Introduction
Brand equity is regarded as a very important concept in business practice as well as in academic research because marketers can gain competitive advantage through successful brands. The competitive advantage of firms that have brands with high equity includes the opportunity for successful extensions, resilience against competitors’ promotional pressures, and creation of barriers to competitive entry (Farquhar, 1989). An indication of the importance of well-known brands is the premium asset valuation that they obtain. For example, 90% of the total price of $220 million paid by Cadbury-Schweppes for the “Hires” and “Crush” product lines of Procter & Gamble is attributed to brand assets (Kamakura and Russell, 1991; Schlossberg, 1990). Similarly, major corporations such as Canada-Dry and Colgate-Palmolive have created the position of brand equity manager to build sustainable brand positions (Yovovich, 1988).

In conceptualizing how customers evaluate brand equity, it is viewed as consisting of two components – brand strength and brand value (Srivastava and Shocker, 1991). Brand strength constitutes the brand associations held by customers. As an example, Ivory may be regarded by its customers as a mild soap with very good cleansing power. On the other hand, brand values are the gains that accrue when brand strength is leveraged to obtain superior current and future profits. As an example, soap, dishwashing liquid, detergents and shampoo are marketed under the Ivory brand name. Our emphasis in this article is on the measure of brand strength.

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<table>
<thead>
<tr>
<th>Financial and customer-based perspectives</th>
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<tbody>
<tr>
<td><strong>Literature review</strong></td>
</tr>
<tr>
<td>Brand equity has been examined from two different perspectives – financial and customer based. The first perspective of brand equity that is not discussed in this article is the financial asset value it creates to the business franchise. This method measures the outcome of customer-based brand equity. Researchers have developed and effectively tested accounting methods for appraisal of the asset value of a brand name (Farquhar <em>et al.</em>, 1991; Simon and Sullivan, 1992).</td>
</tr>
<tr>
<td>The second perspective is customer-based in that consumer response to a brand name is evaluated (Keller, 1993; Shocker <em>et al.</em>, 1994). We focus on the customer-based perspective for two reasons. First, customer-based brand equity is the driving force for incremental financial gains to the firm. Second, managers do not have a customer-based measure to evaluate brand equity. We could discover only one attempt to measure customer-based brand equity. However, the dimensionality of the scale was not as expected and that has reduced the applicability of the scale (Martin and Brown, 1990).</td>
</tr>
<tr>
<td>Initially, brand equity was conceptualized as consisting of consumers’ brand associations that include brand awareness, knowledge and image (Keller, 1991, 1993). As stated earlier, brand equity is regarded as consisting of two components – brand strength and brand value (Srivastava and Shocker, 1991). Our interest is in brand strength, which constitutes the brand associations held by the brand’s customers. Some researchers view brand equity as perceived brand quality of both the brand’s tangible and intangible components (Kamakura and Russell, 1991).</td>
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<tr>
<td>Brand equity is of interest to managers because of brand loyalty and brand extensions. Brand equity has a positive relationship with brand loyalty. Brand extensions are an area that are affected by the original brand’s equity (Bridges, 1992). A current brand extension when compared to a new brand name has lower advertising costs and higher sales because of consumer knowledge of the original brand (Smith, 1991; Smith and Whan Park, 1992). Interestingly, it has been found that consumers accept brand extensions more when the quality variations across the product line are small rather than large (Dacin and Smith, 1994). This suggests that consumers do not trust brands whose quality varies. In fact it is critical for brand managers not to lose brand equity by launching substandard products. In a similar vein, brand extensions are more acceptable for products where the customer-based brand associations are salient and relevant (Broniarczyk and Alba, 1994). For example, consumers will more readily accept a mouthwash extension of Close-up than of Crest because Close-up is associated with breath freshening whereas Crest is associated with dental protection.</td>
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<tr>
<td><strong>A framework for measuring customer-based brand equity</strong></td>
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<tr>
<td><strong>Definition of brand equity</strong></td>
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<tr>
<td>Customer-based brand equity has been defined as the differential effect of brand knowledge on consumer response to the marketing of the brand (Kamakura and Russell, 1991). Thus brand equity is conceptualized from the perspective of the individual consumer and customer-based brand equity occurs when the consumer is familiar with the brand and holds some favorable, strong, and unique brand associations in the memory (Kamakura and Russell, 1991). Based on this definition, we believe that there are five important considerations to defining brand equity. First, brand equity refers to consumer perceptions rather than any objective indicators. Second, brand equity refers to a global value associated with a brand. Third, the global...</td>
</tr>
</tbody>
</table>
value associated with the brand stems from the brand name and not only from physical aspects of the brand. Fourth, brand equity is not absolute but relative to competition. Finally, brand equity positively influences financial performance.

In view of these characteristics, we operationalize brand equity as “the enhancement in the perceived utility and desirability a brand name confers on a product”. It is the consumers’ perception of the overall superiority of a product carrying that brand name when compared to other brands.

**Perceptual dimensions of brand equity: the proposed model**

Although there have been product-specific measures of customer-based brand equity (Park and Srinivasan, 1994), there exists only one study on empirical measurement of customer-perceived brand equity (Martin and Brown, 1990). However, this scale has not been used extensively. Previous researchers have conceptualized brand equity as having five dimensions to brand equity, namely perceived quality, perceived value, image, trustworthiness, and commitment (Martin and Brown, 1990).

To develop a better scale, the authors and their academic colleagues examined the previous research and made the following changes. We replaced the quality dimension with performance that is more focused. We use “performance” as an inclusive term, to refer to the totality of the physical job. We define performance as “a consumer’s judgment about a brand’s fault-free and long-lasting physical operation and flawlessness in the product’s physical construction”. The reason brand name is used by consumers to “infer” quality of an unfamiliar product is because that brand name has built, based on its association with other quality products carrying that name, a value or utility; that is, beliefs about quality (i.e. performance) have gone into that brand name’s value or equity, as our model explicitly states (Brucks and Zeithaml, 1991).

Second, we limited the reference of the image dimension to the social dimension, calling it social image. We define social image as “the consumer’s perception of the esteem in which the consumer’s social group holds the brand. It includes the attributions a consumer makes and a consumer thinks that others make to the typical user of the brand”.

Third, since it was our intention to measure perceptual rather behavioral dimensions of brand equity, we distinguish between commitment as a feeling versus commitment as action. We view only the feeling as a component of brand equity, judging behavior to be a consequence of brand equity rather than brand equity itself. The feeling interpretation of commitment is subsumed in our framework under the rubric of identification/attachment. We define it as “the relative strength of a consumer’s positive feelings toward the brand”.

Finally, we define value as “the perceived brand utility relative to its costs, assessed by the consumer and based on simultaneous considerations of what is received and what is given up to receive it”. We define trustworthiness “as the confidence a consumer places in the firm and the firm’s communications, and as to whether the firm’s actions would be in the consumer’s interest”.

In proposing these components, we regard brand equity as associations consumers hold. We conceptualize and measure these associations at a more abstract level that captures cross-product generality rather than at a level that
would apply to a particular product class only. For example, rather than the brand association “Brand X is an effective teeth whitener” or “Brand Y cleans clothes whiter”, we assess the association “Brand Z does its physical job effectively”.

The rationale for including the five components of brand equity is as follows. Performance is of critical essence for any brand. If a brand does not perform the functions for which it is designed and purchased, consumers would not buy the product and the brand will have very low levels of brand equity. Social image is value-adding because of the social reputation associated with owning or using a brand. For example, although Timex and Swatch watches may perform equally, the Swatch brand name connotes greater value among the American youth. Social image contributes more to a brand’s equity in product categories such as designer clothing and perfumes.

Price/value is included because consumer choice of a brand depends on a perceived balance between the price of a product and all its utilities. Some brands have higher brand equity because of their price value. As an example, Honda cars have brand equity because of their price value (i.e. performance when compared to price) whereas Lexus cars have their equity due to their high performance and social image.

Trustworthiness is included because consumers place high value in the brands that they trust. As an example, consumers’ trust in Nordstrom has translated into a higher level of equity for Nordstrom stores. Conversely, distrust in a brand negatively affects brand equity. Sears automobile repair service briefly lost its consumer franchise in the wake of revelations that it made unnecessary repairs.

Identification/attachment is included because consumers come to identify with some brands and develop sentimental attachment with those brands. The vehement protests which the brief removal of “old” Coca-Cola brought forth by its loyal fans exemplify this dimension and its power in augmenting a brand’s utility.

Scale development

Research process
To begin the research, we asked 22 consumers open-ended questions as to why most people prefer a brand name product over unbranded or generic products. Responses were sought for branded versus generic products in general, followed by specified product categories (different product categories for different respondents). A review of these responses combined with academic and practitioner literature as well as our own reflections served as a guide to the delineation of the five dimensions of brand equity and some of their measures.

Following the first step, we generated 83 measurement items. In order to establish content validity of subsequent scales we gave these measurement items and our construct definitions to three marketing professors. These experts provided a content-based screening process by assigning individual items to the construct category they thought the item best indicated. Items which did not get classified in the construct categories were eliminated. The resulting shorter list contained about five to eight measurement items for each construct.

Pilot study one
We administered the item pool to 75 consumers for a set of existing products (one product per respondent) with their brand names specified. The products were sport sneakers (Asics and Reebok), telephone answering machines...
(AT&T), and television monitors (RCA). Through statistical analysis we reduced the items to 58.

Pilot study two
We collected further data with this reduced set of items, but this time we asked respondents themselves to choose two brands of specified product categories (pens for some and jeans for others) with which they were familiar. The rationale for this modification was to reduce the halo effects across dimensions. This approach worked, though not entirely, and we were able to reduce the number of items further to 26.

Pilot study three
To examine the 26 items and reduce the items to a manageable scale, we carried out another study. Here, we used a "synthetic" stimulus with a hypothetical brand name. An information sheet on a new line of Avani watches was prepared and given to students along with the watch pictures taken from a catalog. Forty-five consumers answered the survey. The details of the confirmatory factor analysis are presented in Appendix 1. The resulting scale was also significantly correlated with an overall measure of brand equity ($p < 0.001$). In our debriefing of the respondents, they had problems with semantic differential scales. Accordingly, we changed the scales to agree/disagree scales for the major study. Also, instead of evaluating one brand, respondents were more comfortable comparing brands. The resulting scale had 17 items individualized for a brand of television and they are presented in Table I.

Study
Once we had the 17 items of the scale, we tested the scale in two categories. The first was television monitors and the second was watches. Recall that brand equity is a concept that can be measured only in comparison with other brands in the same category. We created a questionnaire that consumers could use to compare three brands simultaneously. The top portion of the questionnaire is presented in Appendix 2. The questions were randomized and the orders of the brands in the questionnaire were also changed. We compared three brands of television monitors (Sony, RCA and Goldstar) and three brands of watches (Seiko, Bullova and Timex). The questionnaires were administered to 113 consumers.

We first summed the scale ratings for each of the three brands. From this sum we calculated the average brand equity rating. We then collected the prices of similar product items from the three brands. The brand equity ratings and the prices are shown in Table II. In television monitors, Sony was rated the highest and also had the highest prices. RCA was rated next. Goldstar was rated the lowest and also had the lowest price. In watches, Seiko was rated the highest and also had the highest prices. Although Bullova and Timex had similar ratings, we found Bullova prices to be higher than Timex. The implication of this result is discussed next.

Managerial implications and recommendations
In this article we developed and presented a scale to measure customer-based brand equity. This scale was developed after four studies in which we narrowed our initial scale of 83 items to a scale of 17. The resulting scale was significantly correlated with an overall measure of brand equity. We also tested the scale in two product categories – television monitors and watches. In general we found that prices reflected the equity associated with the brand. The implications for managers are discussed in the next sections.
Measurement of brand equity

It is recommended that firms measure the equity associated with their brands on a regular basis. We provide a simple paper and pencil instrument to measure brand equity. The advantage of this scale is not only the small number of items but also the ability to measure the individual dimensions of brand equity. Thus the measurement of brand equity will enable companies to evaluate their marketing programs. Also, if the brand equity is seen to suffer, further feedback can be obtained from consumers. This feedback will aid in: identifying product performance problems; identifying advertising/positioning problems; and providing feedback to the firm’s employees on where improvements need to be made.

Dimensions of brand equity

The customer-based brand equity scale is based on the five underlying dimensions of brand equity: performance, value, social image, trustworthiness and commitment. One of the major implications of this research is that companies have to manage all of the elements to enhance their brand equity. The following is a list of scale items:

Performance
- P1 From this brand of television, I can expect superior performance
- P2 During use, this brand of television is highly unlikely to be defective
- P3 This brand of television is made so as to work trouble free
- P4 This brand will work very well

Social image
- I1 This brand of television fits my personality
- I2 I would be proud to own a television of this brand
- I3 This brand of television will be well regarded by my friends
- I4 In its status and style, this brand matches my personality

Value
- V1 This brand is well priced
- V2 Considering what I would pay for this brand of television, I will get much more than my money’s worth
- V3 I consider this brand of television to be a bargain because of the benefits I receive

Trustworthiness
- T1 I consider the company and people who stand behind these televisions to be very trustworthy
- T2 In regard to consumer interests, this company seems to be very caring
- T3 I believe that this company does not take advantage of consumers

Attachment
- A1 After watching this brand of television, I am very likely to grow fond of it
- A2 For this brand of television, I have positive personal feelings
- A3 With time, I will develop a warm feeling toward this brand of television

### Table I. Brand equity scale – measurement items

<table>
<thead>
<tr>
<th>Item</th>
<th>Sony</th>
<th>RCA</th>
<th>Goldstar</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P1</td>
<td>6.32</td>
<td>4.43</td>
<td>3.11</td>
</tr>
<tr>
<td>P2</td>
<td>$549</td>
<td>$399</td>
<td>$349</td>
</tr>
<tr>
<td><strong>Social image</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I1</td>
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<td></td>
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<tr>
<td>I2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I3</td>
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<td></td>
</tr>
<tr>
<td>I4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Value</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>V2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trustworthiness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>T2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>T3</td>
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<td></td>
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<tr>
<td><strong>Attachment</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>A2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td></td>
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</tbody>
</table>

### Table II. Brand equity evaluation and market prices

Measurement of brand equity

It is recommended that firms measure the equity associated with their brands on a regular basis. We provide a simple paper and pencil instrument to measure brand equity. The advantage of this scale is not only the small number of items but also the ability to measure the individual dimensions of brand equity. Thus the measurement of brand equity will enable companies to evaluate their marketing programs. Also, if the brand equity is seen to suffer, further feedback can be obtained from consumers. This feedback will aid in: identifying product performance problems; identifying advertising/positioning problems; and providing feedback to the firm’s employees on where improvements need to be made.

Dimensions of brand equity

The customer-based brand equity scale is based on the five underlying dimensions of brand equity: performance, value, social image, trustworthiness and commitment. One of the major implications of this research is that companies have to manage all of the elements to enhance
brand equity. Interestingly, our pilot studies showed that consumers demonstrate a halo across dimensions of brand equity. This suggests that if consumers evaluate a brand to perform well, consumers also expect the brand to have high levels of value, or be more trustworthy. However, if the brand fails on a single dimension (e.g. social image), consumers do not evaluate the other dimensions (e.g. performance) highly. As stated earlier, the performance of Swatch and Timex may be similar in an objective sense. However, Swatch may be evaluated as having better performance because of the perceived higher social image. Also, recovery may be critical to maintaining brand equity. The trustworthiness of the Tylenol brand increased after the product tampering case was handled to the satisfaction of the consumer.

**Brand equity and the marketing mix**

The measurement of brand equity may aid in the evaluation of the marketing mix elements of a brand. As an example, we saw a relationship between price and the equity associated with the brand. In the study, although Timex and Bullova had similar brand equity, the price of a Bullova was found to be 70% higher than Timex. To be competitive Bullova needs to either reduce prices or increase their brand equity.

Promotion is critical in developing equity. Promotion can be used to develop performance expectations (e.g. Lexus cars), increase trustworthiness (e.g. FedEx), increase social image (e.g. Michelob), increase commitment (e.g. Saturn), and increase value (e.g. Honda). After measuring the brand equity, dimensions that need more promotional support can be identified. Finally, distribution of high social image products (i.e. upscale stores) is different from the distribution of low image products (i.e. discount stores).

(For a copy of the scales used in this article, please contact Arun Sharma, Department of Marketing, University of Miami, PO Box 248147, Coral Gables, Florida 33124-6554, USA.)

**References**


Appendix 1: Results

Pilot study three

First, we examined intercorrelations among the items designed for each scale. After removing uncorrelated items from each measurement, we then conducted exploratory factor analysis to determine the scales’ unidimensionality. Finally, we computed coefficient alphas; each of the scales had strong internal consistency. We also calculated coefficient alphas for the scales which were 0.75 for performance, 0.77 for image, 0.77 for value, 0.79 for trust, and 0.83 for attachment/feeling. All reliability coefficients exceeded the 0.70 threshold and therefore represent good internal validity.

Measurement validation

Initially, the set of measurement items corresponding to each theoretical scale construct was examined by item-to-total correlations and exploratory factor analysis (see Table A1). After the initial analysis, the remaining set of measurement items was subjected to confirmatory factor analysis to verify discriminant validity. The measurement model was estimated using LISREL 7.16. The overall fit of the model is acceptable with a chi-square of 161.17 (df = 109; p < 0.001) and Bentler’s comparative fit index (CFI) = 0.87 (see Table AII). In sum, the measurement model provides satisfactory evidence of unidimensionality for the individual scales.

Appendix 2: Sample questionnaire

In the following questionnaire we would like to evaluate three brands of televisions. We would like you to evaluate each statement on a 7-point scale with respect to each brand of television. Please list a 7 if you strongly agree with a statement, a 1 if you strongly disagree with a statement, and a 4 if you neither agree nor disagree with a statement. As an example, you strongly agree (7) with a statement as far as Sony is concerned, strongly disagree with the statement as far as RCA (1) is concerned, and neither agree nor disagree (4) with the statement for Goldstar. In this case you would put 7, 1 and 4 in the respective columns.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Sony</th>
<th>RCA</th>
<th>Goldstar</th>
</tr>
</thead>
<tbody>
<tr>
<td>After watching this brand of television, I am very likely to grow fond of it</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considering what I would pay for this brand of television, I will get much more than my money’s worth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During use, this brand of television is highly unlikely to be defective</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table AII. Maximum likelihood LISREL estimates for five-factor model

<table>
<thead>
<tr>
<th></th>
<th>Image</th>
<th>Value</th>
<th>Trust</th>
<th>Attachment</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>-0.51</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>0.30</td>
<td>-0.40</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attachment</td>
<td>-0.77</td>
<td>0.61</td>
<td>-0.35</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td>0.47</td>
<td>-0.48</td>
<td>0.94</td>
<td>-0.39</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Chi-square with 109 degrees of freedom = 161.17 ($p < 0.001$) ($N = 49$)

Note: Bagozzi and Phillips (1982) tests of discriminant validity (between factors) were supported for all factors despite high correlations between some factors.

Table AI. Construct correlations

<table>
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<th>Performance</th>
<th>Image</th>
<th>Value</th>
<th>Trust</th>
<th>Attachment</th>
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<tr>
<td>P2</td>
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<tr>
<td>P3</td>
<td>-0.61</td>
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<tr>
<td>P4</td>
<td>0.66</td>
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<tr>
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<td>0.80</td>
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</table>

Chi-square with 109 degrees of freedom = 161.17 ($p < 0.001$) ($N = 49$)

Table AII. Maximum likelihood LISREL estimates for five-factor model

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