Application of Consumer Based Brand Equity Model in Indian Banking Sector

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APPLICATION OF CONSUMER BASED BRAND EQUITY MODEL IN INDIAN BANKING SECTOR

* Tahir Ahmad Wani  
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***Qubra

ABSTRACT

With advent of new technologies, banking sector has undergone a great transformation. While this has improved the customer's service experience, it has also posed a challenge for the banks to differentiate their services from the competitors. Now banks are finding it hard to make a name for them and create a brand identity that distinguishes them from the other players in the market. As a result, Indian banks are trying to enhance their brand equity by all means possible. This study is aimed at examining the applicability and practicality of consumer based brand equity model in the Indian banking sector. A sample of 300 customers of the Jammu and Kashmir Bank has been taken to check the relationship between perceived quality of the brand, brand awareness, brand association and brand loyalty with brand equity. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were done to check the validity of the scale. Structural Equation Modeling (SEM) was used to explore the relationships between brand equity and its determinants. The results suggested that brand association and brand loyalty have a significantly positive impact on brand equity while the effect of perceived quality of the brand and brand association was found to be insignificant.

Keywords: Perceived brand quality, Brand awareness, Brand loyalty, Brand association, Brand Equity.

INTRODUCTION

Businesses are evolving and changing at a rapid pace in today’s information age. The reigning champions of yesterday have today been relegated to the history while new kids on the blocks have established themselves firmly. Technology has changed the way business is done. With changes coming at the break-neck speed, companies are finding it challenging to adapt, to survive and set themselves apart from their direct and indirect competitors. In times of brand wars, it is very important for the businesses to create an image for themselves that differentiates them from others. In addition to other assets, an organization’s brand equity is equally important (Van and Alba, 2000) (Yoo et al,
2000). Farquhar (1989) simply defined brand equity as “added value endowed by the brand to the product”. In the last two decades, much of the work related to the brand equity especially in the non-service based organizations (product-based) has been carried out both by academicians as well as practitioners (Aaker, 1991) (Keller, 1993). Service sector as such has not been able to get much attraction from the researchers in terms of brand equity valuation. Some researchers argue that the concept of brand equity is not as important to services as to the products (Krishnan & Hartline, 2001). However, another group of researchers’ findings are equivocal and contradictory (Langford and Cosenza, 1998). Banking industry is where the services are hard to differentiate and it is governed by common rules and laws. This makes it difficult to establish brand equity. Very few studies on consumer based brand equity involving banks have been done so far due to these limitations. The intention of this paper is to give a detailed literature support of consumer based brand equity concept and then test it on the data collected from the customers of the bank and test whether the model holds true for Indian banks or not. Further moderation effects of demographics will be tested to see if the demographic variables have any impact on the determinants of the brand equity or not. Further the theoretical and practical implications of the study will be discussed at the end of the paper.

REVIEW OF LITERATURE

As businesses discovered that the names, symbols or designs associated with them help the customers to identify them better than the rest of the group, they began focusing on making these symbols or names unique to them. This is the concept of brand originated. Kotler (1991, p. 442) defines a brand as “a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors”. In an effort to create unique brands, that set one organization apart from others, they realized that these brands were more than just identification marks. Rather they were assets like any other assets an organization has. Brands have a value associated with them and it is this value associated to a consumer that we call ‘brand equity’ (Aaker, 1999). It is the consumer’s perception of the superiority of service or the product of a brand as compared to others. There are many definitions of brand equity in the available literature. Some call it attitudinal dispositions, behavioural predictions, favourable impressions, brand loyalty, brand, association, brand awareness and perceived quality (Rangaswamy et al, 1993) (Aaker, 1991). Srivastava and Shocker (1991) simply specify brand equity as the additional or incremental value of a product (or service) due to a brand name. Brand equity of a brand is evaluated by four dimensions proposed by Aaker (1991, 1996) and Keller (1993): a) the perceived quality of brand, b) brand awareness, c) brand loyalty and d) brand associations. Thus, all the constructs of brand equity are the perceived characteristics or features of a brand in comparison to other brands in the market.

- Perceived quality of brand: Perceived quality is one of the key dimensions of brand equity (Aaker, 1996). Perceived quality of a brand is always calculated in relation to/ compared to other competing brands. Perceived quality involves a competitor frame of reference (Aaker, 1996). Kayaman & Arasli (2007) found that the perceived quality of the brand has a positive impact on the overall brand equity of hotels. Similarly Pappu, Quester and Cooksey (2005) found that the perceived quality enhances the brand equity as proposed by Aaker (1991).

- Brand loyalty: Loyal customer base is a big asset to an organization and adds value to its brand equity. A loyal customer base represents a barrier to entry, a basis for a price premium, time to respond to competitor innovations, and a bulwark against deleterious price competition (Aaker, 1996). According to Loureiro and Miranda (2011), brand loyalty has a
positive significant effect on the brand equity of internet banking. Similarly Kayaman and Arasli (2007) found brand loyalty having a positive impact on brand equity of hotels. Umar et al (2012) found that brand loyalty partially mediates the relationship between brand association and brand equity.

- **Brand Association:** Brand association is a factor of brand equity that involves image/repute dimensions unique to a brand (Aaker, 1996). Brand association can be seen in forms and reflects characteristics of the brand or aspects independent of the brand itself (Chen, 2001). Associations represent basis for purchase decisions for brand loyalty, and also create value to the firm and its customers (Atilgan, Aksoy & Akinci, 2005). A brand association is “anything linked in memory to a brand” (Aaker, 1991). Brand association has a positive impact on the brand equity (Umar et al 2012, Pappu, Quester and Cooksey (2005).

- **Brand Awareness:** Brand awareness reflects the salience of the brand in the customer's mind and it can be captured through the six levels as- Recognition, Recall, Top-of-Mind, Brand Dominance, Brand Knowledge, Brand Opinion (Aaker, 1996). Brand awareness simply stated means the familiarity of the consumers with the brand and the associations that a consumer keeps with the brand while recalling the brand. According to Aaker (1991), brand awareness is “the ability of the potential buyer to recognize and recall that a brand is a member of a certain product category”. Studies by Juntunen, Juntunen, & Juga (2011) and Pappu, Quester & Cooksey (2005) found that brand equity has a positive significant effect on brand equity.

**Brand Equity in Services**

Brand equity has been mostly associated with physical products (goods) and has received a great deal of attention in the literature. Yet a basic understanding of the nature of brand equity for services has yet to emerge (Krishnan & Hartline, 2001). Brand equity as a concept is very difficult to measure in services given the inherent nature of the services. Usually a customer has to feel or experience the service first to evaluate, recall or be loyal to the service providers. Hence, it is difficult to measure brand equity of such service-oriented organizations, where it is hard for a consumer to differentiate from others without experiencing the services of the competitors. For example, a student when he or she takes an admission in a college usually remains in the college for the whole course and it becomes difficult for him or her to evaluate the brand equity without experiencing the services of other colleges. In product-based organizations, it is not that complicated even before using the product the consumer can have a first-hand look or trial use of the product to establish an image of the product or the brand. Berry et al (1988) argue that while in product/goods-based organizations, the brand name can represent an individual product or a product line but in services, brands should be the firm’s name and should not be individualized (Berry, 2000). Additionally, they suggest that service brands should have distinctiveness, relevance, memorability, and flexibility (Berry et al, 1988). Thus for a service provider like a bank, where there is very little distinction of services offered to the customers and flexibility is rare given the rules and regulations set in by the central bank, it becomes a very serious issue to differentiate itself from the competitors to attain more customers. Thus a service organization like a bank has to strive to build a brand image that is different from its competitors and is positioned at the top of consumers’ minds to enhance the value of brand equity of the organization.
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RESEARCH GAP

Much of the research has been conducted on brand equity of consumer goods-based organizations. Comparatively little literature is available about brand equity evaluation in the services industry. There are limited studies available on brand equity in services like hotels (Kayaman and Arasli, 2007), airlines (Chen and Chang, 2008) and hospitals (Vinodhini and Kumar, 2010) (Kim et al, 2008) etc. Research work on the brand equity of banks is also limited. Umar et al (2012) has undertaken a study to check the practicality and application of Aaker’s (1991) customer-based brand equity model in the Nigerian banking sector. Kim et al (2003) found that brand equity has a positive significant effect on the firms’ financial performance. Studies about brand equity of banks have been done in Malaysia and Bangladesh (Aziz an Yasin, 2010) (Farhana an Islam, 2012) but studies about brand equity of Indian banks are non-existent.

RESEARCH OBJECTIVES

The main objective of the study is to see the applicability and practicality of Aaker’s (1991) consumer-based brand equity model in Indian banking scenario. To fulfill this study requirement, following objectives will be achieved:

1. To examine relationship between perceived quality of a brand with brand equity and to what extent it influences the brand.
2. To examine how brand loyalty affects brand equity.
3. To assess how much does the brand awareness impact the brand equity of Indian banks.
4. To examine if brand association affects the brand equity of the banks.
5. To check if the relationship between determinants of brand equity are moderated by the demographic factors of the respondents.

METHODOLOGY

Research design

The study was done on the dimensions of brand equity identified by Aaker (1991). The instrument contains two parts: first part deals with the demographic characteristics of the respondents (bank customers) while the second part contains questions regarding Aaker’s (1991) model of brand equity. The instrument contains 19 items representing Perceived Quality (5 Items), Brand Awareness (3 Items), Brand Association, (4 Items), Brand Loyalty, (3 Items) and Brand Equity (3 Items).

Sample design

The distribution of respondents is given in Table 1 below:

Table 1: Profile of the Respondents
Data collection

Data was collected through a self-administered questionnaire. A total of 350 questionnaires were given and out of the received 332 questionnaires, only 300 (Tabachnick and Fidell, 2007) were deemed fit for further analysis after screening the incomplete responses. The respondents were distributed on various demographic factors like gender, age, education and occupation.

Sampling technique

Simple random sampling was used to collect data from the respondents. The data was collected from March 20 to May 15, 2015. The data was collected on random weeks, random days and at random branches of Jammu and Kashmir Bank in Kashmir Valley only. Customers present in the bank premises and having an account in the bank were the primary respondents. The questionnaires were given to the customers randomly and collected later.

Scale

The scale was adopted from the work of Dua, Chahal and Sharma (2013). Although the scale itself is an amalgam of various previous scales used by Lassar (1995), Yoo et al (1999), Chen (2009), Jalilvand (2011) and Yoo et al (2000) but it is better suited for banking industry than any individual scale. The diction of the scale was changed to make it more oriented towards a particular bank (J&K Bank), although keeping the original essence of the questionnaire intact.

Table 2: Construct and Measures

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>164</td>
<td>54.7</td>
</tr>
<tr>
<td>Female</td>
<td>136</td>
<td>45.4</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-40 Yrs</td>
<td>258</td>
<td>76.1</td>
</tr>
<tr>
<td>Above 40 Yrs</td>
<td>42</td>
<td>23.9</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>80</td>
<td>26.7</td>
</tr>
<tr>
<td>Employed</td>
<td>85</td>
<td>28.3</td>
</tr>
<tr>
<td>Self-Employed</td>
<td>69</td>
<td>23.0</td>
</tr>
<tr>
<td>Professional</td>
<td>66</td>
<td>22.0</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matriculation</td>
<td>50</td>
<td>16.7</td>
</tr>
<tr>
<td>Intermediate</td>
<td>50</td>
<td>16.7</td>
</tr>
<tr>
<td>Graduate</td>
<td>95</td>
<td>31.7</td>
</tr>
<tr>
<td>Post-Graduate</td>
<td>105</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Perceived Quality

PQ1 J&K bank uses high technology for its services
PQ2 Product/Services of J&K bank are of good quality
PQ3 Product/Services of J&K bank are very reliable
PQ4 J&K bank provides excellent product/Service features
PQ5 The services of J&K bank are effective

Brand Awareness

BA1 I am fully aware about the services/Products of J&K bank
BA2 My bank is easily recognized as compare to others
BA3 The staff of my bank is more knowledgeable
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Brand Association
BAS1 J&K bank gives me feeling of social approval
BAS2 People really admire the services of J&K bank
BAS3 I like the bank very much
BAS4 This bank creates distinct picture in the mind of the customer

Brand Loyalty
BL1 I am loyal to J&K bank
BL2 I am always interested in learning more facts about J&K bank
BL3 I will recommend the services of J&K bank to other people also
BL4 In future, I would like to avail more services from this bank.

Brand Equity
BE1 I will prefer to buy the product of J&K bank instead of any other, even if they are same.
BE2 Even if another brand has same features as my bank, I would prefer J&K bank.
BE3 If there is another bank as good as my bank, I will still prefer J&K bank.

DATA ANALYSIS

An Exploratory Factor Analysis was done on the data using Principal Axis Factoring and Promax Rotation Method (Williams, Brown and Onsman, 2010) and after removing two items (PQ5 & BL1) because of poor loadings the following pattern matrix was obtained with a cumulative variance of 67.876 (Williams, Brown and Onsman, 2010).

Table 3: KMO and Bartlett's Test

<table>
<thead>
<tr>
<th>Measure of Sampling Adequacy</th>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</th>
<th>Bartlett's Test of Sphericity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx. Chi-Square</td>
<td>.923</td>
<td>3527.249</td>
</tr>
<tr>
<td>df</td>
<td>136</td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>
Table 4: Pattern Matrix after EFA

<table>
<thead>
<tr>
<th>Factor</th>
<th>Perceived Quality</th>
<th>Brand Awareness</th>
<th>Brand Equity</th>
<th>Brand Loyalty</th>
<th>Brand Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>PQ1</td>
<td>.850</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ4</td>
<td>.814</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ2</td>
<td>.753</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ3</td>
<td>.720</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BA1</td>
<td></td>
<td>.833</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BA2</td>
<td></td>
<td>.796</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BA3</td>
<td></td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BE2</td>
<td></td>
<td></td>
<td>.952</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BE3</td>
<td></td>
<td></td>
<td>.757</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BE1</td>
<td></td>
<td></td>
<td>.621</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL4</td>
<td></td>
<td></td>
<td></td>
<td>.866</td>
<td></td>
</tr>
<tr>
<td>BL3</td>
<td></td>
<td></td>
<td></td>
<td>.725</td>
<td>.902</td>
</tr>
<tr>
<td>BL2</td>
<td></td>
<td></td>
<td></td>
<td>.670</td>
<td>.681</td>
</tr>
<tr>
<td>BAS4</td>
<td></td>
<td></td>
<td></td>
<td>.676</td>
<td>.558</td>
</tr>
<tr>
<td>BAS1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAS2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAS3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization. (Forced five factors)

a. Rotation converged in 7 iterations.

Table 5: Factor Correlation Matrix

<table>
<thead>
<tr>
<th>Factor</th>
<th>Perceived Quality</th>
<th>Brand Awareness</th>
<th>Brand Equity</th>
<th>Brand Loyalty</th>
<th>Brand Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Quality</td>
<td>1.000</td>
<td>.508</td>
<td>.597</td>
<td>.671</td>
<td>.661</td>
</tr>
<tr>
<td>Brand Awareness</td>
<td>.508</td>
<td>1.000</td>
<td>.540</td>
<td>.573</td>
<td>.649</td>
</tr>
<tr>
<td>Brand Equity</td>
<td>.597</td>
<td>.540</td>
<td>1.000</td>
<td>.678</td>
<td>.677</td>
</tr>
<tr>
<td>Brand Loyalty</td>
<td>.671</td>
<td>.573</td>
<td>.678</td>
<td>1.000</td>
<td>.696</td>
</tr>
<tr>
<td>Brand Association</td>
<td>.661</td>
<td>.649</td>
<td>.677</td>
<td>.696</td>
<td>1.000</td>
</tr>
</tbody>
</table>

HYPOTHESIS DEVELOPMENT

The factor correlation matrix gives us an indication of the relationship of the various dimensions of brand equity. Henson and Roberts (2006) pointed out that a correlation matrix is most popular tool among researchers to check if they should accept the EFA results or not. All the correlation coefficients were above the mark of 0.50 (Hair et al., 1995) (Tabachnick and Fidell, 2007). After the EFA the hypothesis have been stated as:
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H1. Perceived Quality has a positive significant effect on brand equity
H2. Brand Awareness has a positive significant effect on brand equity
H3. Brand Loyalty has a positive significant effect on brand equity
H4. Brand Association has a positive significant effect on brand equity

CONFIRMATORY FACTOR ANALYSIS (CFA) was done on the data obtained using IBM-Amos Version-21. The data was checked for validity, reliability as well as for the model fit. All the 17 items were used in the CFA to obtain a model fit. All of the items loaded very well with scores lying between 0.72 and 0.94.

<table>
<thead>
<tr>
<th>Table 6: Loading of the items after CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate</td>
</tr>
<tr>
<td>PQ → PQ4</td>
</tr>
<tr>
<td>PQ → PQ3</td>
</tr>
<tr>
<td>PQ → PQ2</td>
</tr>
<tr>
<td>PQ → PQ1</td>
</tr>
<tr>
<td>BAS → BAS4</td>
</tr>
<tr>
<td>BAS → BAS3</td>
</tr>
<tr>
<td>BAS → BAS2</td>
</tr>
<tr>
<td>BAS → BAS1</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Validity analysis:
A validity analysis was also done to check the overall validity of the data as well as the model. The results obtained are as follows:

<table>
<thead>
<tr>
<th>Table 7: Validity Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR AVE MSV ASV Brand</td>
</tr>
<tr>
<td>Awareness Perceived Quality Association Loyalty Equity</td>
</tr>
<tr>
<td>Brand Awareness</td>
</tr>
<tr>
<td>Perceived Quality</td>
</tr>
<tr>
<td>Brand Association</td>
</tr>
<tr>
<td>Brand Loyalty</td>
</tr>
<tr>
<td>Brand Equity</td>
</tr>
</tbody>
</table>

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Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Variance (MSV), and Average Shared Variance (ASV).

There were no issues with Convergent Validity as AVE > 0.5 or Discriminant Validity as MSV < AVE, ASV < AVE and Square root of AVE was greater than inter-construct correlations (Black, Babin and Anderson, 2010), (Bagozzi & Yi, 1988).

Reliability:
The data was found reliable with composite reliability (CR) > 0.7 proving scale reliability (Churchill, 1979).

STRUCTURAL EQUATION MODELLING

To examine the simultaneous effect of predictors (independent variables) on the outcome variable (dependent variable) their relationships were calculated using structural equation modelling (SEM). IBM-AMOS graphical Version-21 was used to run SEM on the factors obtained after CFA. The analysis was done in two stages, firstly using the CFA to validate the measurement model and then using SEM to test the proposed hypothesis. After doing the CFA the structural model showing the relationship among predictors and outcome variable was estimated. The whole model consisted of four predictors as Brand Awareness, Perceived Quality, Brand Association and Brand Loyalty and one outcome variable as Brand Equity. Further, the demographic factors of gender, age, education and occupation were tested as moderators. The fit indices were within acceptable limits (Anderson & Gerbing, 1988), (Byrne, 994), (Browne and Cudeck (1993), (Schumacker & Lomax, 2004).

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Structural Paths</th>
<th>Standardized Estimate</th>
<th>Hypothesis Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Perceived Quality of the Brand → Brand Equity</td>
<td>0.072*</td>
<td>Rejected</td>
</tr>
<tr>
<td>H2</td>
<td>Brand Association → Brand Equity</td>
<td>0.445*</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>Brand Loyalty → Brand Equity</td>
<td>0.355*</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4</td>
<td>Brand Awareness → Brand Equity</td>
<td>0.024**</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

* Significant at p < .001; n.s. Non-Significant

Fit Statistics
- $\chi^2$/df ratio/p value 2.542 / 0.000
- Root Mean Square Error of Approximation (RMSEA) .072
- Comparative Fit Index (CFI) .952
- Normed Fit Index (NFI) 0.923
- Goodness of Fit Index (GFI) 0.905

METRIC INVARIANCE TEST:

After the initial model fit the Metric Invariance Test was done using Chi-square differences on the data to check its suitability for multi-group analysis. The data was checked back at measurement level to check if invariance exists at the model level or not.
Table 9: Measurement Invariance Test

<table>
<thead>
<tr>
<th>Measurement Invariance Test -Gender (Male/Female)</th>
<th>Overall Model</th>
<th>Chi-square</th>
<th>df</th>
<th>p-value</th>
<th>Invariant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unconstrained</td>
<td>467.663</td>
<td>218</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully constrained</td>
<td>485.388</td>
<td>235</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of groups</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>17.725</td>
<td>17</td>
<td>0.406</td>
<td>YES</td>
<td></td>
</tr>
</tbody>
</table>

Measurement Invariance Test -Age (20-40 Yrs/ Above 40 Yrs)

| Unconstrained                                    | 534.684       | 218        |    |         |           |
| Fully constrained                                | 549.53        | 235        |    |         |           |
| Number of groups                                 | 2             |            |    |         |           |
| Difference                                       | 14.846        | 17         | 0.607| YES     |           |

Measurement Invariance Test - Occupation

| Unconstrained                                    | 770.365       | 436        |    |         |           |
| Fully constrained                                | 828.747       | 487        |    |         |           |
| Number of groups                                 | 4             |            |    |         |           |
| Difference                                       | 58.382        | 51         | 0.223| YES     |           |

Measurement Invariance Test - Education

| Unconstrained                                    | 891.325       | 436        |    |         |           |
| Fully constrained                                | 951.069       | 487        |    |         |           |
| Number of groups                                 | 4             |            |    |         |           |
| Difference                                       | 59.744        | 51         | 0.188| YES     |           |

Since all the groups were invariant, we proceeded to check the multi-group analysis for gender, age, occupation and education on the previously obtained model using IBS AMOS and Statistical Package developed by Jaskin (2013). The moderation for occupation and education was tested by introducing two groups at a time of the moderating variables, however for education as a variable for moderation we couldn't achieve a model fit so it was excluded for further analysis.

Table 10: Moderation Effect of Gender
### Table 11: Moderation Effect of Age

<table>
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<tr>
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<th>20-40 Yrs.</th>
<th>40 Yrs. Above</th>
<th>z-score</th>
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<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>P</td>
<td>Estimate</td>
</tr>
<tr>
<td>Perceived Quality → Brand Equity</td>
<td>0.053</td>
<td>0.619</td>
<td>0.467</td>
</tr>
<tr>
<td>Brand Association → Brand Equity</td>
<td>0.698</td>
<td>0.000</td>
<td>0.430</td>
</tr>
<tr>
<td>Brand Loyalty → Brand Equity</td>
<td>0.311</td>
<td>0.009</td>
<td>0.648</td>
</tr>
<tr>
<td>Brand Awareness → Brand Equity</td>
<td>0.050</td>
<td>0.413</td>
<td>-0.359</td>
</tr>
</tbody>
</table>

Fit Statistics
- $\chi^2$/df ratio/p value: 2.453/.000
- Root Mean Square Error of Approximation (RMSEA): .070
- Comparative Fit Index (CFI): .914
- Normed Fit Index (NFI): .864

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10

### Table 12: Moderation Effect of Occupation

<table>
<thead>
<tr>
<th></th>
<th>Student</th>
<th>Employed</th>
<th>Self Employed</th>
<th>z-score</th>
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<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>P</td>
<td>Estimate</td>
<td>P</td>
</tr>
<tr>
<td>Perceived Quality → Brand Equity</td>
<td>0.107</td>
<td>0.605</td>
<td>0.038</td>
<td>0.836</td>
</tr>
<tr>
<td>Brand Association → Brand Equity</td>
<td>0.793</td>
<td>0.003</td>
<td>0.648</td>
<td>0.024</td>
</tr>
<tr>
<td>Brand Loyalty → Brand Equity</td>
<td>0.228</td>
<td>0.351</td>
<td>0.399</td>
<td>0.047</td>
</tr>
<tr>
<td>Brand Awareness → Brand Equity</td>
<td>-0.061</td>
<td>0.781</td>
<td>-0.132</td>
<td>0.313</td>
</tr>
<tr>
<td></td>
<td>Estimate</td>
<td>P</td>
<td>Estimate</td>
<td>P</td>
</tr>
<tr>
<td>Perceived Quality → Brand Equity</td>
<td>0.038</td>
<td>0.836</td>
<td>0.219</td>
<td>0.180</td>
</tr>
<tr>
<td>Brand Association → Brand Equity</td>
<td>0.648</td>
<td>0.024</td>
<td>0.610</td>
<td>0.002</td>
</tr>
<tr>
<td>Brand Loyalty → Brand Equity</td>
<td>0.399</td>
<td>0.047</td>
<td>0.397</td>
<td>0.007</td>
</tr>
<tr>
<td>Brand Awareness → Brand Equity</td>
<td>-0.132</td>
<td>0.313</td>
<td>0.050</td>
<td>0.815</td>
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<td></td>
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<td>P</td>
<td>Estimate</td>
<td>P</td>
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<td>Perceived Quality → Brand Equity</td>
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<td>0.605</td>
<td>0.219</td>
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<td>Brand Loyalty → Brand Equity</td>
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<td>0.397</td>
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<tr>
<td>Brand Awareness → Brand Equity</td>
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<td>0.781</td>
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<td>0.815</td>
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<tr>
<td></td>
<td>Student</td>
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<td>P</td>
<td>Estimate</td>
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<tr>
<td>Perceived Quality → Brand Equity</td>
<td>0.107</td>
<td>0.605</td>
<td>0.276</td>
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<tr>
<td>Brand Association → Brand Equity</td>
<td>0.793</td>
<td>0.003</td>
<td>0.460</td>
<td>0.150</td>
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<tr>
<td>Brand Loyalty → Brand Equity</td>
<td>0.228</td>
<td>0.351</td>
<td>0.344</td>
<td>0.292</td>
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<tr>
<td>Brand Awareness → Brand Equity</td>
<td>-0.061</td>
<td>0.781</td>
<td>0.198</td>
<td>0.193</td>
</tr>
<tr>
<td></td>
<td>Employed</td>
<td>Professional</td>
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</tr>
<tr>
<td>Perceived Quality → Brand Equity</td>
<td>0.038</td>
<td>0.836</td>
<td>0.276</td>
<td>0.359</td>
</tr>
<tr>
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<td>-0.132</td>
<td>0.313</td>
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<td>0.193</td>
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<tr>
<td>Self Employed</td>
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<tr>
<td>Perceived Quality → Brand Equity</td>
<td>0.219</td>
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<td>0.050</td>
<td>0.815</td>
<td>0.198</td>
<td>0.193</td>
</tr>
</tbody>
</table>

**Fit Statistics**
- $\chi^2$/df ratio: 1.767 / .000
- Root Mean Square Error of Approximation (RMSEA) = .051
- Comparative Fit Index (CFI) = .907
- Normed Fit Index (NFI) = 0.813

**Notes:** *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10

**RESULTS**

Hypothesis 1, 2, 3 and 4 proposed a positive and significant relationship between Perceived Quality of the brand, Brand Awareness, Brand Loyalty and Brand Association on the Brand Equity. However, the results show that the relationship between perceived quality of the brand and brand awareness were not significant, thereby rejecting H1 and H2. While H3 and H4 were found to be significant and positive thus confirming that brand loyalty and brand association has a positive impact on brand equity. Further it was found that brand association has a more positively significant impact on brand equity than brand loyalty. Further while doing the moderation analysis using gender as a moderating variable we found that gender moderates the relationship between brand associations and brand equity significantly at an estimate of 0.355 for Male customers to 1.304 for female customers. We found a difference between Males and Females on Brand Awareness Brand Equity but because the p-values were above 0.05 we conclude it as a not a strong finding. We also found a group difference between customers of the age 20-40 years and customers above 40 years of age on the relationship between brand awareness and brand equity however the effect was negative with increase in age from 40 onwards.

**DISCUSSION AND IMPLICATIONS**

The aim of the study was to check the applicability and practicality of Aaker’s (1991) consumer based brand equity model in Indian Banking scenario. The findings supported only two determinants of brand equity while as the other two were found to be insignificant. Relationship between Perceived quality of brand and brand equity was found insignificant so was the relationship between brand...
awareness and brand equity (Atilgan, Aksoy and Akinci, 2005). Brand loyalty was found to have a significantly positive impact on brand equity (Yasin et al., 2007) (Atilgan, Aksoy and Akinci, 2005) (Tong and Hawley, 2009) (Kim et al., 2008). Brand association was found to have the strongest direct effect on brand equity (Tong and Hawley, 2009) (Chen and Tseng, 2010) (Umar et al., 2012), (Pappu, Quester and Cooksey, 2005). So we can say that the results partially supported the determinants of brand equity as proposed by Aaker (2001). It was further observed that having female customer doubles the effect of brand association on brand equity while as the age of the customers passes over 40 years the effect of brand awareness on brand equity comes down significantly. The results indicate that a bank that convinces the customers that is offering different services than other competitors and makes the customers associate these services with their names will reap results with higher brand equity. Personalised banking and deploying new technology to enhance the customer experience will surely help banks to create a differentiated name for them and get benefits with higher brand equity. Similarly a bank with more loyal customers will have more brand equity than those with new or switching customers. For getting a loyal customer base, a bank has to work on all other three determinants of brand equity. They have to enhance the perceived quality of their brand, create a differentiated name for themselves and thus enhancing the brand awareness. Although perceived quality and brand awareness were found not having a significant direct impact on brand equity, it is believed that these two factors surely help building a good brand loyalty.

LIMITATIONS AND FUTURE RESEARCH

This study makes an effort to study the practicality of consumer based brand equity model in Indian banks. The results of the study provide a more comprehensive and basic understanding of the determinants of brand equity. The study has both theoretical and practical uses for future academic researchers as well as banking practitioners. However the study contains sample from one bank i.e. Jammu and Kashmir bank only. Jammu and Kashmir bank is the most popular bank in the state of J&K, often referred to as the “people’s bank”. So while evaluating the questions on brand loyalty and brand association or perceived quality of the brand, the respondents might not have had a reference bank in mind to compare the services of the bank with that of J&K bank. Despite these limitations, it can be said with certainty that this study can be a stepping stone for further research in this area with taking into other banks in consideration.

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Henson RK, Roberts JK, (2006), Use of Exploratory Factor Analysis in Published Research: Common Errors and Some Comment on Improved Practice. Educational and Psychological Measurement, 66(3)


• Yoo, B., & Donthu, N. Lee, Sungho., (2000), An examination of selected marketing mix elements and brand equity. Journal of the academy of marketing science, 28(2), 195-211


# JOIN OUR MANAGEMENT DEVELOPMENT PROGRAMMES

**JULY 2015 - JUNE 2016**

## LIST OF PROGRAMMES

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<thead>
<tr>
<th>Sl.No</th>
<th>Programme Title</th>
<th>Programme Director/s</th>
<th>Dates &amp; Venue</th>
<th>Per Participant Fee (Rs)</th>
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<td>22-25 June 2016 Campus</td>
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### Communication

### Finance & Accounting

### General Management

### Human Resource Management & Organizational Behaviour

### Marketing Management

Jaipuria Institute of Management

Management Dynamics, Volume 15, Number 1 (2015)
REGISTRATION

There are two ways of participation, **Organizational Sponsorship** (sponsoring organizations are required to submit the filled-in nomination form/s along with the fee by the last date as mentioned in the brochure, usually ten days before the commencement of the programme) and **Self Sponsorship** (Individual participants are required to submit the filled-in nomination form/s along with the fee by the last date as mentioned in the brochure, usually ten days before the commencement of the programme). A formal acceptance letter will be sent to the nominee subject to approval by the programme director. The participation is confirmed only after receiving an acceptance letter from the MDP office. Nominations may please be sent to: Officer-in-Charge Management Development Programmes Office Jaipuria Institute of Management Gomti Nagra, Lucknow-226010

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