Presentation on Two wheeler Hypothesis Analysis

By: Akshay Saini

Ankur sharma

Anupama Gagan

Arushi MBA 1^{st year} - A

Under the supervision of Porf. Dr. Ajay Singh

Objectives

- To analyze the consumers brand preferences for Two Wheelers

- To evaluate consumers attitude towards the usage of bikes

- To evaluate consumers perception about the important factors pertaining to bike purchase decision

Hypotheses

1. Sales of different brand of two wheelers are uniformly distributed i.e there is no significant difference in the sales of different two wheeler brands.

2. There is no significant difference between the users of two wheelers on the factors like gender, occupation etc towards their attitude about the usage of bikes.

3. Different factors which are important in the purchase decision of two wheeler buyers do not differ significantly.

Hypothesis 1

To test hypothesis 1, chi square test was applied.

- Brand   Count

- Bajaj   50

- Hero Motocorp   43

- Yamaha   22

- Honda   7

- Others   3

- Total   125

- Chi square value (calculated) = 70.64

- Critical Chi square value (0.05, 4) = 9.4877

- Chi square value (calculated) is greater than critical chi square value, hence hypothesis 1 is rejected and it can be concluded that sales of different brand of two wheelers are not uniformly distributed

Hypotheses 2

Hypothesis 2 (a): Married and Unmarried consumers do not differ significantly in their attitude towards bikes
To test this hypothesis z test was applied with following results

Since the calculated z value is less than z critical (two tailed) at .05 significance level, hence null hypothesis is accepted and it can be said that there is no significant difference in the attitude
of married and unmarried consumers towards the usage of bikes.

	Mean	n	Z value	Z value critical at .05 and 125 df	Result
Married	53.88	50	-0.77	1.95	Insignificant
Unmarried	54.50	75			Accept the null hypothesis

Hypothesis 2 (b):

- Consumers of different age group do not differ significantly in their attitude towards bikes

- To test this hypothesis ANOVA was applied with following results

Age Group	Count	Sum	Average	Variance
Under 18 - 25	47	2569	54.66	18.75
26-35	46	2488	52.1	13.81
36-45	32	1725	53.9	25.83

ANOVA Results

| Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	12.8838846	2	6.441942			
Within Groups	2284.924115	122	18.72889	0.343958	0.709644	3.070512

- Since F calculated is less than F critical at 95% significance level, hence Null hypothesis is accepted.

- So, it can be concluded that consumers of different age groups do not differ in their attitude for bikes

Hypothesis 3

Different factors which are important in the purchase decision of two wheeler buyers do not differ significantly.

To test this hypothesis, ANOVA was used with following results

Age Group	Count	Sum	Average	Variance
Price	125	4894	39.152	332.9525
Brand Name	125	2198	17.584	56.87394
Style	125	1088	8.704	17.29071
Comfort	125	1018	8.144	12.43071
Mileage	125	1090	8.72	18.52581
After sales service	125	712	5.696	3.293935
Maintenance	125	1500	12	6.758065

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	101009	6	16834.83			
Within Groups	55567.58	868	64.01795	262.9705	2.1798E-191	2.109008

Since F calculated is much greater than F critical at 95%significance level, hence Null hypothesis is rejected.

So, it can be concluded that different factors which are important in the purchase decision of two wheeler buyers differ significantly.
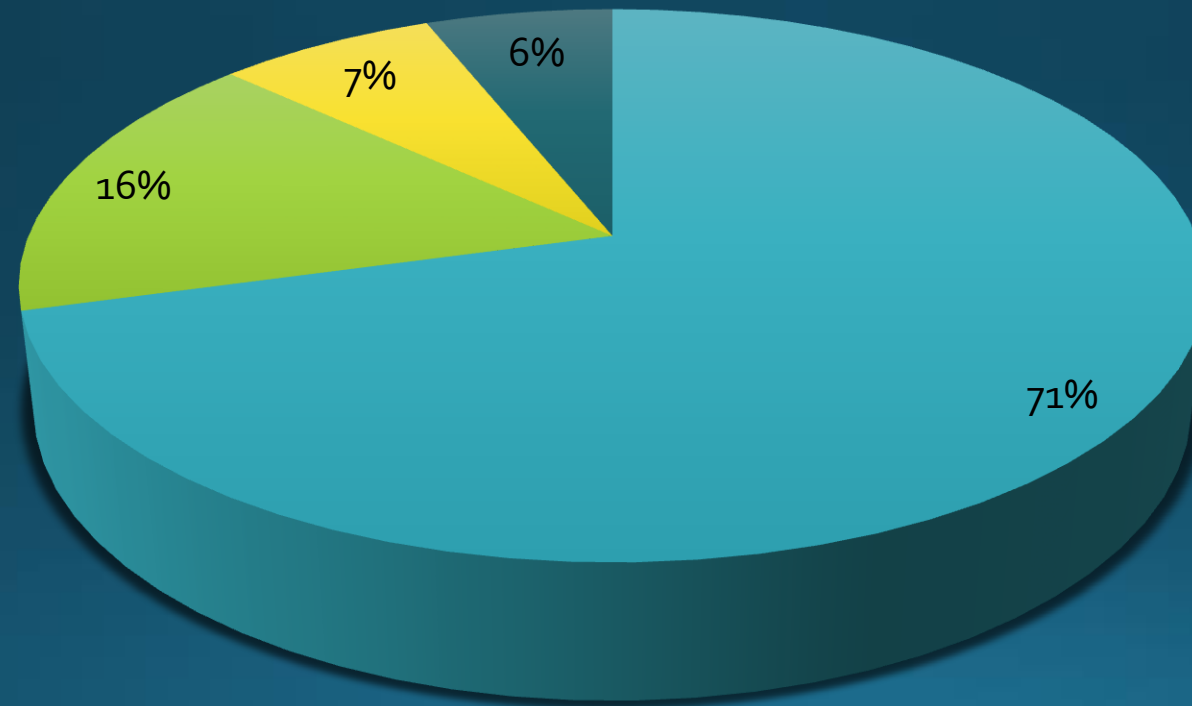
Descriptive statistics analysis

1. Most popular brand: Bajaj

Brand	Value
Others	3
Honda	7
Yamaha	22
Hero Motocorp	43
Bajaj	50

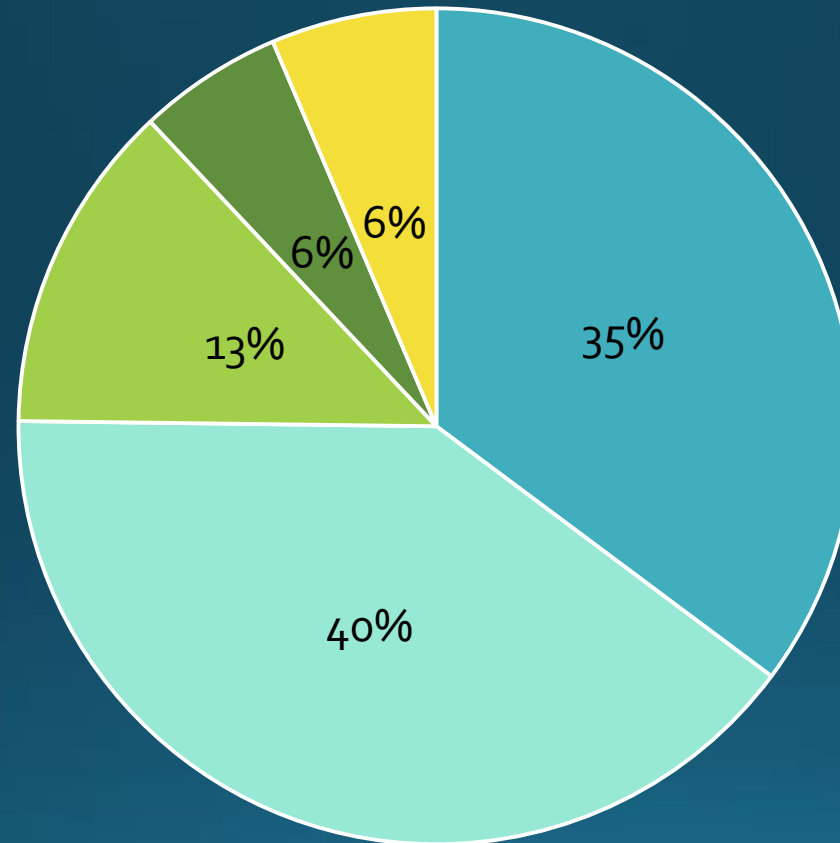Axis: 0, 10, 20, 30, 40, 50, 60
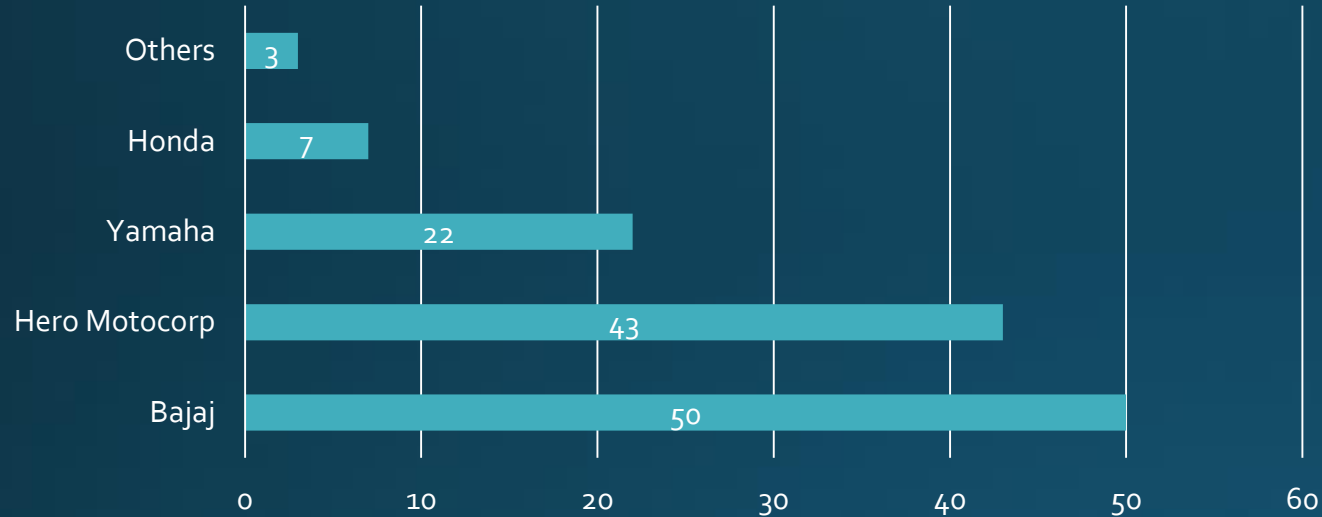
2. Kilometer ride:

- Minimum: 2 KM
- Maximum: 80 KM
- Average: 19.87 KM

3. How many times have you been involved in any crash while you were riding a motorcycle?

- More than 5 times
- 3 - 5 times
- 1-2 times
- Never

71%
16%
7%
6%

5. Characteristics of factors which are considered most for purchasing a bike

Score	Price	Brand Name	Style	Comfort	Mileage	After sales Service	Maintenance
Max	60	40	25	25	25	15	15
Min	10	5	5	4	4	5	5
Avg.	39.15	17.58	8.70	8.14	8.72	5.70	12.00
Sum	4894	2198	1088	1018	1090	712	1500

Price is the most important factor then brand name then maintenance
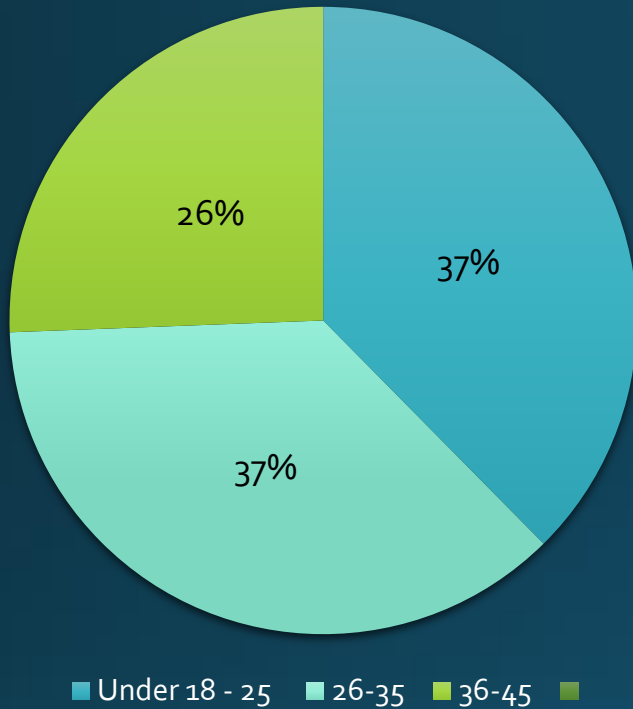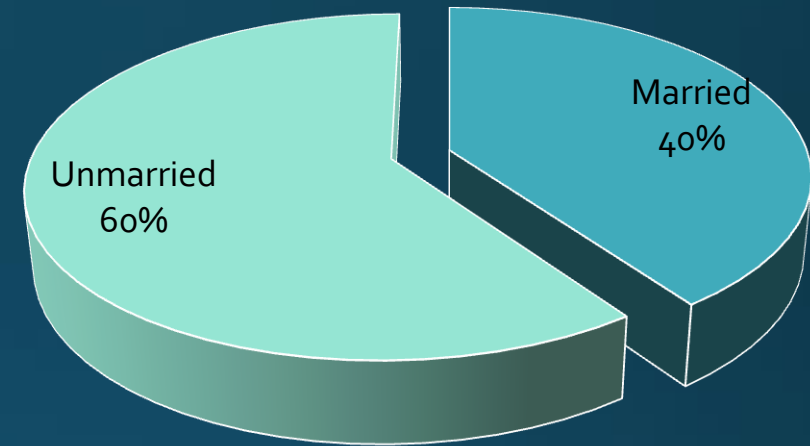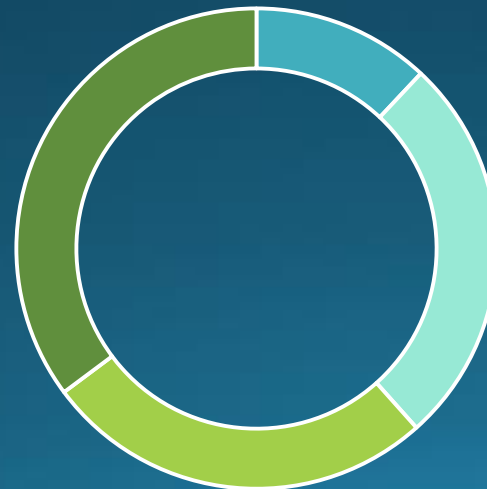
4. Educational qualification:

34%
38%
26%
2%
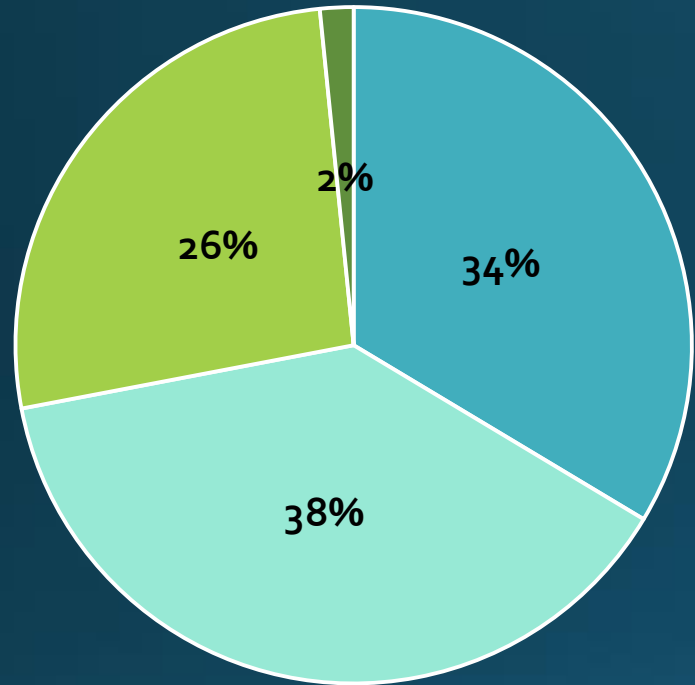
☐ Under- Graduate   ☐ Graduate   ☐ Post- Graduate   ☐ Others:

5.Occupation:

38%
51%
8%
3%
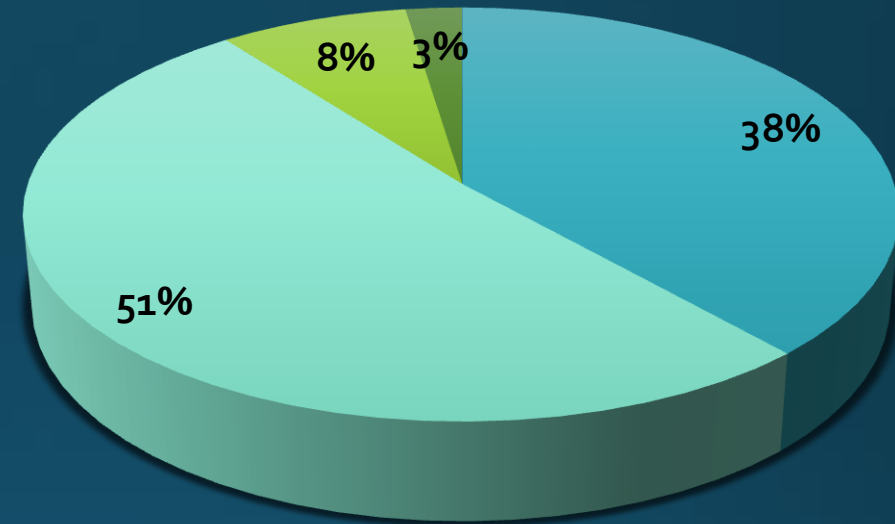
☐ Student   ☐ Service   ☐ Business   ☐ Professionals

Thank You!