



Comparison of customer satisfaction level among Hero, Honda, TVS and Bajaj Two wheeler: A case study of Rajkot city

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Abstract

In two wheeler industry to retaining customers is only way of success. So, to study the customer satisfaction is essential. Present research paper compares the customer satisfaction level of Hero, Honda, TVS and Bajaj two wheelers. Samples of 384 bike users were surveyed with a structured questionnaire. One way ANOVA was used to compare satisfaction level of bike users. According to one way ANOVA it was found that, the mean satisfaction level of Hero bike users and TVS bike users are different. However, the mean satisfaction level of Hero bike users & Honda bike users, Hero bike users & Bajaj bike users, Honda bike users & TVS bike users, Honda bike users & Bajaj bike users and TVS bike users & Bajaj bike users are same.

Keywords: two wheeler, frequency, ANOVA, Tukey

1. Introduction

In 21st century, the two wheeler industry has been growing steadily all over the world. The global market for two-wheelers has shown tremendous growth over the past decade. Asia has accounted for the vast majority of growth, sales in the entire region growing more than threefold over the past decade. India is not an exception for that. Today with annual sales of 4.3 million units, the Indian two-wheeler market is the second largest in the world after china (annual sales of 10 million). The sector is divided into five major product classifications: mopeds, motorcycles, scooters, step thrus and ungeared scooters. This study is a kind of survey that shows the performance and comparison of those companies, so its show the customers view toward the companies and their problem about the companies.

The automobile industry designs, develops, manufactures, markets, and sells motor vehicles, and is one of the world's most important economic sectors in respect of revenue. The competitive nature of the automobile industry has prompted the companies to take up new and innovative market strategies towards the competition. India is the second largest manufacturer and producer of two-wheelers in the world. It stands next only to Japan and China in terms of the number of two-wheelers produced and domestic sales respectively.

Honda's first motorcycle was born out of necessity in immediate post World War II Japan, where public transportation was desperately overcrowded and gasoline severely restricted. Unique practices create unique organizations.

The study covers the users of Hero, Honda, TVS and Bajaj in Rajkot City. The study focuses on customer satisfaction level of Hero, Honda, TVS and Bajaj two wheeler. It includes availability level of products, quality of the products, customer's expectations towards the products and problems faced by customers if any at Hero, Honda, TVS and Bajaj two wheeler.

K. Lakshmi Priya (2016) ^[1] studied the customer satisfaction towards Honda two wheeler in Palakkad, Kerala. He studied the availability level of products, quality of product, customer's expectation towards the product and problem faced by customers at Honda brand.

Duggani Yuvaraju *et al.* (May 2014) ^[2] studied the customer Satisfaction towards Honda Two Wheelers in Tirupati. Their study is useful in understanding the customer relationship management of Honda bikes among customers.

Mrs. G. Mahalakshmi (November 2014) ^[3] studied the customer satisfaction on two wheelers in Theni district. Her study suggests that most of the respondents prefer the TVs XL for their riding comfort and satisfied with their service in Theni district.

The main objective of this study is to compare satisfaction level of bike users in different bike brands.

2. Materials and methods

This study was designed on the basis of prospective observational type. The data was collected from bike user of Rajkot city of four brands, namely, Hero, TVS, Honda and Bajaj. The data collection was made on the basis of questionnaire method.

The statistical techniques one way ANOVA is used to compare satisfaction level of bike users. The statistical software SPSS is used for data analysis.

3. Statistical analysis

3.1 Frequency analysis

Analysis data means studying through the table to identify the secrete of the data. This means that the simplest way of classification of the complex portion is in the form of an extension. The Table-1 shows the frequency analysis of variables, namely, gender, marital status, region, Class of family etc. Out of 384 bike users 252 are male and 132 are female. The frequency analyses of other variables are shown in following table.

Table 1: Frequency Analysis

Variable		Hero	Honda	TVS	Bajaj	Total
Gender	Male	136	68	16	32	252
	Female	40	63	27	2	132
Married status	Married	20	16	9	6	51
	Unmarried	156	115	34	28	333
Region	Urban	122	66	18	20	226
	Rural	54	65	25	14	158
Class of family	Lower	12	2	2	0	16
	Middle	162	127	41	33	363
	Upper	2	2	0	1	5
Education qualification	uneducated	2	2	0	3	7
	Primary	0	1	1	0	2
	Secondary	5	4	3	0	12
	Higher secondary	10	11	5	1	27
	Graduate	87	69	20	24	200
	Post graduate	64	33	13	6	116
Occupation	PhD	8	11	1	0	20
	Student	142	103	34	27	306
	government job	8	4	2	1	15
	Private job	12	8	3	2	25
	Semi-government job	4	8	0	1	13
	Business	5	3	1	0	9
Monthly family income	House wife	0	1	1	0	2
	Farmer	5	4	2	3	14
	Below Rs. 15000	45	22	13	11	91
	Rs.15000-Rs.25000	50	35	8	10	103
Type of two wheeler prefer most	Rs.25001-Rs.40000	41	37	15	11	104
	Rs.40001 and above	40	37	7	12	96
	Motor bike	146	51	6	34	237
Influence about purchasing bike	Scooties	4	79	2	0	85
	scoter	26	1	35	0	62
	Electronic media	16	11	8	5	40
	News paper	16	13	5	5	39
	Trade show	7	3	3	1	14
	Exhibition	12	5	3	1	21
Most like attributes	Brand image	52	50	8	9	119
	Friends	73	48	16	13	150
	Radio	0	1	0	0	1
	Luggage space	16	5	2	2	25
Most like attributes	Fuel efficiency	40	29	7	12	88
	Pick up	28	33	11	9	81
	Resale value	14	7	2	3	26
	Driving comfort	78	57	21	8	164

3.2 One Way ANOVA

The one-way analysis of variance is used to determine whether there are significant differences between the means of three or more independent (unrelated) groups. The hypothesis of one way ANOVA is,

H₀: Mean Satisfaction level of bike users for four brands are same. Vs

H₁: Mean Satisfaction level of bike users for at least two brands differ significantly.

Table-2 gives the descriptive statistics of brand of bike namely, Hero, Honda, TVS and Bajaj. It shows that, out of 384 bike users 176 are Hero bike users, 131 are Honda bike users, 43 are TVS bike users and 34 are Bajaj bike users. This table also shows that the mean satisfaction level, standard deviation, standard error, 95% confidence interval for mean, minimum satisfaction level and maximum satisfaction level for each brand of bike users.

Table 2: Descriptive

Satisfaction level								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hero	176	58.1420	6.91807	.52147	57.1129	59.1712	38.00	75.00
Honda	131	56.6260	8.86943	.77493	55.0929	58.1591	15.00	75.00
TVS	43	54.3023	8.04906	1.22747	51.8252	56.7795	29.00	74.00
Bajaj	34	56.4706	7.23307	1.24046	53.9469	58.9943	38.00	74.00
Total	384	57.0469	7.85295	.40074	56.2589	57.8348	15.00	75.00

In Table-3, the P-value of Levene test for homogeneity of variance is 0.281, which is greater than 0.05. Thus, we accept null hypothesis of equal variances. i.e. The assumption of homogeneity of variances is satisfied.

Table 3: Test of Homogeneity of Variances

Satisfaction level			
Levene Statistic	df1	df2	Sig.
1.279	3	380	.281

The output of ANOVA is shown in table-4. The P-value is 0.026. This is less than 0.05. Hence we reject the null hypothesis. Thus, we can conclude that, Mean Satisfaction level of bike users for at least two brands differ significantly. But we don't know which of the specific groups differs significantly. Hence we have to go for the multiple comparison test which is known as Tukey test.

Table 4: ANOVA

Satisfaction level					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	569.495	3	189.832	3.130	.026
Within Groups	23049.661	380	60.657		
Total	23619.156	383			

Multiple Comparisons

From the result of one way ANOVA, we know that there are significant differences between the groups as a whole. In table-5, Multiple Comparisons shows which groups differed from each other. The Tukey Post-Hoc is generally the preferred test for corresponding Post-Hoc tests in one-way ANOVA. We can see that there is significant difference in satisfaction level of bike users between the brand Hero and TVS (P-value = 0.021). However there is no differences between the brands which has P-value greater than 0.05.

Table 5: Multiple Comparisons

Dependent Variable: satisfaction level Tukey HSD						
(I) Brand of bike	(J) Brand of bike	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hero	Honda	1.51609	.89871	.332	-.8030	3.8351
	TVS	3.83972*	1.32487	.021	.4210	7.2585
	Bajaj	1.67146	1.45900	.661	-2.0934	5.4363
Honda	Hero	-1.51609	.89871	.332	-3.8351	.8030
	TVS	2.32363	1.36882	.326	-1.2085	5.8558
	Bajaj	.15537	1.49902	1.000	-3.7128	4.0235
TVS	Hero	-3.83972*	1.32487	.021	-7.2585	-.4210
	Honda	-2.32363	1.36882	.326	-5.8558	1.2085
	Bajaj	-2.16826	1.78736	.619	-6.7804	2.4439
Bajaj	Hero	-1.67146	1.45900	.661	-5.4363	2.0934
	Honda	-.15537	1.49902	1.000	-4.0235	3.7128
	TVS	2.16826	1.78736	.619	-2.4439	6.7804

*. The mean difference is significant at the 0.05 level.

4. Conclusions

The present study compares the satisfaction level of two wheeler bike users in Hero, Honda, TVS and Bajaj bike brands. On the basis of statistical analysis of this study we conclude that, the mean satisfaction level of Hero bike users and TVS bike users are different. The mean satisfaction level of TVS bike users is less as compare to Hero, Honda and Bajaj bike users. However, the mean satisfaction level of Hero bike users is greater as compare to TVS, Honda and Bajaj bike users. The results of this study will help the company and bike users effectively and efficiently.

5. References

1. Dr. Lakshmi Priya K. Customer Satisfaction towards Honda two wheeler –a study in Palakkad District, Kerala, IJARIE-ISSN (O)-2395-4396, 2016; 1(3):81-89.
2. Dr. Duggani Yuvaraju. (PDF-Scholar) and Prof. S. Durga Rao. Customer Satisfaction towards Honda Two Wheelers: A Case Study in Tirupati, IOSR Journal of Business of management (IOSR-JBM), 2319-7668. 2014; 16(5):65-74.
3. Mrs. Mahalakshmi G. Customer satisfaction on two wheelers a special reference with TVs XL Theni district, International research journal of management and commerce, ISSN: 2348-9766. 2014; 1(8):29-40.