Dimensions of brand equity and its impact on building brand image with special reference to aicte approved management institutes in North Maharashtra region

Rajeev	**Dr.P.T.Chaudhari**
Assistant professor & Research scholar KCES's Institute of Management & Research, North Maharashtra University, Jalgaon	Professor and Head of Department (Commerce & Management), KCES's M.J.College, North Maharashtra University, Jalgaon

ABSTRACT *Brand equity is regarded as a very important concept in business practice as well as in academic research because marketers can gain competitive advantages through strong brands. It is a value that a brand has for a particular organization or company and giving power to brand in gaining competitive advantage. It is important to find out which factor of brand equity has a greater influence on overall brand equity and role of brand equity in building brand image. This study is an attempt to propose a brand equity model for aicte approved management institutes in North Maharashtra region. A confirmatory factor analysis was conducted to make a proposed model. The findings were based on student's attitude and perception about the institutes therefore there is a need of future research on the same concept in the other region of India. Further research could also strengthen this analysis by adding some other factors into the model.*

1. Introduction
The demand of professional managers has become a need of the time to meet the challenges of changing environment and corporate sectors. Therefore government has given approval to open private management colleges so that managers can be developed. This has given an opportunity to open so many management institutes but at the outset most of the institutes are lacking quality education. Brand is defined as name, symbol, logo, trademark and package design intended to identify the goods and services and to differentiate those goods and services from those of competitors. Brand equity is as the value that a brand has for a particular organization or company. It provides a competitive advantage because it gives the brand the power to capture the image and hold some value.

It is important to examine which of the brand equity elements is important for consumers to recognize brand value and also to make a good brand. There are lacks of studies on brand equity, especially those based on management institutes in India. The purpose of this study is to measure the dimensions of brand equity of management institutes and how these dimensions contribute to enhance brand image.

2. Theoretical understanding
Brand equity
Brand equity is defined as an intangible assets and liabilities that create value to the firm and objects. Strong brand, perceived quality, awareness, loyalty and satisfied customers are creating value to the brand. Brand equity is concerned with the measurement of this value. This value varies from firm to firm and objects to objects. Customer based brand equity occurs when the consumer is familiar with the brand and holds some favorable, strong and unique brand associations to memory. There are several intangible assets which are responsible to make brand equity. These assets are the dimensions of brand equity and managers as well as management institutes should focus on this to maintain it in such changing and competitive environment. This paper is based on to study the dimensions of brand equity and how these dimensions are helpful to build brand image of aicte approved management institutes.

Brand image
Brand image is concerned with the image of brand in the mind of customer. Customers are influenced with better quality and service. Consistency in the quality and service can be maintained only with dimensions of brands equity i.e. perceived quality, brand loyalty, brand awareness and brand associations.

3. Research Objectives
The purpose of this study is to propose and test a model of consumer-based brand image in the education industry, with a particular emphasis on the aicte approved management institute. Therefore, based upon the related literature and theoretical framework of Aaker brand equity model, the objectives of this study are-

(1) To examine the effect of dimensions of brand equity on overall brand equity.
(2) To investigate the role of brand equity in building brand image.
(3) To develop reliable and valid scales to measure brand image of a aicte approved management institute.

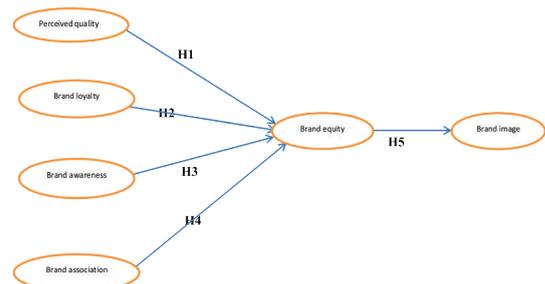## 4. Conceptual framework and research hypotheses

Figure-1

The foundation of the current research work is taken by Aaker's model. He explained five dimensions of brand equity. They are perceived quality, brand loyalty, brand awareness, brand association and other proprietary assets. Among them the first four is considered as customer's evaluation and reactions to the brand and that can be readily understood by consumers. This study is different from other studies as it is based on understanding the four dimensions of brand equity and its influence on building brand equity and how brand equity results brand image of management institutes. In summary, Strong brand equity means that customers have high brand-name awareness, maintain a favorable brand association, perceive that the brand is of high quality, and are loyal to the brand.

The detailed explanation of the dimensions of brand equity is as follows-

Perceived quality
Perceived quality does not refer the real quality of the product but also the customer's perception of the overall quality or

superiority of the product (or service) with respect to its intended purpose, relative to alternatives (Zeithaml, 1988). Perceived quality refers value to a brand in several ways i.e. high quality gives consumers a good reason to buy the brand and allows the brand to differentiate itself from its competitors, to charge a premium price, and to have a strong basis for the brand extension (Aaker, 1991). Based on the above definition and the suggested relationship of perceived quality (Tang & Hawly, 2009) and brand equity in the literature, the following hypothesis is formulated-

H1: Perceived quality has a significant effect on brand equity.
Brand loyalty
Brand loyalty is at the heart of brand equity. Behavioral perspective and attitudinal perspective conceptualize brand loyalty not on the basis of consumer behavior but rather on the basis of consumer perception. According to Aaker (1991), brand loyalty adds considerable value to a brand and/or its firm because it provides a set of habitual buyers for a long period of time. Hence, the following hypothesis of the relationship between brand loyalty and brand equity is proposed-

H2: Brand loyalty has a significant effect on brand equity.
Brand awareness
Brand awareness refers to the ability of a potential buyer to recognize or recall a brand as a member of a certain product category (Aaker, 1991). According to Keller (1993), brand recognition is the first step in the task of brand communication, whereby a firm communicates the product's attributes until a brand name is established with which to associate them. Brand awareness can be a sign of quality and commitment, letting consumers to become familiar with a brand and helping them to consider it at the point of purchase (Aaker, 1991). Hence, the following hypothesis of the relationship between brand awareness and brand equity is proposed-

H3: Brand awareness has a significant effect on brand equity.
Brand association
Brand association is anything "linked" in memory to a brand (Aaker, 1991).It can be seen in all forms and reflects features of the product or aspects independent of the product itself (Chen, 2001). Brand association creates value for the firm and its customers by helping to process/retrieve information, differentiate the brand, create positive attitudes or feelings provide a reason to buy, and provide a basis for extensions (Aaker, 1991).Customer based brand equity occurs when consumers have a high level of awareness and hold some strong, favorable, and unique brand associations in their memories (Tang & Howley 2009).Hence, the following hypothesis of the relationship between brand association and brand equity is proposed-

H4: Brand association has a significant effect on brand equity.
Brand equity
Strong brand, perceived quality, awareness, loyalty and satisfied customers are creating value to the brand. Brand equity is concerned with the measurement of this value. This value varies from firm to firm and objects to objects.

On the other hand brand image is concerned with the image of brand in the mind of customer. Customers are influenced with better quality and service. Consistency in the quality and service can be maintained only with dimensions of brands equity i.e. perceived quality, brand loyalty, brand awareness and brand associations. The higher the brand equity the higher will be the image and vice versa. Hence, the following hypothesis of the relationship between brand equity and brand image is proposed.

H5: Brand equity has a significant effect on brand image.
5. Research Methodology
A research framework was designed to test the above hypothe-sized relationships in aicte approved institutes imparting management education in North Maharashtra region. For this

purpose, students studying MBA in AICTE approved institute imparting management education in this region were targeted and convenience sampling method was used to collect data.

5.1 Sample and data collection
The target population of this study is defined as students of MBA who is studying under academic session 2015-17 of AICTE approved institutes imparting management education in Jalgaon, North Maharashtra and a sample of 232 students have been taken for the pilot study. The convenience sampling method is used to collect data from respondents. This study is based on confirmatory factor analysis and for confirmatory factor analysis a sample of more than 200 respondents is essential for analysis.

5.2 Instrument and measures
The survey questionnaire consisted of items for measuring the dimensions of brand equity and brand image. Brand equity items were developed from existing scales to measure the five constructs on a five-point Likert scale (1=strongly disagree to 5 = strongly agree).Brand image items were developed from existing scales to measure brand image.

5.3 The scales of brand equity
The students were asked to evaluate the dimensions of brand equity and brand image of the institution on the basis of 20 attributes in the form of questionnaire. These attributes were derived from Pappu et al.(2005) & Yoo et al.(2000) study of Perceived quality, Yoo et al.(2000) study of brand awareness, Aaker(1996) study of brand association, Kim et al.(2003) and Taylor et al.(2004) study of brand loyalty and Ross–Wooldridge et al.'s(2004) study of brand equity and company image and Javalgi et al.'s(1992) study of hospital image and self-made questionnaire of the author.

6. Reliability test
Cronbach's alpha coefficients were used to examine the internal consistency of items, and items with appropriate cronbach's alpha were taken for the scales. The cut off value for cronbach's alpha is ≥ 0.7.Here all the constructs come under recommended value and they were accepted and a total of 20 items were retained. Among all items, 16 items are for the 5 brand equity constructs and 4 items are for the brand image respectively.

Table-1

Dimensions	Cronbach's alpha
Perceived quality	.9290
Brand Loyalty	.9283
Brand awareness	.9287
Brand association	.9272
Brand equity	.9293
Brand image	.9277

The following table explains the correlation among various exogenous constructs

Correlation among exogenous constructs

Table-2

Exogenous constructs	Perceived quality	Brand loyalty	Brand awareness	Brand association	Brand equity	Brand image
Perceived quality	-------	.694	.706	.789	.640	.706
Brand loyalty	.694	------	.807	.876	.799	.860
Brand awareness	.706	.807	------	.799	.694	.822
Brand association	.789	.876	.799	------	.849	.946
Brand equity	.640	.799	.694	.849	------	.810
Brand image	.706	.860		.946	.810	

All correlations are significant at .001 levels

The above table shows that estimated value between all the exogenous constructs of brand equity is highly correlated.

7. Confirmatory factor analysis
With the help of this model researcher find out the standardized regression coefficient, Goodness of model fit and standardized residual covariance and give the satisfactory results. The result for estimated or proposed model is given on following table-

7.1Model for goodness of fit

Table 3

Goodness of fit measures	Estimated model or Proposed model
Absolute fit measures	
CMIN	375.451
Degrees of freedom(df)	155
Likelihood ratio χ2/df	375.451/155=2.422
Non-centrality parameter(NCP)	220.451
Goodness of fit index(GFI)	.859
Root mean square residual(RMR)	.053
Root mean square error of approximation(RMSEA)	.078
Expected cross validation index	2.102
Baseline comparisons	
CFI	.901
RFI	.810
Incremental fit measures	
Adjusted goodness of fit index(AGFI)	.810
Tucker Lewis Index(TLI)	.879
Normed fit index(NFI)	.845
Parsimonious fit measures	
Parsimonious norm fit index(PNFI)	.689
Parsimonious goodness of fit index(PGFI)	.634
Model(AIC)	485.451

From the above table it is clear that the value of GFI, AGFI and NFI for the proposed model are .859, .810 and .845 which is acceptable and near to the value of standard model i.e. .9.The value of RMR and RMSEA for the proposed model is .053 and .078 which is also acceptable for the model as the value of RMR is ≤.06 and for RMSEA is ≤.08.The value of CFI for the proposed model is .901 which is acceptable as the value for the standard model is ≥.9. Based on these findings, this study concludes that the structural model fits the data well.
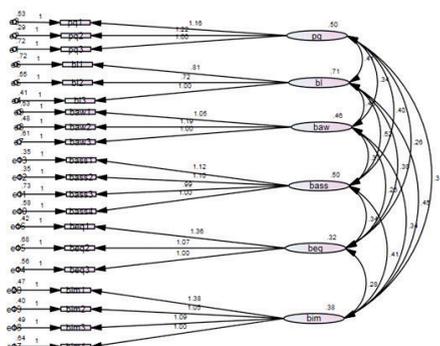
7.2 Measurement model

Figure-2(Measurement model)

(In the above figure pq= Perceived quality, bl=Brand loyalty, baw=Brand awareness, bass=Brand association, beq=Brand equity, bim=Brand image)

For checking validity, discriminant validity and convergent validity were checked. First, AVE (Average Variance Explained) should be greater than 0.50 (Fornell & Larcker, 1981). Second, AVE should be greater than MSV (Maximum shared variance) and ASV (Average Shared Variance). From table-4, AVE of each constructs is greater than 0.5. AVE is greater than MSV and ASV for all the constructs. So, discriminant validity was achieved for the measurement model.

7.3Validity of the model
The value of CR (construct reliability), AVE (average variance explained), MSV (Maximum shared variance) and ASV (Average Shared Variance) of all the constructs are given below to check the validity of the model

Table-4

	CR	AVE	MSV	ASV
Perceived quality	0.844628	0.636434	.1681	.1156
Brand loyalty	0.790918	0.558254	.2704	.2025
Brand awareness	0.792996	0.561451	.1369	.1024
Brand association	0.820602	0.535908	.1701	.1406
Brand equity	0.773795	0.533076	.1444	.0961
Brand image	0.818163	0.529814	.2025	.1281

For convergent validity, construct reliability (CR) should be greater than 0.7 and average variance explained (AVE). From above table CR is greater than 0.7 (CR>0.7) for all the constructs and also CR is greater than AVE (CR>AVE) for all the constructs. For Convergent validity, AVE (Average variance explained) of each constructs is greater than 0.5.So, convergent validity was obtained. For discriminant validity average variance explained (AVE) should be greater than maximum shared variance (MSV) and average shared variance(ASV).In the above table AVE is greater than MSV and ASV for all the constructs. So, Discriminant validity was obtained. After testing results indicates that the proposed model is reliable and valid.

7.4Structural Equation Modeling
After testing validity and reliability of the constructs in CFA, the next step is the structural equation model. The structural model is shown as follows-
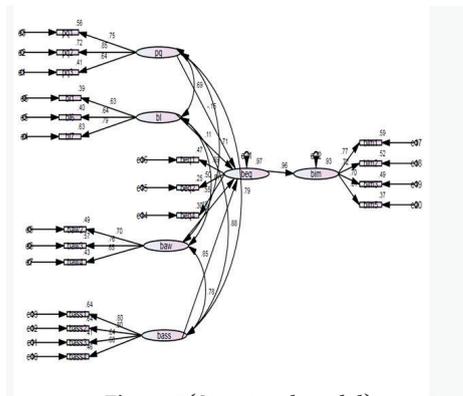

Figure-3(Structural model)

The predicting capability of a model can be assessed by the amount of variance explained by independent variables in the dependent variables. The square multiple correlations of dependent variables of the study were for brand image (19%) and for brand equity to accept (12%).

8. Hypothesis testing
Table 5 provides the results of regression analysis, and shows a significant relationship between perceived quality, brand loyalty, brand awareness and brand association with brand equity respectively and brand equity with brand image. The relationship is significant (p <0.05), which supports hypotheses

H4 and H5 except H1, H2 and H3. The standardized coefficients (β) are in the hypothesized direction, and are used to assess the contribution of dimensions of brand equity to the overall brand equity and contribution of brand equity to build the brand image. Regression analysis also reveals a significant relationship of brand equity with brand image. This supports H5. The path estimates for the proposed model is given below-

Table-5

Path	Est.	S.Est.	S.E.	C.R	P
H1 Perceived quality ➔ Brand equity	-.110	-.151	.079	-1.395	.163
H2 Brand loyalty ➔ Brand equity	.066	.107	.115	.572	.568
H3 Brand awareness ➔ Brand equity	.148	.193	.094	1.564	.118
H4 Brand association ➔ Brand equity	.616	.845	.162	3.809	***
H5 Brand equity ➔ Brand image	1.576	.962	.193	8.168	***

a. *** implies significantly different from zero at the .001 level (two-tailed).

From the above table the standardized β coefficient for the perceived quality, brand loyalty and brand awareness are -.151, .107 and .193 respectively which is not significant at p<.05 level. Therefore it does not support the hypothesis H1, H2 and H3 respectively. The standardized β coefficient for the brand association is .845 which is high and it is significantly different from zero at the .001 level. Therefore it supports the hypothesis H4 and implies that brand association has a significant effect on brand equity.

The standardized β coefficient for the brand equity is .962 which is high and it is significantly different from zero at the .001 level. Therefore it supports the hypothesis H5 and implies that brand equity has a significant effect on brand image.

9. Finding
The result shows that out of all the dimensions, brand association is found to have the most significant effect on brand equity. It has the strongest impact, which indicated the essentiality of development of brand association to build brand equity for management institutes. On the other hand brand equity is also found to have the significant effect on brand image. This is further confirmed with the data analysis having brand association (Standardized coefficient β=0.845, p=.000) followed by brand equity (Standardized coefficient β=0.962, p=.000).The summary of the hypothesis findings are as follows-

Table 6

Hypothesis	Finding
H1 Percieved quality has a significant effect on brand equity.	Not Supported
H2 Brand loyalty has a significant effect on brand equity.	Not Supported
H3 Brand awareness has a significant effect on brand equity.	Not Supported
H4 Brand association has a significant effect on brand equity.	Supported
H5 Brand equity has a significant effect on brand image.	Supported

10. Implications of study
The two important implications can be derived from the findings. The first is that management institutes of this region should concentrate on their efforts primarily on brand association which has high importance in the construct of brand equity and will contribute positively to the institute's brand equity. In the highly competitive educational market, management of the institute should work on brand association to develop it and retain it to gain repeated business.

The second implication is that management of institutes should consider the inter correlations among all four dimensions of brand equity. Brand association can be increased when the student is associated with or perceived with the brand's better quality, which in turn will increase overall brand equity and increasing brand equity will help to build the brand image.

11. Limitations
This research study is based on to measure brand equity and its role in building brand image of aicte approved management institutes of North Maharashtra region. Therefore there is a scope to study student's attitude and perception towards brand image of management institutes of other regions in India. Furthermore, the restriction of using convenience sampling techniques has indicated that the outcomes of this research cannot be generalized.

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