



An Empirical Study of Brand Equity Dimensions for Selected Consumer Durables among Selected Students of Vadodara city

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ABSTRACT

Brand equity when it is viewed from consumer perspective is called as customer based brand equity. This maker makes attempt to measure customer based brand equity for two durables viz. laptop and mobile phones with the help of David Aaker's four dimensions of brand equity among selected college going students in Vadodara city. The sample included only those students who are already using Laptop as well as Mobile Phone. On the basis of study it is observed that most of the respondents own and use well known brands of laptop and mobile. Further, an attempt has been made to examine relationship of selected demographic variables and above referred four dimension. Based on the study, it is concluded that, demographic factors of the respondents do not influence their opinion on all the five dimensions of brand equity viz. brand awareness, brand loyalty, perceived quality, brand association and overall brand equity.

KEYWORDS: brand association, brand awareness, brand loyalty, customer based brand equity, durables, perceived quality

1.0 Introduction

Today, companies have started realizing the importance of brand for their products and services. Today, almost all the products and services are branded. Consumers today prefer branded products compared to unbranded products in earlier times. Many a times they associate brand with good quality. They create the image of the brands of various products in their minds and then make purchase decisions from various alternatives of brands. The power of a brand lies in what customers have learned, felt, seen, and heard about the brand over time (Keller, 2001, p. 3). According to American Marketing Association brand is defined as, "the name, term, sign, symbol or design or combination of them, intended to identify goods and services of one seller or group of sellers and to differentiate them from those of competitors" (Kotler, 2009).

In a competitive business environment, brands play a significant role in bringing value for the firm. Marketers have realized the importance of brand equity recently. It is said that brand equity is an intangible asset for the firm and it brings financial value to the firm. Hence, they started measuring brand equity from various dimensions. Brand equity can be measured from two perspectives which is from financial perspective and from consumer perspective. Brand equity which is measured from consumer perspective is known as customer based brand equity.

In this paper, an attempt has been made, to measure brand equity from consumer perspective by following David Aaker's (1991) brand equity model and by using customer based brand equity scale constructed by authors in previous studies.

2.0 Concept of Brand Equity

According to David A. Aaker (1991), brand equity is defined as "a set of assets (and liabilities) linked to a brand's name and symbol, that adds to (or subtracts from) the value provided by a product or service to a firm and/or that firm's customers."

3.0 Customer Based Brand Equity

Customer based brand equity is defined as the differential effect that brand knowledge has on consumer response to marketing of that brand. "A brand has positive customer based brand equity if consumers react more favourably to a product, when it is marketed. Brand is said to have negative customer based brand equity when consumers react less favourably to a product. Customer based brand equity occurs when the consumer has a high level of awareness and familiarity with the brand and holds some strong, favourable and unique associations in the memory. (Keller, 2007)

4.0 Review of Literature

Kumaravel and Kandasamy (2012) studied brand equity of hypermarket store in India and found out that out of 5 measures of brand equity

i.e. Brand Awareness, Brand Loyalty, Perceived Quality, Brand Association and Brand Image, perceived quality was an important indicator for selection of a hypermarket store. Thiripurasundari and Natarajan (2011) in their study examined the determinant of brand equity in Indian passenger car Industry. Their results show that brand preference and brand loyalty are important determinant in creating brand equity.

Tong and Hawley (2009) studied customer based brand equity for sportswear brands in Chinese Market. They adopted David Aaker's model of brand equity for measuring brand equity. They studied the relationship between Aaker's four dimensions of brand equity on customer's overall brand equity. They found out that only two dimensions i.e. Brand Association and Brand Loyalty has significant effect on overall brand equity, but perceived quality and brand awareness didn't show much effect on brand equity. Natarajan and Thiripurasundari (2012) studied and measured customer based brand equity in selected car manufacturing firms by conducting a survey of 450 car owners. Their study found that, Brand Knowledge and Brand application has positive relationship with brand preference. Brand relationship has positive influence with Brand Loyalty. Hence, company image directly correlates with customer based brand equity constructs. Brand Preference and Brand Loyalty influenced Brand Equity.

Chang and Liu (2009) studied the impact of Brand equity on brand preference and purchase intentions for 18 brands from 3 service industries i.e. ADSL, mobile communications and banking credit card services through structural equation model. They studied 6 brands from each service category. They found out that in service industry brand attitude has significant impact on brand equity compared to the brand image. Also, there is positive impact of brand equity on brand preference and purchase intentions. A brand with higher level of brand equity generates higher level of consumer preference for a brand. Chen and Tseng (2010) measured brand equity of an airline company from consumer perspective. They studied interrelationships among various dimensions of brand equity i.e. brand awareness, brand image, perceived quality and brand loyalty in airline industry. Also, they studied the relationships between these four dimensions of brand equity and overall brand equity. Their results showed that brand loyalty has significant effect on overall brand equity. Hence brand loyalty is the main determinant of brand equity. There are causal relationships among various components of brand equity.

Cobb-Walgren et al. (1995) examined the effect of brand equity on consumer preferences and purchase intentions by selecting two brands, one from service category and another from product category and concluded that products with high brand equity has significant effect on brand preference and purchase intentions.

5.0 Research Methodology

The Research Methodology of the study is as under:

5.1 Objectives of the Study

The objective of this research study is to measure customer based brand equity for selected durables i.e. mobile phones and laptop owned and used daily by selected college going students by using 5 point Likert scale. The study has selected these two durables because most of the college going students in Vadodara city own and use these durables. The study has selected college going students because they depend upon these two products daily for their studies and entertainment. Following are the objectives of the study:

- 1) To measure the respondents' opinion on five dimensions of brand equity.
- 2) To study the influence of demographic factors of the respondents on their opinion on all the five dimensions of brand equity viz. brand awareness, brand loyalty, perceived quality, brand association and overall brand equity.
- 3) To find out which brands of Laptop and mobile are preferred by students.
- 4) To find out amount spent by students in purchase of Laptop and Mobile.

5.2 Hypotheses of the Study

Hypotheses for the products under study are developed as under:

5.2.1 Hypotheses for Laptop

H1: There is no relationship of age, monthly income, and educational qualifications with recognition of the brand.

H2: There is no relationship of age, monthly income, educational qualifications with loyalty towards the present brand.

H3: There is no relationship of age, monthly income, educational qualifications with respondents' trust on quality of the present brand.

H4: There is no relationship of age, monthly income, educational qualification with respondents' opinion that they like the brand image of the present brand which they use.

H5: There is no relationship of age, monthly income, educational qualifications with sticking to the present brand used by the respondents.

5.2.2 Hypothesis for Mobile Phone

H6: There is no relationship of age, monthly income, educational qualifications with recognition of the brand.

H7: There is no relationship of age, monthly income, educational qualifications with loyalty towards the present brand.

H8: There is no relationship of age, monthly income, educational qualifications with respondents' trust on quality of the present brand.

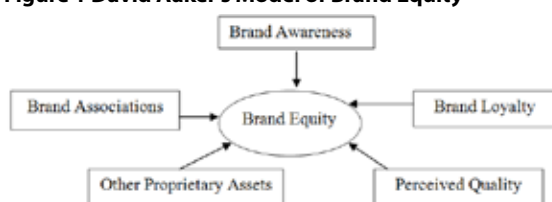
H9: There is no relationship of age, monthly income, educational qualification with respondents' opinion that they like the brand image of the present brand which they use.

H10 : There is no relationship between age, monthly income, educational qualifications with sticking to the present brand used by the respondents.

5.3 Research Model

This paper is based on David Aaker's Model of Brand Equity, which is produced as under:

Figure 1 David Aaker's Model of Brand Equity



Various researchers have developed a model for measuring customer based brand equity. The most widely used model in previous studies were of Aaker and Keller's model of Brand equity. This research study is based on David Aaker's model of brand equity which has 4 dimensions i.e. brand awareness, brand loyalty, perceived quality and brand associations.

5.4 Research Instrument

Washburn and Plank (2002) studied customer based brand equity in the context of co-branded products by administering Yoo and Donthu's (1997) scale and evaluating their scale. They concluded that Yoo and Donthu's scale is universally accepted scale for measuring customer based brand equity. Total twenty items measuring all the five brand equity dimensions was taken from Wenbo Cui (2011). The original scale to measure all brand equity dimensions and overall brand equity is the scale developed by Yoo & Donthu (2001) and Pappu et. al. (2005). Brand equity items were measured on a five point likert's scale ranging from 'strongly disagree' to 'strongly agree'. The brand equity dimensions measured are as under:

- 1) Brand awareness
- 2) Brand loyalty
- 3) Perceived quality
- 4) Brand association
- 5) Overall Brand Equity

5.5 Research Design

This study is based on descriptive research design.

5.6 Methods of Data Collection

5.6.1 Secondary Data

Secondary data are collected from journals and books.

5.6.2 Primary Data

A structured non disguised questionnaire is framed to collect primary data from respondents for measuring customer based brand equity. Questionnaire contained two sections. Section A contained questions to ascertain the demographic data of the respondents. In section II scale was used to measure customer based brand equity for two durable products viz. laptop and mobile phone.

5.7 Sampling Decisions

5.7.1 Population

All students of M.S. University, belonging to age group 18 to 40 years and who owned and used laptop and mobile phones.

5.7.2 Sampling Frame

All students of M.S. University, falling in the age group between 18 to 40 years, residing in Vadodara city and using own laptop and mobile phone.

5.7.3 Sampling Unit

Any student enrolled in either graduate, post graduate or diploma course of M.S. University was sampling unit.

5.7.4 Sample Size

Primary data was collected through questionnaire from 100 respondents which were students of M.S. University.

5.7.5 Sampling Method

Convenience sampling method is used to collect the data.

5.8 Tools used for Data Analysis

The data collected was analyzed with the help of SPSS software and chi square distribution was performed to ascertain the relationship between the variables.

5.9 Limitations of the Study

Due to time and financial constraint, the sample size has been restricted to 100 respondents selected on convenience based. The results cannot be generalized.

6.0 Data Analysis and Interpretations

6.1 Reliability Test

The reliability scores is computed as under:

Table 1 Reliability Scores

Dimensions	Laptop	Mobile Phones
All Dimensions	0.88	0.89
Brand Awareness	0.607	0.68
Brand Loyalty	0.738	0.71
Perceived Quality	0.613	0.76
Brand Associations	0.825	0.82
Overall Brand Equity	0.795	0.81

Reliability score for all the scale items was found out by using cronbach alpha coefficient to examine the internal consistency of the scale items. The value of cronbach alpha for laptop is 0.88 and for mobile phone is 0.89. So, as alpha values are greater than 0.6, so the scale is considered as reliable.

6.2 Demographic Profile of Respondents

The demographic profile of the respondents is summarized as under:

Table 2 Demographic Characteristics of the Respondents

Demographic Profile	Number	Percentage
Age Group		
18-23	84	84
24-30	14	14
31-40	2	2
TOTAL	100	100
Gender		
Male	51	51
Female	49	49
TOTAL	100	100
Marital Status		
Married	4	4
Unmarried	96	96
TOTAL	100	100
Course Enrolled		
Under Graduate	24	24
Post Graduate	58	58
PG Diploma	18	18
TOTAL	100	100
Monthly Income of the Family		
Below Rs. 25,000/-	27	27
Rs.25001/- to 50,000/-	22	22
Rs.50,001/- to 75,000/-	13	13
Rs.75001/- to 1,00,000/-	9	9
Rs.1,00,000/- & above	29	29
TOTAL	100	100

The distribution of demographic information of the respondents revealed that respondents were single, highly educated and belonged to moderate and high income group. Among 100 respondents, 51% males and 49% were females. 84 percent belonged to age group of 18 to 23. The mean age of the respondent was 22 Years. Regarding their education, 58% were pursuing post graduation, 24% graduation and remaining 18% were enrolled in graduate course. 50% students belonged to income group ranging from Rs.10000/- to Rs.50000/-. The Mean monthly family income of respondents was Rs.65498/-.

6.3 Preference of Usage of Brands of Laptop and Mobile

The various brands of laptop and Mobile used by Respondents are shown as under:

Table 3 Usage of Laptop and Mobile Phone Brands

Usage of Laptop			Usage of Mobile Phone		
Name of Brands	Number	Percentage	Name of Brands	Number	Percentage
Acer	9	9	Nokia	46	46
Toshiba	1	1	Reliance	0	0
Lenovo	15	15	LG	2	2
Samsung	4	4	Samsung	36	36
Dell	41	41	Sony	3	3
Others	30	30	Others	13	13
TOTAL	100	100	TOTAL	100	100

From table 3, we can see that, out of the mentioned brands of laptop, the most favourite brand is Dell and among mobile phone, the most favourite brand is Nokia followed Samsung. 41% of students use Dell laptop followed by 15% lenovo. For mobile phone, 46% uses Nokia brand followed by Samsung 36%.

6.4 Amount spent on Purchase of Laptop and Mobile Phone

The amount spent on purchase of laptop and Mobile Phones by Respondents is presented as under:

Table 4 Amount Spent on Purchase of Laptop and Mobile Phone

Laptop			Mobile Phones		
Amount Spent (In Rupees)	Number	Percentage	Amount Spent (In Rupees)	Number	Percentage
15000-20000	1	1	1000-5000	29	29
20001-25000	11	11	5001-10000	36	36
25001-30000	12	12	10001-15000	20	20
30001-35000	22	22	15001-20000	5	5
35001-40000	21	21	20001-30000	6	6
40001 & above	33	33	30001 & above	4	4
TOTAL	100	100	TOTAL	100	100

76% of respondents had spent amount Rs 30000/- to 40000/- for purchase of laptop. 65% of respondents had spent Rs.1000/- to Rs. 10000/- for purchase of mobile phones. The mean amount spent on purchase of Laptop is Rs.35000/- and mean amount spent on purchase of mobile is Rs.9850/-.

6.5 Testing of Hypotheses for Laptop using Chi Square Analysis

Ho: There is no association with selected demographic variables and respondent's opinion on selected brand equity dimensions.

Table 5 Association between Demographic Factors and Selected Brand Equity Dimensions

Hypotheses	Selected brand equity dimensions and Demographic Factors for Laptop	d.f.	Calculated Value	Table Value	Result
	Age				
H1	Recognize the present brand	6	4.35	12.592	Accept Ho
H2	Loyal to the present brand	8	5.43	15.507	Accept Ho
H3	Trust the quality	6	3.86	12.592	Accept Ho
H4	Like the brand image	6	3.10	12.592	Accept Ho
H5	Prefer to buy present brand	8	6.85	15.507	Accept Ho
	Monthly Family Income				
H1	Recognize the present brand	12	10.43	21.026	Accept Ho
H2	Loyal to the present brand	16	11.47	26.296	Accept Ho
H3	Trust the quality	12	14.59	21.026	Accept Ho
H4	Like the brand image	12	14.27	21.026	Accept Ho
H5	Prefer to buy present brand	16	20.81	26.296	Accept Ho
	Course Enrolled				
H1	Recognize the present brand	6	5.53	12.592	Accept Ho
H2	Loyal to the present brand	8	9.56	15.507	Accept Ho
H3	Trust the quality	6	7.86	12.592	Accept Ho
H4	Like the brand image	6	12.90*	12.592	Reject Ho
H5	Prefer to buy present brand	6	5.53	12.592	Accept Ho

* Sig. at 5%

Chi square test was performed to find out relationship between age groups, monthly family income and course enrolled and all brand equity dimensions. Only for one dimension there is association between course enrolled and the criteria "I like the brand image of the product which I use" as calculated value is more than table value viz. 12.90. For rest of the dimensions, the calculated value of chi-square is less than table value for all the brand equity dimensions, hence we do not reject the remaining hypotheses and conclude that demographic variables doesn't influence the respondents' opinion on selected brand equity dimensions viz. brand awareness, brand loyalty, perceived quality, brand association and overall brand equity for laptop.

6.6 Testing of Hypotheses for Mobile Phone using Chi Square Analysis

Ho: There is no association with selected demographic variables and respondent's opinion on selected brand equity dimensions

Table 6 Association between Demographic factors and Selected Brand Equity Dimensions

Hypotheses	Selected brand equity dimensions and Demographic Factors for Mobile Phone	d.f.	Calculated Value	Table Value	Result
	Age				
H1	Recognize the present brand	4	2.09	9.488	Accept Ho
H2	Loyal to the present brand	8	13.06	15.507	Accept Ho
H3	Trust the quality	8	3.28	15.507	Accept Ho
H4	Like the brand image	8	9.32	15.507	Accept Ho
H5	Prefer to buy present brand	8	7.21	15.507	Accept Ho
	Monthly Family Income				
H1	Recognize the present brand	8	6.70	15.507	Accept Ho
H2	Loyal to the present brand	16	14.9	26.296	Accept Ho
H3	Trust the quality	16	24.75	26.296	Accept Ho
H4	Like the brand image	16	21.30	26.296	Accept Ho
H5	Prefer to buy present brand	16	18.07	26.296	Accept Ho
	Course Enrolled				
H1	Recognize the present brand	4	5.25	9.488	Accept Ho
H2	Loyal to the present brand	8	13.23	15.507	Accept Ho
H3	Trust the quality	8	5.62	15.507	Accept Ho
H4	Like the brand image	8	14.50	15.507	Accept Ho
H5	Prefer to buy present brand	8	5.40	15.507	Accept Ho

From the above table, it is observed that, there is no significant association between selected demographic variables viz. age groups, monthly family income and course enrolled and all brand equity dimensions

as the calculated value of chi-square is less than table value for all the brand equity dimensions. So, we do not reject all our hypotheses and conclude that demographic variables doesn't influence the respondents' opinion on selected brand equity dimensions viz. brand awareness, brand loyalty, perceived quality, brand association and overall brand equity for mobile phones.

Implications

Companies should try to create brand image and its reputation because the findings of the study undertaken reveals that most of the respondents purchase a reputed and well known brand. It is also observed that respondents have shown preference to multinational brands. Hence, the competition from multinational brand should be considered to be a challenge for domestic companies to create brand awareness of their brands by devising appropriate marketing strategy in order to survive in global competitive market.

Conclusion

Branding plays a very vital role in today's competitive environment. Respondents purchase and use the most reputed and well known brands of laptop and mobile phones. It is interesting to note that the study reveals that most of the respondents use laptop of Dell and mobile of Nokia and Samsung. The study undertaken reveals that selected demographic variables like age groups, course enrolled and monthly family income of respondents doesn't influence their opinion on all the brand equity dimensions like brand awareness, brand loyalty, perceived quality, brand associations and overall brand equity for durables viz. laptop and mobile phones.

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