MEASURING CUSTOMER BASED BRAND EQUITY: EVIDENCE FROM HERO MOTOCORP TWO WHEELERS IN TAMILNADU

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Brand Equity;

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Brand Loyalty;

Abstract

Two wheeler sales in India have reached 20 million unit sales in the year 2017-18 with a growth rate of 14.80%. With a growing competition and new entrants, it is always challenging for the company to satisfy their customers and to retain them with their brand name. It is very much essential to understand the importance of brand awareness, brand association, perceived quality and brand loyalty with reference to brand equity. Considering the need and importance, this study was designed with the intention of measuring customer based brand equity with special reference to Hero MotoCorp in Tamilnadu. A well-structured questionnaire was framed considering 27 variables to measure the brand equity. Simple random sampling was adapted in this research and collected 400 samples. Structural Equation Modelling was adapted in this study and found that brand association and perceived quality has its significance and positive impact on brand equity. The outcome of this study revealed a positive and significant impact of brand associations and perceived

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quality on brand equity. The study also registered its recommendation to the brand managers of Hero MotoCorp to concentrate the four dimensions of brand equity, especially, brand association and perceived quality to have a strong customer satisfaction and brand equity.

Introduction

Branding is a term used to define and differentiate a product from one manufacturer to another. The American Marketing Association describes brand as a name, term, symbol, design or combination of them that helps to identify a product or service of a firm and differentiate them from those of competitor. In other words, a brand is an intended statement of a promise made by a company to their customers. It showcases what the customer expects from the company's products or services. A brand may carry different values depends on the role it plays in the market. A brand can enhance significant value of a product or service when it is familiar and also creates optimistic image among the customers' minds, called brand equity. Brand equity as competitive edge will influence the satisfied and loyal customers to pay more for their products or services than the competitors' products or services. It not only increases the revue pattern of a company, but also influence in reduction of marketing cost associated with it.

Brand equity can be explained and measured with the help of many factors and out of them four variables are said to be highly influenced dimensions to measure the brand equity. The identified four dimensions are

- ***Brand Awareness****: It is the first phase of brand equity building process to create awareness among the general public about the brand. This will activates the rest of the components of brand equity building process.*
- ***Brand Association****: It is the colour, image or symbol associated with a brand which the customer think of or relate to the brand.*

- ***Perceived Quality****: It is the perception of the customers on the ability of the products or services in fulfilling their expectations.*

- ***Brand Loyalty****: It is the behaviour pattern of a customer in which the satisfied customers may go for repeated purchases over time.*

The highly influenced four dimensions are brand awareness, brand association, perceived quality and brand loyalty which are used in this present study to measure the customer based brand equity with reference to Hero MotoCorp two wheelers in Tamilnadu.

1.   Literature Review

Many brand masters defined brand equity from the customer perspective where in brand equity as the value of a brand in the minds of the customer, (A.Aaker, 1991)[1], (Keller, 1993)[10] and (Osselaer & W.Alba, 2000)[15]. (A.Aaker, 1991)[1]defined a brand as assets and liabilities associated with a product of a company in the minds of their customers. He also mentioned the five dimensions of the brand equity such as brand awareness, brand association, perceived quality, brand loyalty and proprietary assets. (Keller, 1993)[10]defined brand power is in the minds of the customers with respect to the experience and knowledge about a brand.

Numerous studies have published with respect to customer based brand equity considering the theoretical model framed by (A.Aaker, 1991)[1] and (Keller, 1993)[10]. A multidimensional scale was framed to measure the brand equity, (Yoo & Donthu, 2001)[21] and it was validated by (H.Washburn & E.Plank, 2002)[7]. The conceptual framework of this study is derived from the studies carried out by (A.Aaker, 1991)[1] and (Keller, 1993)[10] with the four dimensions and its influence on brand equity.

Brand Awareness

Brand awareness is defined as the ability of the individual to recall a product and recognize a brand without external influence, (A.Aarker, 1996)[2] and (Keller, 1993)[10]. It is one of the highly influencing factors with respect to purchase decision of the customers, (Kimpakorn & Tocquer, 2010)[11] and even extended to brand loyalty.

Brand Association

The customer must aware about a brand and then extending association with a brand, (H.Washburn & E.Plank, 2002)[7]. Two dimensions are directly associated with a brand which is product related attribute (Brand Performance) and non-product related attribute (Brand Personality and Organizational Associations), (A.Aarker, 1996)[2], (Chen, 2001)[6], (Keller, 1993)[10], (Netemeyer, et al., 2004)[13] and (Pappu, Quester, & W.Cooksey, 2005)[17]. Brand performance can be evaluated with two dimensions such as fault free operations, durability in physical structure, (Lasser, Mittal, & Sharma, 1995)[12]. Brand personalities can be explained with the symbolic attributes such as social image, trustworthiness, country of origin and its perceived value, (Lasser, Mittal, & Sharma, 1995)[12].

Perceived Quality

Customers' perception about the quality of a product is called as perceived quality, (Zeithaml, 1988)[22] and (A.Aarker, 1996)[2]. This will influence them in decision making with respect to purchasing a product, (A.Aarker & Jacobson, 1994)[3]. Colour, appearance and forms and availability of the products are the factors influnce them while purchase decision, (Bernues, Olaizola, & Corcoran, 2003)[5] and (Acebron & Dopico, 2000)[4].

Brand Loyalty

Customer attachment with a brand is called as brand loyalty, (A.Aaker, 1991)[1] which is divided in to two broad categories such as behavioural loyalty and cognitive loyalty. Frequent purchases or commitment to repurchase the similar brand can be explained with the help of behavioural loyalty, (Oliver, 1999)[14] and cognitive loyalty can be defined as the intention to purchase the brand as their first choice, (Yoo & Donthu, 2001)[21]. Also brand loyalty can be measured with the customer interest to purchase a product even the price of the product increased in the market compared to competitors.

2.   Conceptual Framework

After reviewing the relevant literature, this study adapted and proposed the following conceptual framework to be tested using Structural Equation Modelling. Brand Awareness, Brand Associations, Perceived Quality and Brand Loyalty are considered as exogenous variables while

Brand Equity is considered as endogenous variables. The fitness of this model was also evaluated using Structural Equation Modelling.

Figure 01 : Conceptual Framework
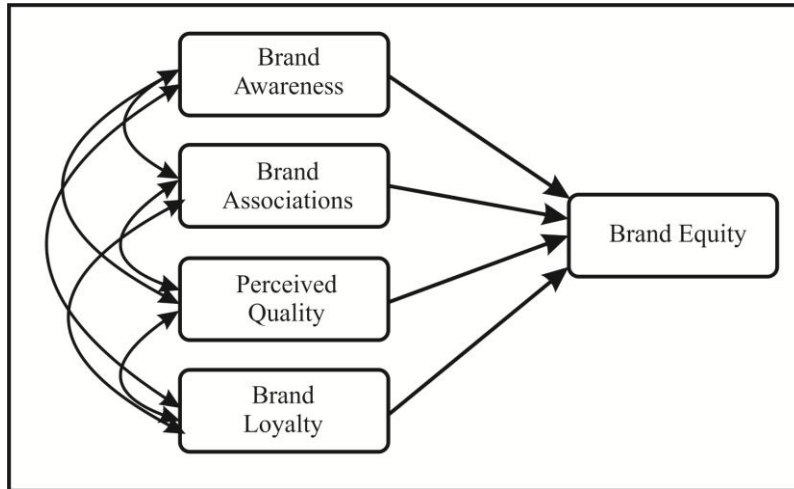
3.   Need of the study

Two wheeler sales in India has achieved units sale of 20,192,672 in the financial year 2017-18 which is the first time the industry has crossed 20 million unit sales, (Panday & Dalvi, 2018)[16]. The industry has recorded a growth rate of 14.80% and out of which contributions of scooters and motorcycles increased by 19.9% and 13.6% respectively, (Shah, 2018)[19]. With a growing competition and new entrants, it is always challenging for the company to satisfy their customers and to retain them with their brand name. It is very much essential to understand the importance of brand awareness, brand association, perceived quality and brand loyalty with reference to brand equity. Considering the need and importance, this study was designed with the intention of measuring customer based brand equity with special reference to Hero Moto Corp in Tamilnadu.

4.   Objectives

After reviewing literature published already and considering the need, this study proposed to measure the customer based brand equity of Hero MotoCorp in Tamilnadu district. Also to assess the significant influence of four variables such as brand awareness, brand associations, pervceived quality and brand loyalty on brand equity of Hero MotoCorp.

Hypothesis Framed

Considering the objectives of this research, the following hypotheses were framed and tested using statistical tools.

H1: Brand Awareness has a positive and significant impact on brand equity

H2: Brand association has a positive and significant impact on brand equity

H3: Perceived quality has a positive and significant impact on brand equity

H4: Brand loyalty has a positive and significant impact on brand equity

5. Research Methodology

The objective of this research is to understand and measure the customer based brand equity of Hero MotoCorp considering four dimensions such as brand awareness, brand association, perceived quality and brand loyalty. A well-structured questionnaire was framed considering the above mentioned four dimensions of brand equity. A total of 27 variables were used in this questionnaire to measure the brand equity and the same was sent to 550 respondents all over Tamilnadu. Simple random sampling was adapted in this research and collected 400 valid samples which are considered for this study. SPSS was used in this study to run the reliability analysis; Cronbach's Alpha. The proposed model fit and correlation between four dimensions of brand equity were measured using AMOS.

6. Results and Discusion

Reliability Analysis

Cronbach's alpha was used in this study to test the internal consistency of the questionnaire adapted to measure customer based brand equity through 27 questions representing four dimensions such as brand awareness, brand associations, perceived quality and brand loyalty. The result of Cronbach's alpha test is given below.

Table 01 : Reliability analysis

Cronbach's Alpha	N of Items
0.889	27

From the above table it is understood that the value of Cronbach's alpha is above the standard value of 0.7 which confirms the existence of strong internal consistency of the questionnaire used in this study. Hence it is concluded that the variables used in this study are more reliable to measure the customer based brand equity with respect to four dimensions such as brand awareness, brand association, perceived quality and brand loyalty.

Demographic profile of the respondents

The demographic variables such as gender, age, monthly income, educational qualification and marital status were collected and analysed using frequency distribution table. The outcomes are presented below.

Table 02 : Demographic profile of the respondents

Parameter		Frequency	Percentage
Gender	Male	211	52.8
	Female	189	47.3
Total		**400**	**100.0**
Age	< 21 years	190	47.5
	21 to 25 years	147	36.8
	25 to 30 years	28	7.0
	> 30 years	35	8.8
Total		**400**	**100.0**
Employment Status	Student	263	65.8
	Government Employee	27	6.7
	Private Employee	73	18.2
	Doing Business	37	9.3
Total		**400**	**100.0**
Income per Month (Rs.)	< 10,000	30	7.5
	10,000 to 20,000	43	10.8
	20,000 to 30,000	36	9.0
	> 30,000	28	7.0
	Not Applicable	263	65.8
Total		**400**	**100.0**
Educational	SSLC / HSC	0	0

Qualification	UG Degree	135	33.8
	PG Degree	258	64.5
	Ph.D	7	1.8
	Not Applicable	0	0
Total		**400**	**100.0**
Marital Status	Married	50	12.5
	Unmarried	350	87.5
Total		**400**	**100.0**

The statistics from above table confirms male respondents are higher than female respondents; 211 male and 189 female respondents. Out of 400 respondents, 337 respondents are in the age of less than 25 years old and among them 190 respondents are less than 21 years old. Around 65% of the respondents are students pursuing either UG or PG degree. 137 among 400 respondnets are working people in which 10.8% of the respondents are drawing a monthly salary between Rs.10,000 to Rs.20,000. The data from marital status also confirmed that majority of the respondents are unmarried; 350 out of 400 respondents.

Vehicle owned by the respondents

To understand the two wheeler brand owned by the respondents, the relevant data was collected using closed ended question. The nine two wheelers listed in this questiionare are the top selling vehicles in the year 2017-18, (Panday & Dalvi, 2018). The results given by the respondents are grouped and tabulated below.

Table 03 : Vehicle owned by the respondents

Vehicle	Count	Percentage
Hero Moto Corp	51	12.8
Honda	82	20.5
Bajaj	28	7.0
TVS Motors	58	14.5
Eicher Motors	46	11.5
Yamaha	45	11.3
Suzuki	8	2.0

Mahindra	8	2.0
Harley Davidson	7	1.8
Others	67	16.8
Total	**400**	**100.0**

It is understood from the above table that majority of the respondents own two wheelers from Hondo followed by TVS Motors; 82 and 58 respondents respectively. Only 7 respondents are having two wheelers from Harley Davidson. Out of 400 respondents, 67 are having two wheelers which are not listed in the questionnaire used for this study.

Confirmatory Factor Analysis

Confirmative Factor Analysis (CFA) was performed with the identified variables using AMOS software. Also the study derived the value of Composite Reliability (CR) and Average Variance Explained (AVE) for the identified dimensions. The result of the Confirmative Factor Analysis (CFA) along with Composite Reliability and Average Variance Explained is given below.

Table 04 : CFA for the constructs

Observed Indicators	Loadings	SE	CR	AVE
Brand Awareness				
BA1 - Some characteristics of Hero MotoCorp comes to my mind quickly	0.883	0.624		
BA2 - I can recognize Hero MotoCorp quickly among other competing brands	0.811	0.697		
BA3 - I am familiar with Hero MotoCorp brand	0.892	0.555	0.62	0.68
BA4 - Product from Hero MotoCorp comes up first in my mind when I need to make a purchase decision on the product.	0.885	0.762		
BA5 - Product from Hero MotoCorp is the only brand recalled when I need to make a purchase decision on the product.	0.865	0.733		
Brand Association				
BAS 1 - Hero MotoCorp has very unique brand image, compared to competing brands	0.633	0.82		
BAS 2 - I respect and admire people who use Hero MotoCorp	0.744	0.737	0.61	0.58
BAS 3 - I like the brand image of Hero MotoCorp	0.756	0.783		

BAS 4 - I like and trust the company, which makes Hero MotoCorp products	0.871	0.615		
BAS 5 - This brand is safe and trouble free to use/consume.	0.625	0.581		
BAS 6 - In its status and style, this brand matches my personality	0.888	0.52		
BAS 7 - I am proud to own a product of this brand	0.892	0.542		
Perceived Quality			0.73	0.67
PQ 1 - I trust the quality of products from Hero MotoCorp	0.863	0.32		
PQ 2 - I can expect superior performance from Hero MotoCorp	0.891	0.68		
PQ 3 - Products from Hero MotoCorp offer excellent features	0.895	0.499		
PQ 4 - Product from Hero MotoCorp is very reliable.	0.837	0.376		
PQ 5 - Product from Hero MotoCorp is better as compared to other brand(s) of the product in terms of the colour/flavour/form/ appearance.	0.853	0.516		
PQ 6 - I don't have difficulties in finding the information that I need from the label of the package.	0.803	0.972		
Brand Loyalty			0.71	0.64
BL 1 - I consider myself to be loyal to Hero MotoCorp	0.761	0.637		
BL 2 - When buying two wheeler, Hero MotoCorp would be my first choice	0.901	0.492		
BL 3 - I will keep on buying Hero MotoCorp as long as it provides me satisfied products	0.823	0.721		
BL 4 - I am still willing to buy Hero MotoCorp even if its price is a little higher than that of its competitors	0.821	0.565		
BL 5 - I would love to recommend Hero MotoCorp to my friends	0.922	0.463		
BL 6 - I will not buy other brands, when this brand is available at the showroom.	0.813	0.793		
Brand Equity			0.74	0.56
BE 1 - Even if another brand has the same features as Hero MotoCorp, I would prefer to buy Hero MotoCorp	0.873	1.951		
BE 2 - If another brand is not different from Hero MotoCorp in any way, it seems smarter to purchase Hero MotoCorp	0.892	1.87		
BE 3 - Hero MotoCorp is more than a product to me	0.804	1.768		

The outcome of CFA confirms that all the factor loadings were significant and higher than the standard value of 0.7, except the variables BAS1. The values of Composite Reliability of all the variables are lying in between 0.61 to 0.74; satisfied the standard value of 0.6. Also the values of Average Variance Explained are in the range of 0.56 to 0.68 which satisfied the standard value of 0.50.

Structural Equation Modelling (SEM)

Model Fit

In order to test the hypothesis framed for this, SEM was framed considering brand awareness, brand association, perceived quality and brand loyalty as exogenous variables and brand equity as endogenous variable. The proposed model fit was also analysed using Chi-Square ($\chi2$), Root Mean Square Residual (RMR), Adjusted Goodness of Fit (AGFI), Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA), and the result is presented below.

Table No 5 : Model Fit – Brand Equity Dimensions

$\chi2$/df	RMR	AGFI	CFI	RMSEA	P Close
2.71	0.086	0.853	0.919	0.143	0.000

The measurement from the above model fit confirms that the proposed model was fit with acceptable value of $\chi2$/df, 2.71 which is lessor than the standard value of 3. The values of RMR, AGFI, CFI and RMSEA are in the satisfied range [RMR<0.1, AGFI>0.8, CFI>0.9 and RMSEA<1.0]. The significance value also confirms the goodness of proposed model fit and it was statistically significant.

Hypothesis Testing

The influence of four identified dimensions such as brand awareness, brand associations, perceived quality and brand loyalty on the overall brand equity of Hero MotoCorp was tested using SEM model and also verified the frames hypothesis of this study. The test was performed considering brand awareness, brand associations, perceived quality and brand loyalty as

exogenous variables and brand equity as endogenous variable. The outcome of the hypothesis testing and its significance were presented below.

Table No 06 : Hypothesis Testing

Relationships	Standardized Coefficient	T Value	P Value	Null Hypothesis
Brand Awareness – Brand Equity	-0.14	-0.89	0.649	Accepted
Brand Association – Brand Equity	0.17	0.78	0.002	Rejected
Perceived Quality – Brand Equity	0.37	2.80	0.044	Rejected
Brand Loyalty – Brand Equity	-0.34	-1.20	0.325	Accepted

Figure 02 : Relationship between four dimensions and Brand Equity
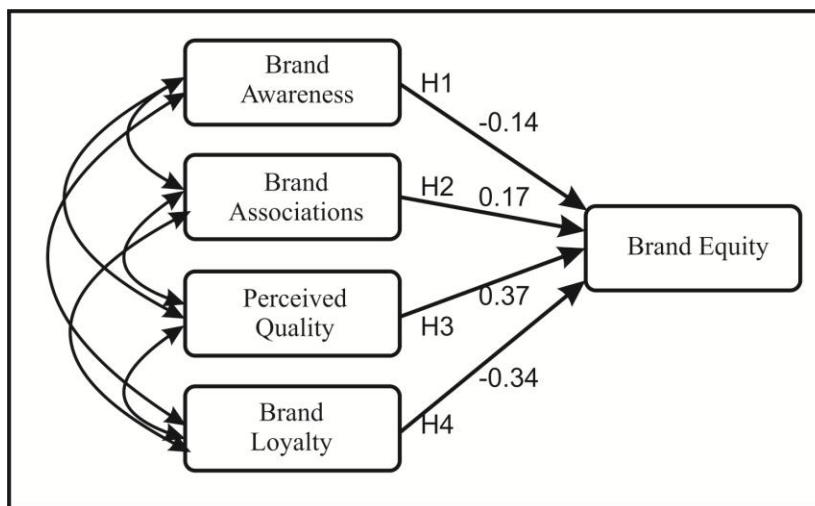
The result provided the strong and positive support with respect to the hypothesis H2 and H4, which significantly influence the brand equity. The significance values of brand association and perceived quality are lessor than the acceptable range of 0.05 and hence, the null hypothesis is

rejected and concluded that brand association and perceived quality are positive and strong influence on brand equity of Hero MotoCorp. The significance values of hypothesis H1 and H4 were not statistically significant but the standardized coefficient indicates negatively influence on brand equity of Hero MotoCorp.

Correlation between Exogenous Constructs

The correlation between the exogenous constructs such as brand awareness,brand associations, perceived quality and brand loyalty was calculated and its significant levels were tested. The results are presented below in a matrix format.

Table No 07 : Correlation Matrix

		Exogenous Constructs			
		Brand Loyalty	**Perceived Quality**	**Perceived Quality**	**Brand Awareness**
Exogenous Constructs	**Brand Loyalty**	1.000	-	-	-
	Perceived Quality	0.512*	1.000	-	-
	Brand Associations	0.560*	0.645*	1.000	-
	Brand Awareness	0.531*	0.606*	0.621*	1.000

The values from the correlation matrix confirm the existence of moderate relationship between the four exogenous constructs where the values lies in the range of 0.50 to 0.65. Among four constructs the correlation between brand association and perceived quality was the highest degree of relationship, 0.645 and all the values are significant at 1% level of significance. The least level of correlation was existed between perceived quality and brand loyalty; correlation value: 0.512.

7. Discussion and Conclusion

The present research adapted (A.Aaker, 1991)[1] brand dimensions to measure the brand equity of Hero MotoCorp in Tamilnadu. The outcome of this study revealed a positive and significant impact of brand associations and perceived quality on brand equity. The statistical analysis did not give strong and significant relationships of brand awareness and brand loyalty on brand equity of Hero MotoCorp in Tamilnadu. The study registered its recommendation to the brand managers of Hero MotoCorp to concentrate the four dimensions of brand equity, especially, brand association and perceived quality to have a strong customer satisfaction and brand equity. Though brand awareness and brand loyalty are failed to register its significance, the brand managers shall not avoid its importance while measuring brand equity.

8. Scope of the study

The brand equity of Hero MotoCorp two wheelers was measured considering the samples from Tamilnadu. The study can be extended to different states to have a consolidated view of brand equity of two wheelers of Hero MotoCorp. The brand equity was measured considering only four dimensions such as brand awareness, brand associations, perceived quality and brand loyalty. This can be extended using brand image, financial implications and performance of two wheelers of Hero MotoCorp.

References

[1]   A.Aaker, D. (1991). Managing Brand Equity. *Free Press,* New York.

[2]   A.Aarker, D. (1996). Measuring Brand Equity Across Products and Markets. *California Management Review, 38*(3), 102-120.

[3]   A.Aarker, D. & Jacobson, R (1994). Study Shows Brand-Building Pays off for Stockholders. *Advertising Age, 65*(30), 18.

[4]   Acebron, L.B., & Dopico, D.C. (2000). The importance of intrinsic and extrinsic cues to expected and experienced quality: an empirical application for beef. *Food Quality and Preference, 11*(3), 229-238.

[5]   Bernues, A., Olaizola, A., & Corcoran, K. (2003). Extrinsic attributes of red meat as indicators of quality in Europe: an application for market segmentation. *Food Quality and Preference, 14*(4), 265-276.

[6]   Chen, A. C.H. (2001). Using Free Association to Examine the Relationship between the Characteristics of Brand Associations and Brand Equity. *Journal of Product & Brand Management, 10*(7), 439-451.

[7]   Cobb-Walgren, C.J., Ruble, C.A., & Donthu, N. (1995). Brand Equity, Brand Preference, and Purchase Intent. *Journal of Advertising, 24*(3), 25-40.

[8]   H.Washburn, J., & E.Plank, R. (2002). Measuring Brand Equity: An Evaluation of a Consumer-based Brand Equity Scale. *Journal of Marketing Theory and Practice, 10*(1), 46-62.

[9]   Hankinson, G., & Cowking, P. (1995). What Do You Really Mean by the Brand? *The Journal of Brand Management, 3*(1), 43-50.

[10]   Keller, K.L. (1993). Conceptualizing, Measuring, and Managing Customer-based Brand Equity. *Journal of Marketing, 57*(1), 1-22.

[11]   Kimpakorn, N., & Tocquer, G. (2010). Service Brand Equity and Employee Brand Commitment. *Journal of Services Marketing, 24*(5), 378-388.

[12]   Lasser, W., Mittal, B., & Sharma, A. (1995). Measuring Customer-Based Brand Equity. *Journal of Consumer Marketing, 12*(4), 11-19.

[13]   Netemeyer, R.G., et al. (2004). Developing and validating measures of facets of customer-based brand equity. *Journal of Business Research, 57*(2), 209-224.

[14]   Oliver, R.L. (1999). Whence Consumer Loyalty? *Journal of Marketing, 63*, 33-44.

[15]   Osselaer, S.M., & W.Alba, J. (2000). Customer Learning and Brand Equity. *Journal of Consumer Research, 27*(1), 1-16.

[16]   Panday, A., & Dalvi, A. (2018, April 4). *Autocar Professional.* Retrieved November 16, 2018, from Autocar Professional: http://www.autocarpro.in/news-national/india-wheeler-industry-sells-20m-units-fiscal-28927

[17]   Pappu, R., Quester, P.G., & W.Cooksey, R. (2005). Consumer-based Brand Equity: Improving the Measurement – Empirical Evidence. *Journal of Product and Brand Management, 14*(3), 143-154.

[18]   Pitta, D.A., & Katsanis, L. P. (1995). Understanding brand equity for successful brand extension. *Journal of Consumer Marketing, 12*(4), 51-64.

[19]   Shah, R. (2018, April 12). *Financial Express.* Retrieved November 16, 2018, from Financial Express: https://www.financialexpress.com/auto/bike-news/top-two-wheeler-

manufacturers-in-india-2-01-crore-two-wheelers-sold-market-share-analysis-of-worlds-largest-two-wheeler-market/1130593/

[20]   Tong, X. & Hawley, J.M. (2009). Measuring customer-based brand equity: Empirical evidence from the sportswear market in China. *Journal of Product & Brand Management.* 18(4), 262-271

[21]   Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research, 52*, 1-14.

[22]   Zeithaml, V.A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing, 52*(3), 2-22.