

CUSTOMER BASED BRAND EQUITY DIMENSIONS: AN ANALYSIS WITH PSYCHOLOGICAL, PRE-PURCHASE FACTORS AND POST PURCHASE SATISFACTION

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Abstract

Branding is an art and a cornerstone of marketing and is all about creating difference. Brand equity is the willingness of someone to continue his loyalty and it measures segments from entrenched users of the brand to convertible users. Customer Based Brand Equity occurs when the consumer has a high level of awareness and familiarity with brand and holds some strong, favorable, and unique brand associations in memory. Today's fast-changing passenger car market has become tougher to analyse the brand equity of a particular brand. Hence this has become an important challenge for firms in automobile industry in general and car industry in particular, for their survival and sustainable growth in the market. This has resulted in the need for studying customer based brand equity. The study aims to understand the influence of Psychological factors in purchase of Passenger cars and the relationship between customers based brand equity dimensions and psychological factors, pre-purchase factors and post purchase satisfaction. The study has been conducted using interview schedule during the period 2017-2018. Stratified random sampling method has been adopted and analysed using ANOVA. The study is pertaining to Coimbatore City only. The study has considered only six brands such as, Maruti, Hyundai, Tata Motors, Hindustan Motors, Ford and Honda based on the market share.

Keywords: Customer Based Brand Equity, Passenger Cars, Pre purchase and Post purchase Factors, Psychological Factors

Introduction

Brands are the 21st century's warriors in the market place and a means to distinguish the goods from one brand to another. A customer as well as a firm finds an identity in a brand. A customer doesn't need any additional description of a product if he or she recognizes a brand. The value of a brand comes from its ability to gain an exclusive and prominent place in the minds of a large number of customers. It provides a strong competitive edge over the other companies and hence they are increasingly becoming important tradable assets. Brand has a name, logo, symbol, package design, or other attribute that identifies a product and distinguishes it from others. A brand's ability to gain approval from customers results in the success of brand. Branding is an art and a cornerstone of marketing and is all about creating difference. Aaker (1991) defines brand equity as "a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and or to that firm's customers". Brand equity is the willingness of someone to continue his loyalty and it measures segments from entrenched users of the brand to convertible users. Brand equity can be determined at the firm level, product level and customer/consumer level. Firm level approaches measures the brand as a financial asset. A product level approaches measure is to compare the price and no-name or private label product to an equivalent branded product. Consumer level approach seeks to map the mind of the consumers to

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find out what association with the brand. Customer Based Brand Equity model provides a blue print for the steps involved in building a strong brand. Customer Based Brand Equity occurs when the consumer has a high level of awareness and familiarity with brand and holds some strong, favorable, and unique brand associations in memory. It springs from a consumer awareness for the brand that triggers associations in memory that are linked to the brand, overtime, their positive brand attitude takes on strong emotional associations that extend well beyond the ‘liking’ the brand. The favorable brand attitude built over time by the acceptance if perceived benefits for the brand, and loyal brand behavior, resulted in strong positive brand equity: a preference for the brand that goes beyond any objective consideration of the product.

Statement of the problem

Brands play a significant role in emerging business scenario and are considered to be the wealth-generators of the twenty-first century. The marketers have high responsibility to create a value for their brand. The marketers should identify the parameters for creating value to a particular brand which helps them to sustain in the market for a long period. The customer based brand equity comprises five dimensions namely, brand awareness, brand loyalty, brand association, perceived quality- named as ‘principal assets’ and proprietary brand assets- named as ‘supplementary assets’. The need for customer based brand equity has increased abundantly for industrial sectors especially for car industry which is named as “Sunrise sector” of Indian economy, because the development in automobile sector overhauls the perception of the potential car buyers, with their disposable income and availability of profitable financial position. Today’s fast-changing passenger car market has become tougher to analyse the brand equity of a particular brand. Hence this has become an important challenge for firms in automobile industry in general and car industry in particular, for their survival and sustainable growth in the market. There are hardly few studies which have considered all the dimensions of the customer based brand equity. This has resulted in the need for studying customer based brand equity with a comprehensive coverage of core dimensions.

Objectives

The study has been conducted with the objective to

1. Influence of Psychological factors in purchase of Passenger cars
2. Study the relationship between customer based brand equity dimensions and psychological factors, pre-purchase factors and post purchase satisfaction.

Scope of the study

The study aims at examining the customer based brand equity of passenger cars considering four dimensions, namely, brand awareness, brand loyalty, brand association, and perceived quality (principal assets) from customer perspective. The dimension of proprietary brand assets (supplementary assets) is not considered in this study as it is a dimension from firm's perspective.

Research Methodology

The study is based mainly on primary data. Secondary data have also been used in this study. Primary data have been collected using interview schedule. The period considered for the study has been 2017-2018. Stratified random sampling method has been adopted for the selection of respondents in this study. The study is pertaining to Coimbatore City only. Cronbach's alpha test has been applied to test the reliability of the set of statements in the interview schedule forming the scale. The alpha coefficient has been found to be ranging from (0.770 to 0.894). The study has considered only six brands such as, Maruti, Hyundai, Tata Motors, Hindustan Motors, Ford and Honda based on the market share. Statistical tool ANOVA have been used for analyzing the data collected using SPSS version.

Consumer behavior – an Overview

The value added by brand equity may also arise from the purchasing behaviors of target consumers. Buying behavior is the decision processes and acts of people involved in buying and using products, whereas consumer buying behavior refers to the buying behavior of the ultimate consumer. A firm needs to analyse buying behavior for the following reasons, such as, buyers reactions to a firms marketing strategy, marketing concept stress and predictions how consumers will respond to marketing strategies.

Psychological Factors

Psychological factors have been considered as important factor in the consumer buying behavior process which plays a predominant role in making the decision. The factors such as family needs, status symbol, income level, and the name of brand are considered for the purchase.

Pre- purchase Factors

In pre purchase decision, customer makes two types of decisions is considered, the first type is assortment decision which directs at the choice of product or service and the second type of decision is market related decisions which concern the choice of specific brands and how to obtain them

Post- purchase satisfaction

The post purchase satisfaction leads to brand loyalty and have become a important construct for the concept. The consumer's satisfaction or dissatisfaction with the brand will influence subsequent behavior, if the consumer is satisfied, then he or she will exhibit a higher probability of purchasing the brand on the next occasion. The satisfied customer will also tend to say good things about the brand and the company to others.

The post purchase behavior depends upon the extent of consumers' set of experience stored in memory. Understanding consumer needs and buying processes is essential for building effective marketing strategies by understanding how buyers go through different stages of consumer behavior process.

Analysis and Interpretation

Psychological factors influenced in the purchase

Psychological factors have been considered for understanding the customer behaviour which have influenced in the purchase of the passenger cars. Psychological factors include the personal, cultural, and social factors which have influenced. Psychological factors are measured by summing the ratings for eight statements at five point scale given by the respondents.

Table 1 Psychological Factors influenced you to purchase the car - Descriptive Statistics

Statement	N	Minimum	Maximum	Mean	S.D
Family needs		2.00	5.00	4.3500	.7131
Status symbol		1.00	5.00	4.0680	.7979
Income level		1.00	5.00	3.9840	.7880
Family members ca		1.00	5.00	4.0140	.7969
Special family prog		1.00	5.00	3.8360	.9224
Brand name		1.00	5.00	4.0960	.7900
Festival seasons/of		1.00	5.00	3.6380	.9533
Psychological score		8.00	35.00	27.99	3.72

Source: Computed

The above table shows that the highest rating have been for 'Family needs' (4.3500) followed by mean score of 4.0960 have been found for 'brand name', mean score of 4.0680 have been found for

'status symbol', mean score of 4.0140 have been found for 'family members care', mean score of 3.9840 have been found for 'income level', mean score of 3.8360 have been found for 'special family programme' and the lowest mean score of 3.6380 have been found for 'festival seasons/offers'. The highest mean score has been for 'Family needs' and the lowest score has been for 'festival seasons/offers'. The total average rating for psychological factors is 27.99. It is inferred from the table that psychological factors have influenced in the purchase of car and have been beneficial in the decision making. Respondents are found to be more concerned about family needs which have been influenced in the purchase.

Demographic Factor vs. Psychological Factors

Ho: "The average psychological factor score does not differ significantly for the selected demographic factors".

Table 2 Demographic Factors Vs Psychological Factors

Demographic Factors	OVERALL SCORE OF PSYCHOLOGICAL FACTORS						
	Group	Mean	S.D.	No.	t-Test	F-test	Significance
Gender	Male	27.98	3.79	414	0.07		Ns
	Female	28.01	3.38	86			
Age	21-30 yrs	27.56	3.99	134		4.089	**
	31-40 yrs	28.76	3.54	177			
	41-50 yrs	27.68	3.56	118			
	Above 50 yrs	27.38	3.67	71			
Educational Level	No formal education	29.62	3.35	26		1.805	Ns
	School level	27.44	3.55	63			
	Graduate level	27.99	3.78	204			
	Post Graduate level	28.1	3.71	143			
	Professional	27.59	3.77	64			
Occupational status	Business/self-employed	28.4	3.8	228		4.065	**
	Agriculture	28	3.08	5			
	Employed	27.42	3.57	132			
	Professional	26.77	3.23	77			
	Student	28.73	4.28	30			
	Housewife	29.32	3.11	22			

	Retired	31.5	3.62	6			
Family Annual Income	< Rs. 200000	27.15	3.25	60		4.26	**
	Rs. 200001-Rs.400000	27.32	3.56	153			
	Rs.400001-Rs.600000	28.27	3.67	139			
	Rs.600001-RS.800000	29.04	3.85	96			
	>Rs. 800001	28.21	4.11	52			
Size of the fam	One	25.83	5.97	12		2.92	*
	Two	28.49	3.08	35			
	Three	27.84	3.93	127			
	Four	28.4	3.52	235			
	Above 4	27.22	3.64	91			
Number of cars owned	One	28.13	3.65	399		1.43	Ns
	Two	27.29	3.97	80			
	Three	27.47	3.8	15			
	More than 3	29.17	4.31	6			
	Once in a week	26.69	3.43	52			
	Twice in a week	28.38	3.46	40			
	Thrice in a week	27.02	3.9	58			
Total		27.99	3.72	500			

Source-Computed *significant at 5% level ** significant at 1% level Ns: Not significant

Mean scores has been calculated for male and female respondents separately. It has been found that the mean score were higher (28.01) for female respondents compared to that of male respondents which is found to be 27.98. This indicates that the psychological factors are more influenced the female respondents compared to male respondents. Age wise mean scores reveals that the respondents belonging to the age group between 31 – 40 years have been found to have the highest mean score of 28.76 and the lowest mean score of 27.38 has been found for the age group above 50 years. In respect of educational level, it is found among the respondents who do not have basic or formal education have the highest mean score of 29.62 whereas the least mean score of 27.44 has been found among the respondents who possess education at school level. Among the respondents belonging to occupational status, retired people have scored maximum of 31.50 whereas the least score of 26.77 has been found among the respondents who are professionals. Respondents having family income between Rs.600001 – Rs.800000 have been found to have the highest score of 29.04

whereas the least mean score of 27.15 has been found among the respondents with family annual income less than Rs.200000. In respect of size of the family, mean scores has been the highest with 61.00 when the size of the family is with three members. The least score of 25.83 has been found for the respondents having two members in a family. Respondents with more than three cars have been found to have the highest mean score of 29.17 and the respondents having two cars have been found to have least mean score of 27.29. ANOVA results indicate that when the calculated F-ratio value which is greater than the table value, the hypothesis is not accepted and if the calculated value is lesser than the table value, the hypothesis is accepted. The result shows that there is no significant difference in the average psychological factors score meant for educational level as well as number of cars owned. Hence, the null hypothesis is accepted in respect of these factors. However, in the case of age, occupational status and family annual income there is a significant difference in the average psychological factors score at 1 per cent level and for size of the family at 5 per cent level of significance. Hence, the null hypothesis is rejected with respect these factors. The paired t-test result shows that there is no significant difference in the psychological factors score and of the gender. Hence, the null hypothesis is accepted with respect to gender.

Product related factors Vs. Psychological factor

Ho: "The average psychological factor score does not differ significantly for the selected product related factors"

Table 3 Product Related Factors Vs. Psychological factors

Variable	OVERALL SCORE OF PSYCHOLOGICAL FACTORS						
	Group	Mean	S.D.	No.	t-test	F-test	Significance
Brand possess	Maruti	27.96	3.73	247		1.865	Ns
	Hindustan Motor	30.15	2.88	13			
	Ford	28.27	3.18	56			
	Tata	26.6	3.93	35			
	Hyundai	27.63	3.95	54			
	Honda	27.92	4.62	24			
	Others	28.42	3.45	71			
Period usage of car	1-4 yrs	28.29	3.77	285		1.965	Ns
	5-8 yrs	27.65	3.41	136			
	9-12 yrs	27.09	4	56			
	13-16 yrs	27	3.92	7			

	> 16 yrs	28.94	3.86	16			
Fuel used in the car	Petrol	27.88	3.86	204		0.51	Ns
	Diesel	28.1	3.62	282			
	Gas	27.21	3.83	14			
Mileage per litre	<10 km	28	3.28	29		6.92	**
	11-15 km	28.98	3.61	177			
	16-20 km	27.49	3.53	220			
	21-25 km	26.67	3.96	64			
	> 25 km	29.6	5.15	10			
Kilometers run in a month	500 Kms or less	27.71	3.79	147		2.25	Ns
	501-1000 Kms	27.76	3.64	178			
	1001-1500 Kms	27.67	3.76	64			
	1501-2000 Kms	28.69	3.79	64			
	Above 2000 Kms	29.17	3.47	47			
Maintenance expenditure per year	Up to Rs.5000	27.43	3.71	88		5.01	**
	Rs.5001-10000	27.32	3.57	155			
	Rs.10001-15000	28.68	3.68	223			
	Above Rs.15000	27.88	4.02	34			
Frequency of usage of the car	Every day	28.29	3.71	350		4.44	**
	Once in a week	26.69	3.43	52			
	Twice in a week	28.38	3.46	40			
	Thrice in a week	27.02	3.9	58			
Period of change in the car	< 1 yr	30.46	3.58	97		17.48	**
	1-2 yrs	28.55	3.83	83			
	3-4 yrs	27.7	3.38	96			
	5-6 yrs	27.19	3.15	69			
	> 6yrs	29.14	3.13	14			
	Not changed	26.42	3.33	141			
Family influence	Yes	28.48	3.78	391	5.7		**
	No	26.22	2.88	109			
Total		27.99	3.72	500			

Source-Computed

*significant at 5% level

** significant at 1% level

Ns: Not significant

Among the respondents who have possessed Hindustan Motors scored maximum of 30.15 and the lowest mean score of 26.60 has been found for the respondents who have possessed Tata. In respect of period of usage of the car, the mean score has been the highest with 28.94 for the respondents using car more than 16 years whereas the least mean score of 27.00 has been found for the respondents using the car between 13 – 16 years. Among the respondents who use diesel car have scored the maximum of 28.10 while the least score of 27.21 has been found for the respondents who use gasoline cars. In respect of mileage run per litre, mean score reveals that the respondents whose mileage run per litre of the car is more than 25 kilometers have been found to have the highest mean score of 29.60 and the lowest mean score of 26.67 has been found among the respondents whose mileage run per litre of the car is between 16-20 kilometers. Mean score has been calculated for kilometers run in a month. It has been found that the mean score has been higher (29.71) for the respondents who runs the car above 2000 kilometers in a month while least mean score of 27.67 has been found among the respondents who runs the car within 1001-1500 kilometers. Maintenance expenditure wise, mean score shows that the respondents spending between Rs.10001-15000 have been found to have the highest mean score of 28.68 for the maintenance of the car and the lowest mean score of 27.32 has been found among the respondents spending between Rs.5001 – 10000. In respect of the frequency of usage of the car per week, mean score has been found among the respondents who have been using the car twice in a week have scored maximum of 28.38 whereas the minimum score of 26.69 has been found for the respondents using the car once in a week.

In respect of the period of change of the car, the highest mean score of 30.46 has been found among the respondents who have changed their car less one year and the least score of 26.42 has been found among the respondents who have not changed the car. In respect of family influence in the purchase, the highest mean score of 28.48 has been found among the respondents who have been influenced by the family in the purchase of the car and the least mean score of 26.22 has been found among the respondents who are not influenced by the family. ANOVA results indicate that when the calculated F-ratio value which is greater than the table value, the hypothesis is not accepted and if the calculated value is lesser than the table value, the hypothesis is accepted. The results show that there, is no significant difference in the average psychological factor scores meant for the product related factors in respect of kilometers run in a month, period of usage of the car, fuel used, and brand possessed. Hence, the null hypothesis is accepted in respect of these factors. However, in case of period of change of car, maintenance expenditure per year, mileage run per litre and frequency of usage of cars, there is significant difference in the psychological score at 1 per cent level. Hence the

null hypothesis is rejected with respect of these factors. The paired t-test result shows that there is significant difference in the psychological factors in respect of family influence in the purchase of the car at 1 per cent level. Hence, the null hypothesis is rejected in respect of family influence in the purchase of car.

Pre-purchase factors

Pre-purchase factors have been measured by summing up the ratings given by 500 respondents for fourteen statements at five point scale given by the respondent

Table 4 Pre-purchase factors influenced you to purchase the car - Descriptive Statistics

Statements	N	Minimum	Maximum	Mean	S.D
Advertisement & promotions	500	1.00	5.00	4.1020	.9948
Credit card acceptance	500	1.00	5.00	3.5860	1.2907
Installment payment facility	500	1.00	5.00	4.0920	1.0087
Availability of variety of cars under one roof	500	1.00	5.00	4.0700	.9649
Location of car dealer	500	1.00	5.00	4.0500	.9473
Information provided by sales person	500	1.00	5.00	4.0920	.9536
Information provided by magazines	500	1.00	5.00	4.0260	.9629
Mileage run per litre	500	1.00	5.00	4.4220	.8156
Engine power	500	1.00	5.00	4.3680	.8844
Style, interior & model	500	1.00	5.00	4.3560	.8642
Safety	500	1.00	5.00	4.5160	.7175
Spacious	500	1.00	5.00	4.2960	.8472
Technology	500	1.00	5.00	4.2960	.8729
Cost of the Car	500	1.00	5.00	4.0120	1.0344
Pre-purchase factors	500	14.00	70.00	62.92	8.62

Source: Computed

From the above table, highest score 4.5160 have been found for safety followed by mean score of 4.4220 have been found for mileage run per liter, mean score of 4.3680 have been found for engine power, mean score of 4.3560 have been found for style, interior and model, mean score of 4.2960 have been found for two items spacious and technology, mean score of 4.1020 have been found for advertisement and promotions, mean score of 4.0920 have been found for installment payment facility, mean score of 4.0700 have been found availability of variety of cars under one roof. Mean score of 4.0500 have been found for location of car dealer, mean score of 4.0260 have been found for information provided by magazines, mean score of 4.0120 have been found for cost of car, and the lowest mean score of 3.5860 have been found for credit card acceptance. The total average rating for pre-purchase factors is 58.28. It is inferred that the pre-purchase factors influence in decision making in the purchase of the car. The highest score has been found for safety and the lowest score has been for credit card facilities. Respondents have given importance to the safety and mileage of the car are given much importance and has influenced them in the purchase of the car.

Demographic Factors Vs. Pre-purchase Factors

Ho: "The average pre-purchase factors score does not differ significantly for the selected demographic factors".

Table 5 Demographic Factors Vs. Pre-purchase Factors

Demographic Factors	Group	Pre-Purchase Factors Score			T-test	F-test	significance
		Mean	S.D	No.			
Gender	Male	58.45	8.2	414	1.001		Ns
	Female	57.47	8.97	86			
Age	21-30 yrs	57.39	8.69	134		5.611	**
	31-40 yrs	60.23	6.65	177			
	41-50 yrs	56.54	9.72	118			
	Above 50 yrs	58.03	8.14	71			
Educational Level	No formal education	58.96	8.29	26		1.48	Ns
	School level	60.37	6.91	63			
	Graduate level	57.89	8.77	204			
	Post Graduate level	58.34	8	143			
	Professional	57.08	8.78	64			
Occupational status	Business/self-	59.68	7.25	228		3.035	**

	employed						
	Agriculture	58.6	5.46	5			
	Employed	56.01	9.67	132			
	Professional	58.56	7.39	77			
	Student	57.6	9.54	30			
	Housewife	58.41	9.34	22			
	Retired	54.5	10.17	6			
Family Annual Income	< Rs. 200000	57.07	6.97	60			
	Rs. 200001- Rs.400000	57.9	8.24	153			
	Rs.400001- Rs.600000	60.29	7.67	139			
	Rs.600001- RS.800000	57.04	9.07	96			
	>Rs. 800001	57.77	9.59	52		3.044	*
Size of the fami	One	59.5	9.34	12			
	Two	57.89	7.67	35			
	Three	56.81	9.89	127			
	Four	58.75	7.8	235			
	Above 4	59.12	7.24	91		1.497	Ns
Number of cars owned	One	58.46	8.26	399			
	Two	57.75	8.45	80			
	Three	57.27	10.75	15			
	More than 3	56.5	5.82	6		0.331	Ns
Total		58.28	8.33	500			

Source: computed *significant at 5% level ** significant at 1% level Ns: Not significant

Mean score has been calculated out for male and female respondents separately. It has been found that the mean score has been higher (58.45) for male respondents compared to that of female respondents which is found to be 57.47. This indicates that the loyalty level is higher for male respondents than the female respondents. Age wise mean score reveals that the respondents belonging to the age group between 31 – 40 years have been found to have the highest mean score of

60.23 and the lowest mean score of 56.54 has been for the age group between 41 – 50 years. In respect of the educational level, it has been found that the respondents who are educated at school level have scored the maximum of 60.37 while least score of 57.08 has been found for the respondents who are professionally qualified. Among the respondents belonging to occupational status, business or self-employed have the highest mean score of 59.68 whereas, retired respondents have the least score of 54.5. Respondents having family annual income between Rs.400001 – Rs.600000 have been found to have the highest mean score of 60.29 whereas the least score of 57.04 has been found among the respondents with family annual income between Rs.600000-Rs.800001. In respect of size of the family, loyalty mean score has been found to have the highest mean score of 59.50 when the size of the family is with two members. The least mean score of 56.81 has been found for respondents having four members in the family. Respondents with one car have been found to have highest mean score of 58.46 and the respondents having more three cars have been found to have lowest mean score of 56.5. ANOVA results indicate that when the calculated F ratio value is greater than the table value, the hypothesis is not accepted and if the calculated value is lesser than the table value, the hypothesis is accepted. The results show that there is no significant difference in the average pre-purchase factor score meant for educational level, size of family and number of cars owned. Hence, the null hypothesis is accepted in respect of these factors. However, in the case of age and occupational status there is a significant difference at 1 per cent whereas family annual income is significantly differs at 5 per cent level. Hence, the null hypothesis for the age and occupational status are rejected for these factors. The paired t-test result shows that there is no significant difference in pre-purchase factor score in respect of the gender. Hence, the null hypothesis is accepted.

Product related factors Vs. Pre-purchase factor

Ho: "The average pre-purchase factors score does not differ significantly for the selected product related factors".

Table 6 Product related factor Vs. pre-purchase factors

Product related Factor	Group	Pre-Purchase Factors Score			t-test	F-test	Significance
		Mean	S.D	No.			
Brand possessed	Maruti	58.62	7.98	247		1.39	Ns
	Hindustan Motors	55.15	6.69	13			
	Ford	58.11	6.8	56			
	Tata	57.06	9.27	35			

	Hyundai	56.8	10.28	54			
	Honda	57	10.67	24			
	Others	60	7.75	71			
Period of usage of car	1-4 yrs	60.25	6.81	285			
	5-8 yrs	56.19	8.86	136			
	9-12 yrs	53.8	10.69	56			
	13-16 yrs	54.57	10.66	7			
	> 16 yrs	58.44	8.25	16		11.35	**
Fuel used in the car	Petrol	56.21	9.56	204			
	Diesel	59.9	6.77	282			
	Gas	55.86	10.83	14		12.81	**
Mileage run per liter	<10 km	56.07	7.71	29			
	11-15 km	56.89	9.42	177			
	16-20 km	58.54	7.86	220			
	21-25 km	61.3	5.91	64			
	> 25 km	64.6	4.48	10		5.52	**
Kilometers run in month	500 Kms or less	57.22	7.35	147			
	501-1000 Km	58.26	9.57	178			
	1001-1500 Km	59.63	7.47	64			
	1501-2000 Km	59.38	8.86	64			
	Above 2000 Km	58.4	6.16	47		1.29	Ns
Maintenance expenditure per year	Up to Rs.5000	57.97	9.05	88			
	Rs.5001-10000	56.48	9.2	155			
	Rs.10001-15000	60.06	6.78	223			
	Above Rs.15000	55.71	9.32	34		7.18	**
Frequency of usage of the car	Every day	58.95	7.89	350			
	Once in a week	52.35	10.24	52			
	Twice in a week	56.3	8.18	40			
	Thrice in a week	60.97	6.51	58		13.19	**
Period of change of car	< 1 yr	59.44	7.98	97			
	1-2 yrs	57.86	8.97	83		9.13	**

	3-4 yrs	55.2	9.14	96			
	5-6 yrs	55.28	8.74	69			
	> 6yrs	63.21	5.89	14			
	Not changed	60.82	6.23	141			
Family influence	Yes	58.07	8.29	391	1.09		Ns
	No	59.06	8.48	109			
Total		58.28	8.33	500			

Source-computed

*significant at 5% level

** significant at 1% level

Ns: Not significant

Among the respondents who have possessed Maruti scored maximum of 58.62 while the least mean score of 55.15 has been found among the respondents who possessed Hindustan motors. In respect of the period of usage of the car, mean score has the highest with 60.25 for the respondents using the car for 1 – 4years whereas the lowest mean score of 53.8 has been found for the respondents using the car for 9 – 12 years. Among the respondents who use diesel car have scored the maximum of 59.9 while the least score of 55.86 has been found for the respondents who use gasoline cars. In respect of mileage run per litre, mean score reveals that the respondents whose mileage run per litre of the car is more than 25 kilometers have been found to have the highest mean of 64.6 whereas the lowest mean score of 56.07 has been found among the respondents whose mileage run per litre less than 10 kilometers per litre. Mean score have been calculated for kilometers run in a month. It has been found that the mean score has been higher (59.63) for the respondents who run the car between 1001-1500 kilometers in a month while the lowest mean score of 57.22 has been found among the respondents who run the car less than 501-1000 kilometers in month. Maintenance expenditure wise, mean score shows that the respondents spending between Rs.10001-Rs.15000 been found to have the highest mean score of 60.06 for the maintenance of the car and the lowest mean score of 55.71 has been found among the respondents spending above Rs.15000 for the maintenance of the car per year. In the respect of the frequency of usage of the car, mean score has been found among the respondents who have been using the car thrice in a week have scored maximum of 60.97 whereas the least mean score of 52.35 has been found among the respondents using car once in a week. In respect of the period of change of the car, the highest mean score of 63.21 has been found among the respondents who have changed their car in more than 6 years and the least mean score of 55.20 has been found for the respondents who have changed within 3-4 years. In respect of family influence in the purchase, the highest mean score of 59.06 has been found among the respondents who have been not influenced by the family in the purchase of the car whereas the lowest mean score of 58.07 has

been found among the respondents who are influenced by the family in the purchase of the car. ANOVA results indicate that when the calculated F – ratio value is greater than the table value, the hypothesis is not accepted and if the calculated value is lesser than the table value, the hypothesis is accepted. The results show that there is no significant difference in the average pre-purchase factors score meant for product related factors in respect of kilometers run in a month and brand possessed. Hence, the null hypothesis is accepted with respect to these factors. The other variables, namely, period of usage of the car, period of change of the car, fuel used, maintenance expenditure of the car, mileage run per litre, frequency of usage of the car per week have significant difference at 1 per cent level. Hence, the null hypothesis is rejected with respect of these factors. The paired t-test results shows that there is no significant difference in the pre-purchase factor score in respect of the family influence at 1 per cent level of significance, and hence, the null hypothesis is rejected.

Post-purchase satisfaction

Table 7 Post-purchase factors influenced you to purchase the car - Descriptive Statistics

Statements	N	Minimum	Maximum	Mean	S.D
After sales services	500	2.00	5.00	4.4240	.7703
Insurance/renewal/claim facility	500	1.00	5.00	4.0520	.9587
Car accessories	500	1.00	5.00	4.1840	.8693
Easy availability of spare parts	500	1.00	5.00	4.2640	.8507
Availability of service station	500	1.00	5.00	4.2640	.8785
Price of spare parts	500	1.00	5.00	4.2000	.9196
Service expenses/charges	500	1.00	5.00	4.1620	.9474
Durability	500	1.00	5.00	4.1720	.7769
Mobile service	500	1.00	5.00	4.0740	.9457
Service Track	500	1.00	5.00	4.0120	.9086
Resale value	500	1.00	5.00	4.2520	.9520
Post-purchase satisfaction score	500	12.00	55.00	46.06	6.20

The above table shows the average rating for post purchase satisfaction. The highest rating have been found for 'after sales services' (4.4240), followed by 'Easy availability of spare parts' and 'Availability of service station' (4.2640), 'Resale value' (4.2520), 'Price of spare parts' (4.2000), 'Car accessories' (4.1840) 'Durability' (4.1720), 'service expenses/charges' (4.1620), 'Mobile service' (4.070), 'Insurance/renewal/claim facility' (4.0520), and the lowest rating have been found for 'Service track' (4.0120). The total average rating for post purchase factors is 46.06. The highest score has been found for the after sales service facility and the lowest score has been found for service track. Respondents should be tracked properly and intimate or remind the service period of the car which helps the customers to be more associated with brand and firm.

Demographic Factors Vs. Post-purchase satisfaction

Ho: "The average post purchase satisfaction score does not differ significantly for the selected demographic factors".

Table 8 Demographic Factors Vs. Post-purchase satisfaction

Demographic factors	OVERALL SCORE OF POST PURCHASE FACTORS						
	Group	Mean	S.D.	No.	T-test	F-test	Significance
Gender	Male	45.99	6.24	414	0.5		Ns
	Female	46.42	6	86			
Age	21-30 yrs	45.32	6.37	134		1.53	Ns
	31-40 yrs	46.8	5.53	177			
	41-50 yrs	45.82	6.88	118			
	Above 50 yrs	46.01	6.16	71			
Educational Level	No formal education	45.77	6.07	26		0.51	Ns
	School level	46.67	6.21	63			
	Graduate level	45.68	6.55	204			
	Post Graduate level	46.13	5.63	143			
	Professional	46.66	6.37	64			
Occupational status	Business/self-employed	46.48	5.83	228		2.95	**
	Agriculture	49.6	4.1	5			
	Employed	44.56	7.01	132			
	Professional	47.38	5.21	77			

	Student	45.27	7.21	30			
	Housewife	47.36	4.26	22			
	Retired	42.5	7.82	6			
Family Annual Income	< Rs. 200000	43.6	6.04	60			
	Rs. 200001- Rs.400000	46.66	6.41	153			
	Rs.400001- Rs.600000	46.71	5.66	139		3.22	*
	Rs.600001- RS.800000	45.73	6.16	96			
	>Rs. 800001	46.02	6.63	52			
Size of the family	One	46.58	7.17	12			
	Two	44.54	6.11	35			
	Three	45.7	6.74	127		0.87	Ns
	Four	46.44	5.88	235			
	Above 4	46.1	6.12	91			
Number of cars owned	One	45.93	6.07	399			
	Two	46.54	6.56	80			
	Three	46.07	7.95	15		0.44	Ns
	More than 3	48.17	5.74	6			
Total		46.06	6.2	500			

Source-computed

*significant at 5% level

** significant at 1% level

Ns: Not significant

Mean score has been calculated out of male and female respondents separately. It has been found that the mean score has been higher (46.42) for female respondents compared to that of male respondents which is found to be 45.99. This indicates that the loyalty level is higher for female respondents than the male respondents. Age wise mean score reveals that the respondents belonging to the age group between 31 – 40 years have been found to have the highest mean score of 46.80 and the lowest mean score of 45.32 has been for the age group between 21 – 30 years. In respect of the educational level, it is found that the respondents who are educated at school level have scored the maximum of 46.67 while least score of 45.68 has been found for the respondents who are educated at graduate level.

Among the respondents belonging to occupational status, agriculturalists have the highest mean score of 49.60 whereas retired respondents have the least score of 42.50. Respondents having family annual income between Rs.400001 – Rs.600000 have been found to have the highest mean score of 46.71 whereas the least score of 43.60 has been found among the respondents with family annual income is less than Rs.2,00,000. In respect of size of the family, loyalty mean score has been found to have the highest mean score of 46.58 when the size of the family is with two members. The least mean score of 44.54 has been found for respondents having three members in the family. Respondents with more than three cars have been found to have highest mean score of 48.17 and the respondents having three cars have been found to have lowest mean score of 46.07. ANOVA results indicate that when the calculated F ratio value is greater than the table value, the hypothesis is not accepted and if the calculated value is lesser than the table value, the hypothesis is accepted. The result shows that there is no significant difference in the average post purchase satisfaction with respect to age, educational level, size of family and number of cars owned. Hence, the null hypothesis is accepted in respect of these factors. However, in the case of other variables namely, occupational status have a significant difference at 1 per cent level and family annual income have a significant difference at 5 per cent level. Hence, null hypothesis is rejected with respect to these factors.

Analysis of Post-satisfaction Vs. Product related factors

Ho: "The average post-purchase satisfaction score does not differ significantly for the selected product related factors".

Table 9 Product Related Factors vs. Post-Purchase Factors

Product related factor	OVERALL SCORE OF POST PURCHASE FACTORS						
	Group	Mean	S.D.	No.	t-test	f-test	Significance
Brand possesse	Maruti	46.86	5.88	247		3.60	**
	Hindustan Motor	44.92	6.85	13			
	Ford	45	6.82	56			
	Tata	43.94	6.44	35			
	Hyundai	44.63	6.29	54			
	Honda	43.33	8.79	24			
	Others	47.37	4.52	71			
Period of usage the car	1-4 yrs	46.73	5.65	285		3.38	**
	5-8 yrs	45.36	6.36	136			

	9-12 yrs	44.13	7.49	56			
	13-16 yrs	43.43	7.3	7			
	> 16 yrs	47.94	6.82	16			
Fuel used in the	Petrol	45.42	6.9	204			
	Diesel	46.57	5.48	282			
	Gas	45.07	8.34	14		2.23	Ns
Mileage run per	<10 km	46.72	6.2	29			
	11-15 km	45.21	6.38	177			
	16-20 km	46.17	6.42	220			
	21-25 km	47.05	4.74	64			
	> 25 km	50.3	3.09	10		2.53	*
Kilometers run	500 Kms or less	44.9	6.17	147			
month	501-1000 Kms	46.45	6.83	178			
	1001-1500 Kms	46.61	5.36	64			
	1501-2000 Kms	46.64	5.92	64			
	Above 2000 Kms	46.68	4.72	47		1.86	Ns
Maintenance	Up to Rs.5000	44.8	5.07	88			
expenditure per	Rs.5001-10000	45.06	7.17	155			
	Rs.10001-15000	47.43	5.4	223			
	Above Rs.15000	44.91	7.31	34		6.78	**
Frequency of use	Every day	46.35	6.02	350			
of car per week	Once in a week	42.29	6.86	52			
	Twice in a week	46.00	6.80	40			
	Thrice in a week	47.74	4.90	58			**
Period of change	< 1 yr	45.73	5.93	97			
the car	1-2 yrs	46.23	6.52	83			
	3-4 yrs	44.96	7.6	96			
	5-6 yrs	44.55	6.26	69			
	> 6 yrs	48.29	4.12	14			
	Not changed	47.45	4.86	141		3.35	**
Family influence	Yes	45.6	6.34	391	3.18		**

	No	47.72	5.35	109			
Total		46.06	6.2	500			

source-computed

*significant at 5% level

** significant at 1% level

Ns: Not significant

Among the respondents who have possessed Hindustan motors scored maximum of 40.77 while the least mean score of 38.57 has been found among the respondents who possessed Hyundai cars.

In respect of the period of usage of the car, mean score has the highest with 40.57 for the respondents using the car for 13 – 16 years whereas the lowest mean score of 39.79 has been found for the respondents using the car for 9 – 12 years. Among the respondents who use diesel car have scored the maximum of 40.32 while the least score of 39.64 has been found for the respondents who use gasoline cars. In respect of mileage run per liter, mean score reveals that the respondents whose mileage run per liter of the car is more than 25 kilometers have been found to have the highest mean of 44.50 whereas the lowest mean score of 39.64 has been found among the respondents whose mileage run per litre between 21 – 25 kilometers. Mean score have been calculated for kilometers run in a month. It has been found that the mean score has been higher (42.87) for the respondents who run the car above Rs.2000 kilometers in a month while the lowest mean score of 39.22 has been found among the respondents who run the car within 501-1000 kilometers in month. Maintenance expenditure wise, mean score shows that the respondents spending above Rs.15001 have been found to have the highest mean score of 40.71 for the maintenance of the car and the lowest mean score of 39.45 has been found among the respondents spending between Rs.5001 – Rs.10000 for the maintenance of the car per year. In the respect of the frequency of usage of the car, mean score has been found among the respondents who have been using the car twice in a week have scored maximum of 41.55 whereas the least mean score of 39.02 has been found among the respondents using car thrice in a week. In respect of the period of change of the car, the highest mean score of 41.19 has been found among the respondents who have changed their car within 5 – 6 years and the least mean score of 38.80 has been found for the respondents who have not changed their car. In respect of family influence in the purchase, the highest mean score of 40.40 has been found among the respondents who have been influenced by the family in the purchase of the car whereas the lowest mean score of 39.21 has been found among the respondents who are not influenced by the family in the purchase of the car. ANOVA results indicate that when the calculated F – ratio value is greater than the table value, the hypothesis is not accepted and if the calculated value is lesser than the table value, the hypothesis is accepted. The results show that there is no significant difference in the average post purchase satisfaction score meant for the product related factors in respect of

kilometers and, fuel used. Hence the null hypothesis is accepted. The other variables, namely, period of usage of car, period of change of car, maintenance expenditure per year and frequency of the usage of car at 1 per cent level of significance and mileage run per litre is significant at 5 per cent level. Hence the null hypothesis is rejected with respect of these factors.

The paired t-test shows that there is a significant difference in post-purchase satisfaction score and family influence in the purchase of the car at 1% level of significance. Hence, the null hypothesis is rejected in respect of family influence in the purchase of car.

Conclusion

The customer of any brand needs to realize the fullest satisfaction after his purchase (post -purchase satisfaction). Post- purchase satisfaction is important for any customer for which Customer Based Brand Equity along with its core dimensions and pre-purchase factors plays a mentionable role. The study also reveals that the pre-purchase factors and Customer Based Brand Equity have a direct effect on post-purchase satisfaction. But psychological factors play a vital role till the stage of purchase of the car. Maruti brand cars are available comparatively at moderate prices mainly due to the strength of the brand. The brand Maruti enjoys a very high brand value due to the effect of the core dimensions of Customer Based Brand Equity along with the major contribution from their latent factors. Brand value depends on management's ability to leverage the brand's strength by adopting strategic actions to fetch more current and future profits at lowered risks. The findings in the study will be useful to the marketers to employ the various marketing strategies to maximize the sales and thereby it also help to increase the market share for their brand.

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