

# **CUSTOMER SATISFACTION TOWARDS TATA NEXON**

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# ABOUT COMPANY

Tata Motors Limited is India's biggest automobile company and a major global maker of cars, SUVs, buses, trucks, and defense vehicles. It was founded in 1945 by J. R. D. Tata and is based in Mumbai. The company is part of the Tata Group, a respected Indian business group started by Jamshedji Tata in 1868. Tata Motors has factories in India and other countries like the UK, South Korea, South Africa, Argentina, and Thailand. Its vehicles are sold in more than 170 countries around the world.

Tata Motors began by making commercial vehicles in 1954 through a partnership with Daimler-Benz and entered the passenger vehicle market in 1991. Over the years, it has grown by adding well-known global brands like Jaguar Land Rover. The company earns money through vehicle sales, services after purchase, technology licenses, financial services like leasing and insurance, and selling spare parts.

Currently, Tata Motors Limited had a market capitalization of approximately ₹2,61,891 Cr. The company is known for focusing on innovation, quality, and caring for the environment. Its vision is to be the best in how it works, what it makes, and in following strong values and ethics. The mission of Tata Motors is to give great value to customers, reward its investors well, and make a positive difference in society.

# RESEARCH OBJECTIVE & METHODOLOGY

OBJECTIVE OF THE STUDY : “To study the customer satisfaction level for Tata Nexon”.

COLLECTION OF DATA : For collecting Primary Data from the users, a questionnaire was designed. Then questionnaire was administered to the consumers who use Tata Nexon car. Then a pilot survey was conducted to check the validity of the survey.

Survey Area: Gaya

Mode of survey: Online Questionnaire

Sample size : 255

The formula for calculating the sample size is given by:

$$\text{Unlimited population: } n = \frac{z^2 \times \hat{p}(1-\hat{p})}{\varepsilon^2}$$

$$\text{Finite population: } n' = \frac{n}{1 + \frac{z^2 \times \hat{p}(1-\hat{p})}{\varepsilon^2 N}}$$

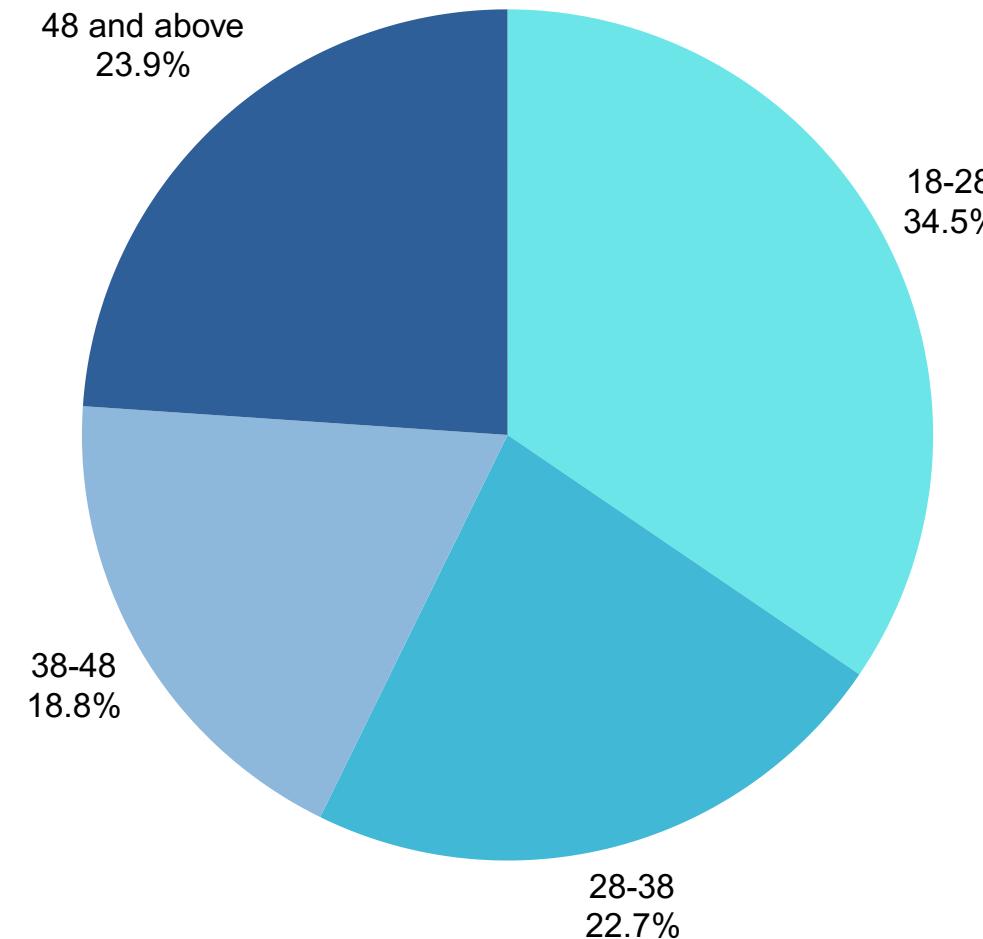
Where:

- $n$  = required sample size
- $Z$  = Z-score corresponding to the desired level of confidence (typically chosen from standard normal distribution tables; for example, for a 95% confidence level,  $Z$  is approximately 1.96)
- $p$  = estimated proportion of the population that possesses the characteristic of interest
- $E$  = desired margin of error
- $N$  is the population size

For our study, to calculate the required sample size, we have taken a confidence level of 95% and the corresponding  $z$  value will be 1.96.  $p$  represents the population proportion which is 0.7 in our case.

# EXPLORATORY DATA ANALYSIS

## Distribution of Age



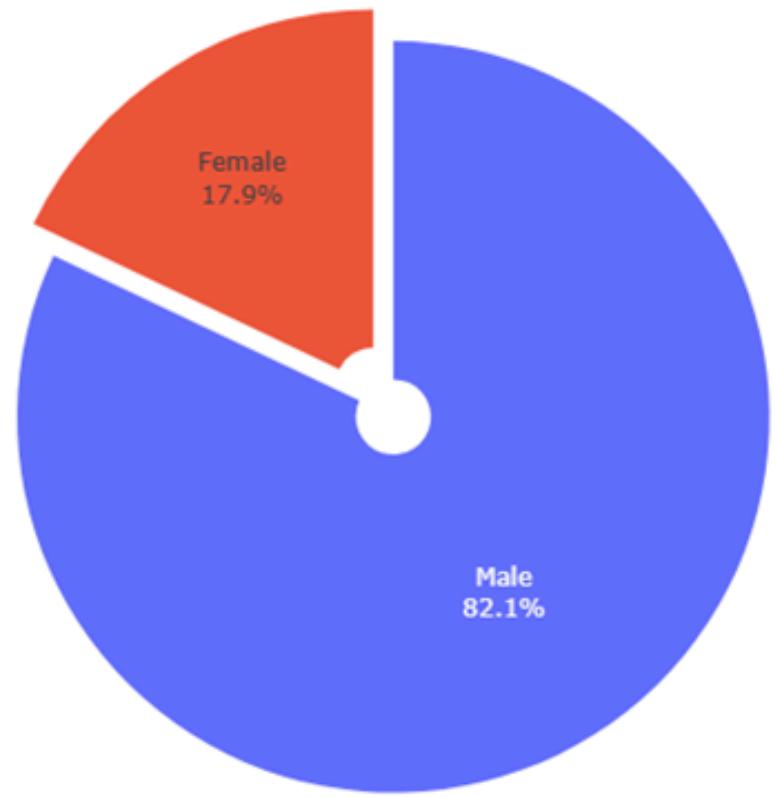
Age	Count of Age:
18-28	88
28-38	58
38-48	48
48 and above	61

### Interpretation:

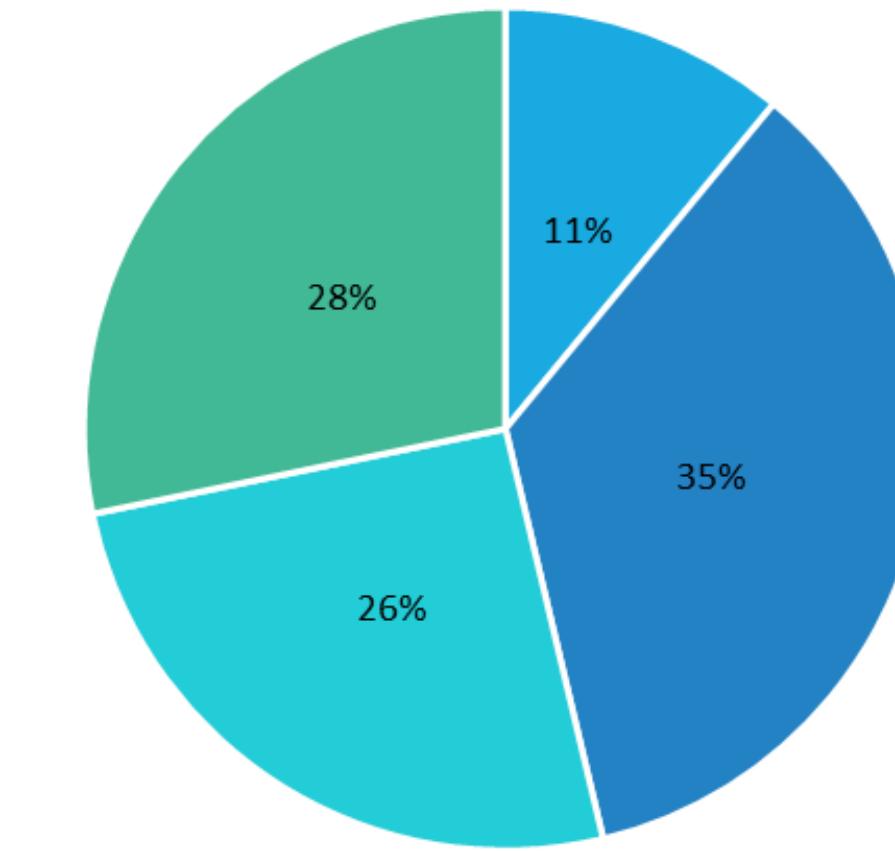
We can observe from the table that majority of the respondents are in the age group 18-28 years followed by 48 and above years, 28-38 years and lastly 38-48 years. This frequency is a result of random sampling as no particular age group has been targeted.

- 88 respondents between age group 18-28 years.
- 61 respondents are from the age group 48 and above years.
- 58 respondents between age group 28-38 years.
- 48 respondents are from the age group 38-48

## Distribution of Gender



## Distribution of Occupation:



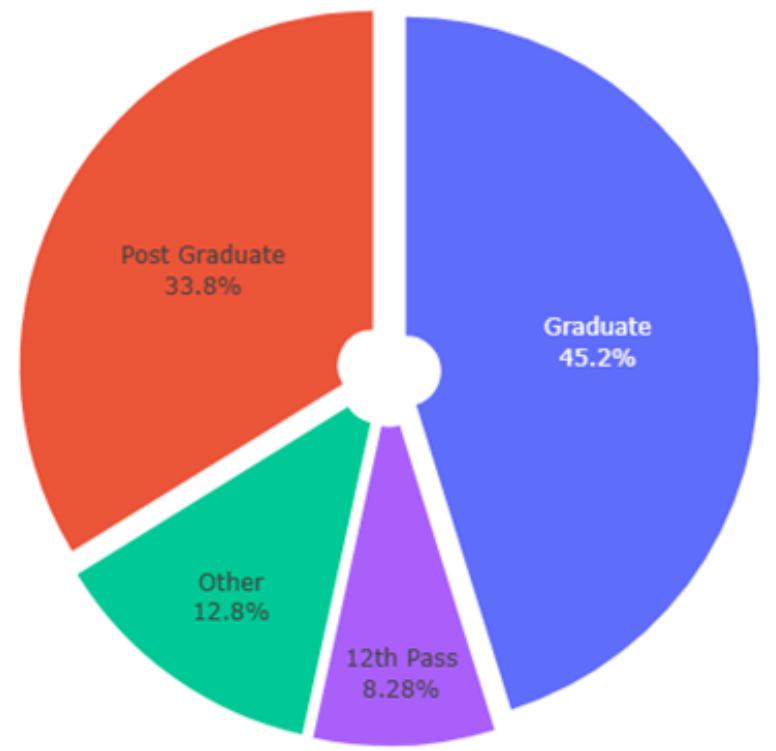
Gender	Count of Gender
Male	214
Female	41

Interpretation: We can observe from the graph above that out of a total of 255 respondents, 214 are male and 41 are female. Males comprise a large fraction of users.

Profession:	Count of Profession:
Business	28
Government employee	90
Other	65
Private employee	72

Interpretation: We can observe from the graph above that out of a total of 255 respondents, 28 are doing business, 90 are Government employee, 65 are Other and 72 are Private employee. Government and Private employee comprises a large fraction of users.

Distribution of Education Level:

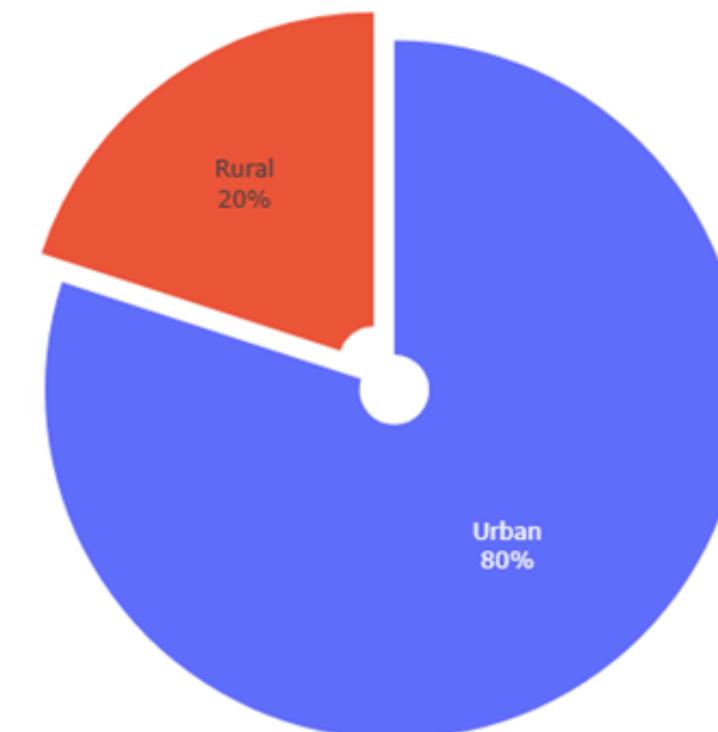


Education level :	Count of Education level :
12th Pass	20
Graduate	112
Other	33
Post Graduate	90

Interpretation: We can observe from the chart that majority of the respondents are graduates.

- 20 respondents are 12th qualified.
- 112 respondents are Graduate.
- 90 respondents are post graduates.
- 33 respondents are others.

Distribution of Place:

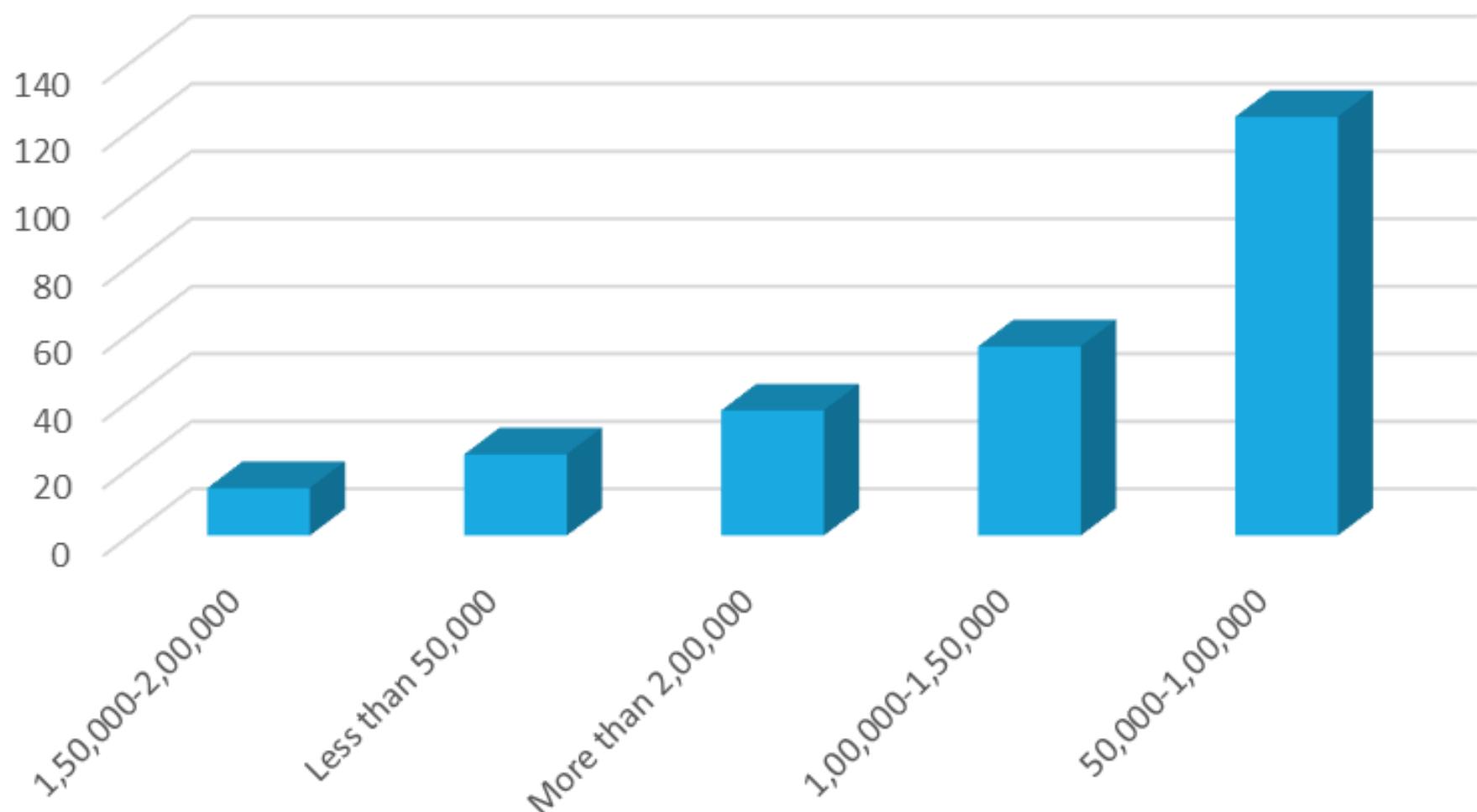


Place :	Count of Place :
Rural	51
Urban	204

Interpretation: We can observe from the chart that majority of the respondents belongs to Urban area.

- 51 respondents belong to rural area.
- 204 respondents belong to urban area.

## Monthly Income

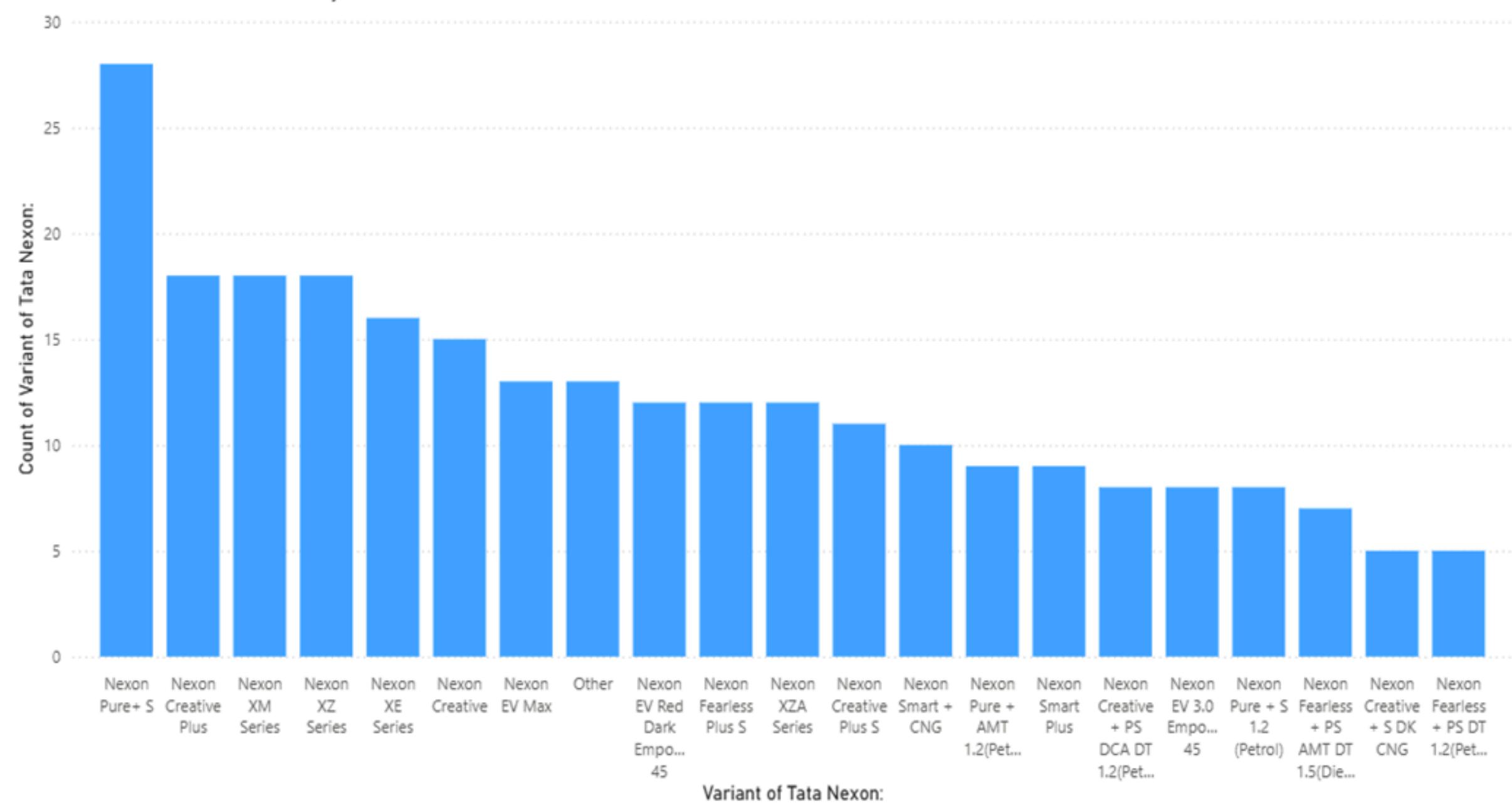


Monthly income :	Count of Monthly income :
1,50,000-2,00,000	14
Less than 50,000	24
More than 2,00,000	37
1,00,000-1,50,000	56
50,000-1,00,000	124

### Interpretation

From the above pie chart it is clear that the majority of respondents belongs average monthly income of 50,000 – 1,00,000 (124) followed by the respondents whose income is in between 1,00,000 – 1,50,000 (56). 37 respondents belong to the people whose salary is more than 2,00,000, 24 people have the monthly salary of less than 50,000 and 14 respondents belong 1,50,000 – 2,00,000 monthly income group.

Count of Variant of Tata Nexon: by Variant of Tata Nexon:



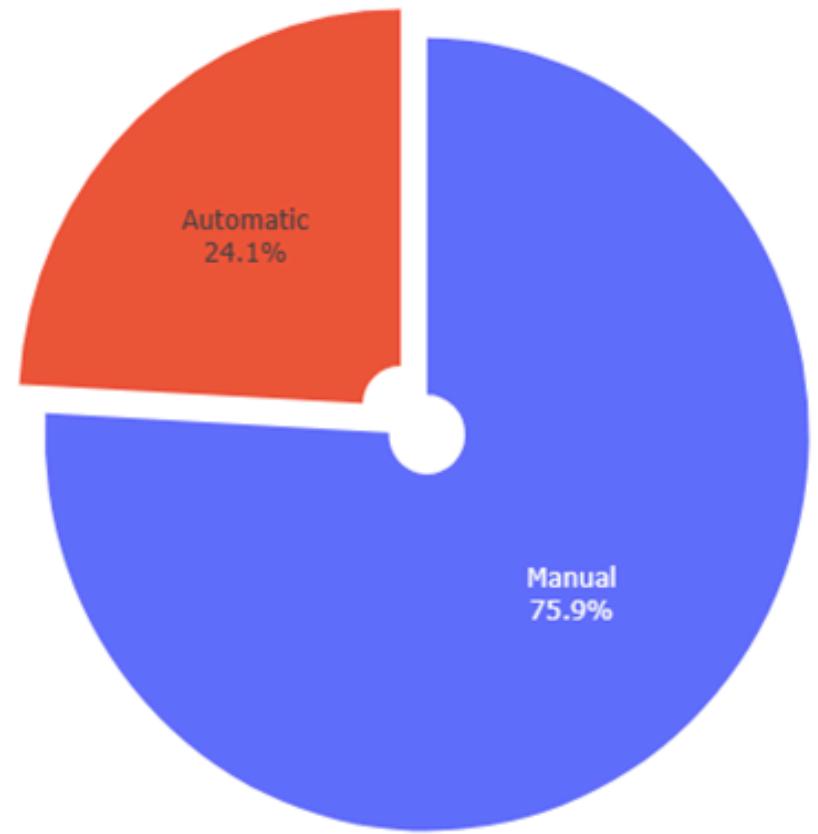
Variant of Tata Nexon:

Variant of Tata Nexon:	Count of Variant of Tata Nexon:
Nexon Pure+ S	28
Nexon Creative Plus	18
Nexon XM Series	18
Nexon XZ Series	18
Nexon XE Series	16
Nexon Creative	15
Nexon EV Max	13
Other	13
Nexon EV Red Dark Empowered+ 45	12
Nexon Fearless Plus S	12
Nexon XZA Series	12
Nexon Creative Plus S	11
Nexon Smart + CNG	10
Nexon Pure + AMT 1.2(Petrol)	9
Nexon Smart Plus	9
Nexon Creative + PS DCA DT 1.2(Petrol)	8
Nexon EV 3.0 Empowered 45	8
Nexon Pure + S 1.2 (Petrol)	8
Nexon Fearless + PS AMT DT 1.5(Diesel)	7
Nexon Creative + S DK CNG	5
Nexon Fearless + PS DT 1.2(Petrol)	5
Total	255

### Interpretation:

- Most preferred variant: Nexon Pure+ S (28 units).
- High demand: Creative Plus, XM Series, and XZ Series (18 each).
- EV interest rising: EV Max, Red Dark Empowered+ 45, and EV 3.0 Empowered 45 show good traction.
- Other variants like Fearless Plus S and XZA Series also show solid presence.
- Low preference: Some petrol/CNG combinations have minimal uptake (5–7 units).

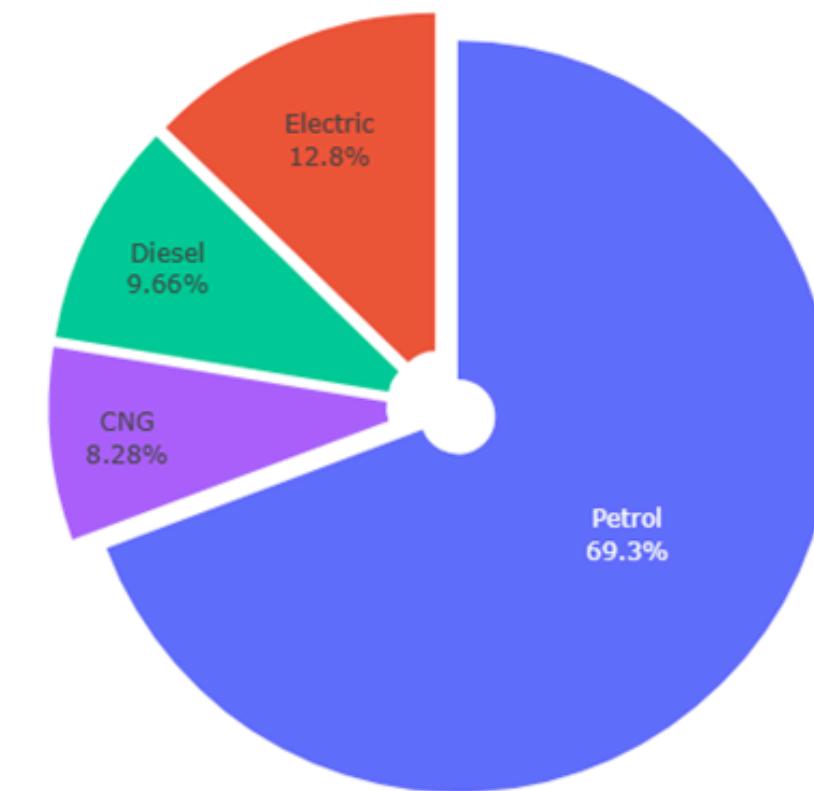
Distribution of Transmission:



Manual  
Automatic

Transmission :	Count of Transmission :
Automatic	68
Manual	187

Distribution of Fuel Type:



Petrol  
Electric  
Diesel  
CNG

Fuel type :	Count of Fuel type :
CNG	22
Diesel	24
Electric	33
Petrol	176

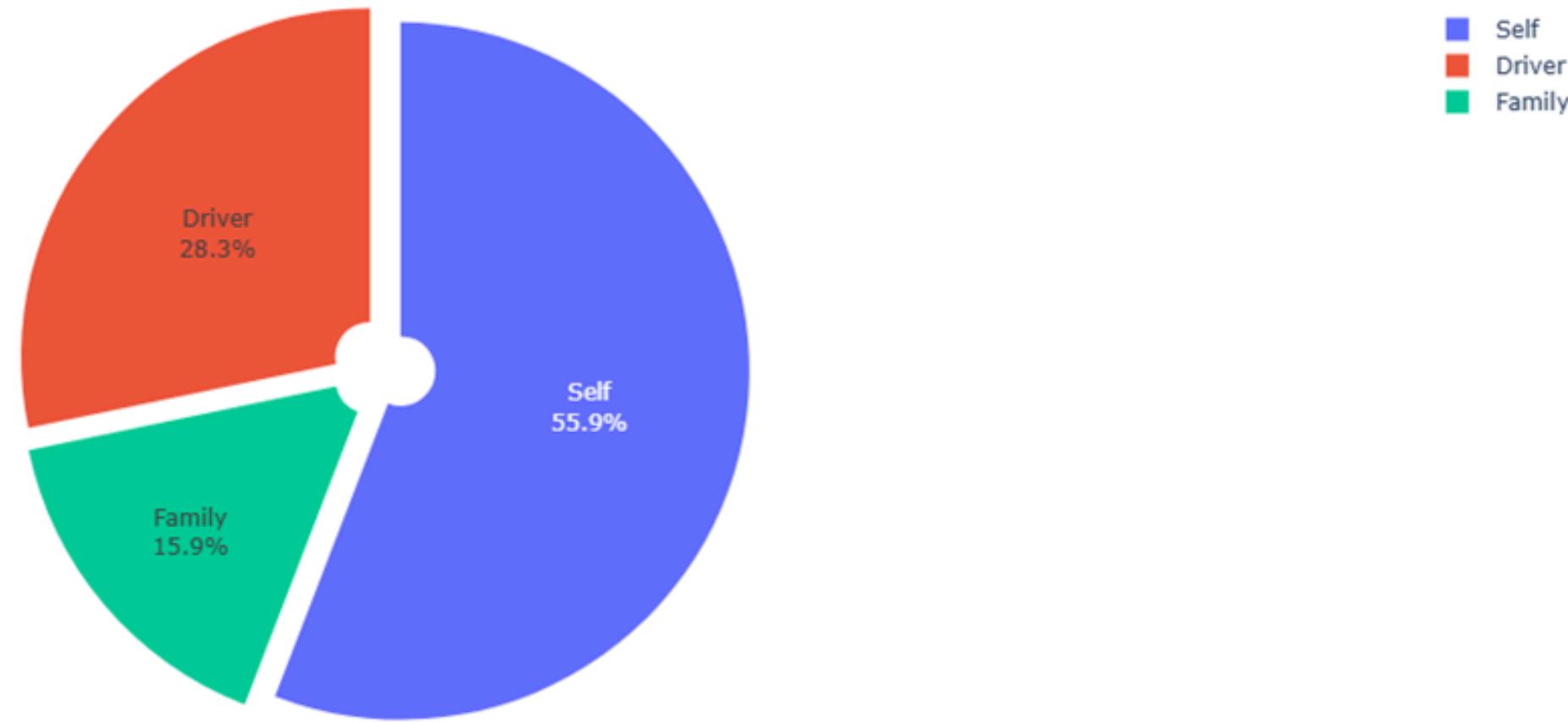
#### Interpretation:

- Manual transmission dominates with 75.9% of users.
- Automatic transmission chosen by only 24.1%,

#### Interpretation:

- Petrol is the most preferred fuel type (67%).
- Electric usage is growing (13%), while Diesel and CNG trail behind at around 9% each.
- Indicates a clear shift toward conventional fuel, with mild adoption of greener alternatives.

Distribution of Primary driver:

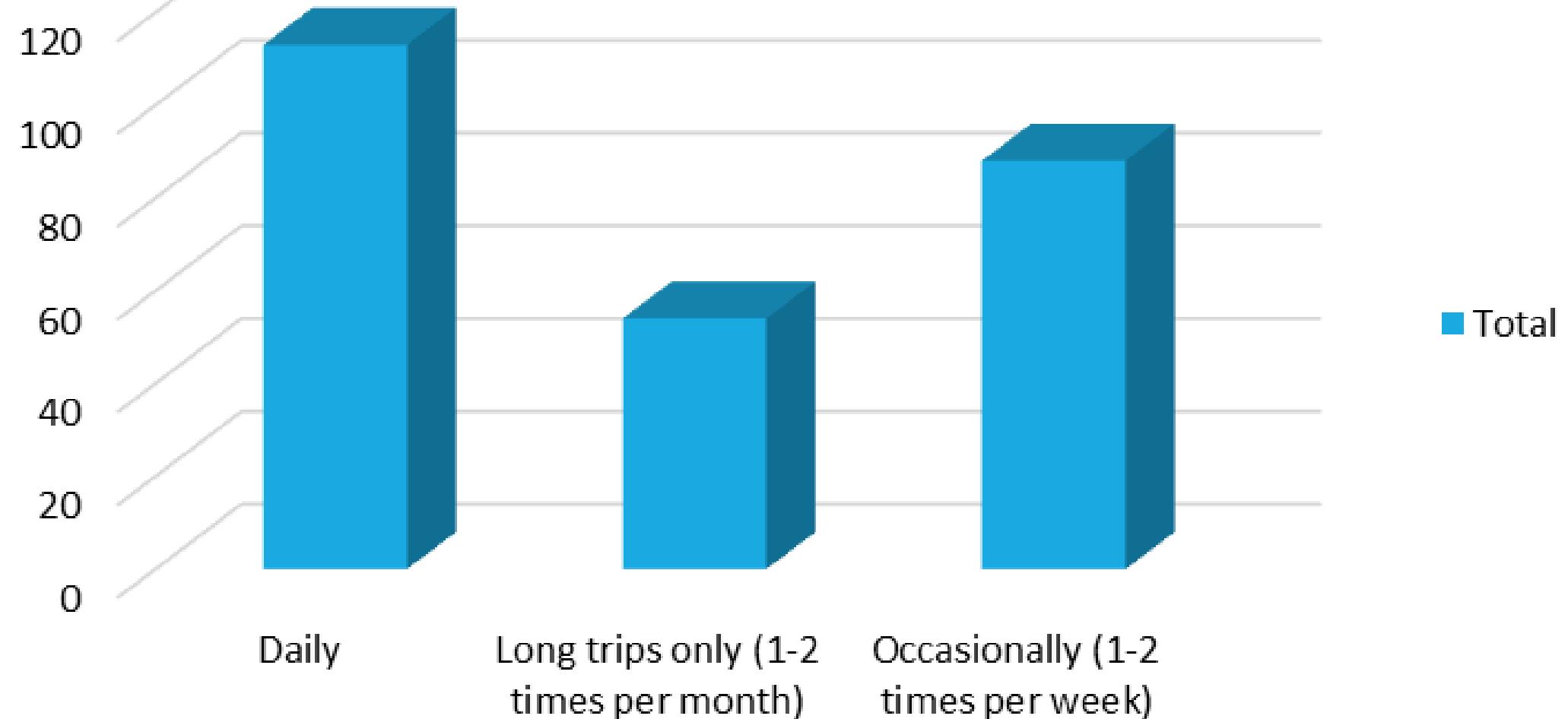


Interpretation:

- Self-driving is most common (55.9% of users).
- Drivers are employed in 28.3% of cases, showing a reliance on them.
- Family members account for 15.9%, indicating occasional shared usage.

Primary driver	Count of Primary driver
Driver	77
Family	42
Self	136

## Usage frequency

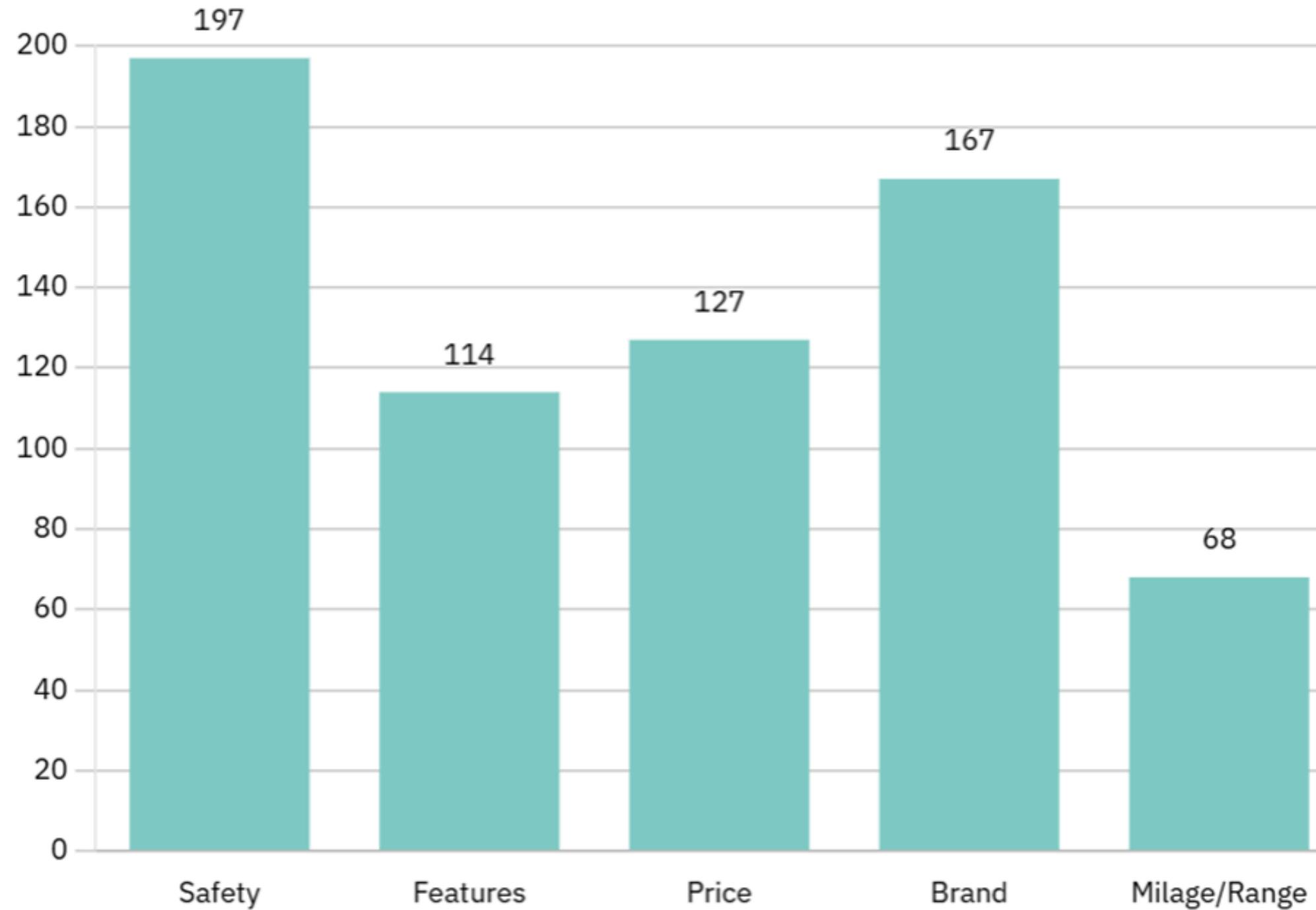


Usage frequency :	Count of Usage frequency :
Daily	113
Long trips only (1-2 times per month)	54
Occasionally (1-2 times per week)	88

### Interpretation:

- Daily use dominates with 113 respondents, indicating regular, essential use.
- Occasional use (1–2 times/week) follows at 88, showing moderate engagement.
- Long trips only (monthly) are least common with 54 users, pointing to infrequent usage patterns.

## Main reason for choosing Tata Nexus :

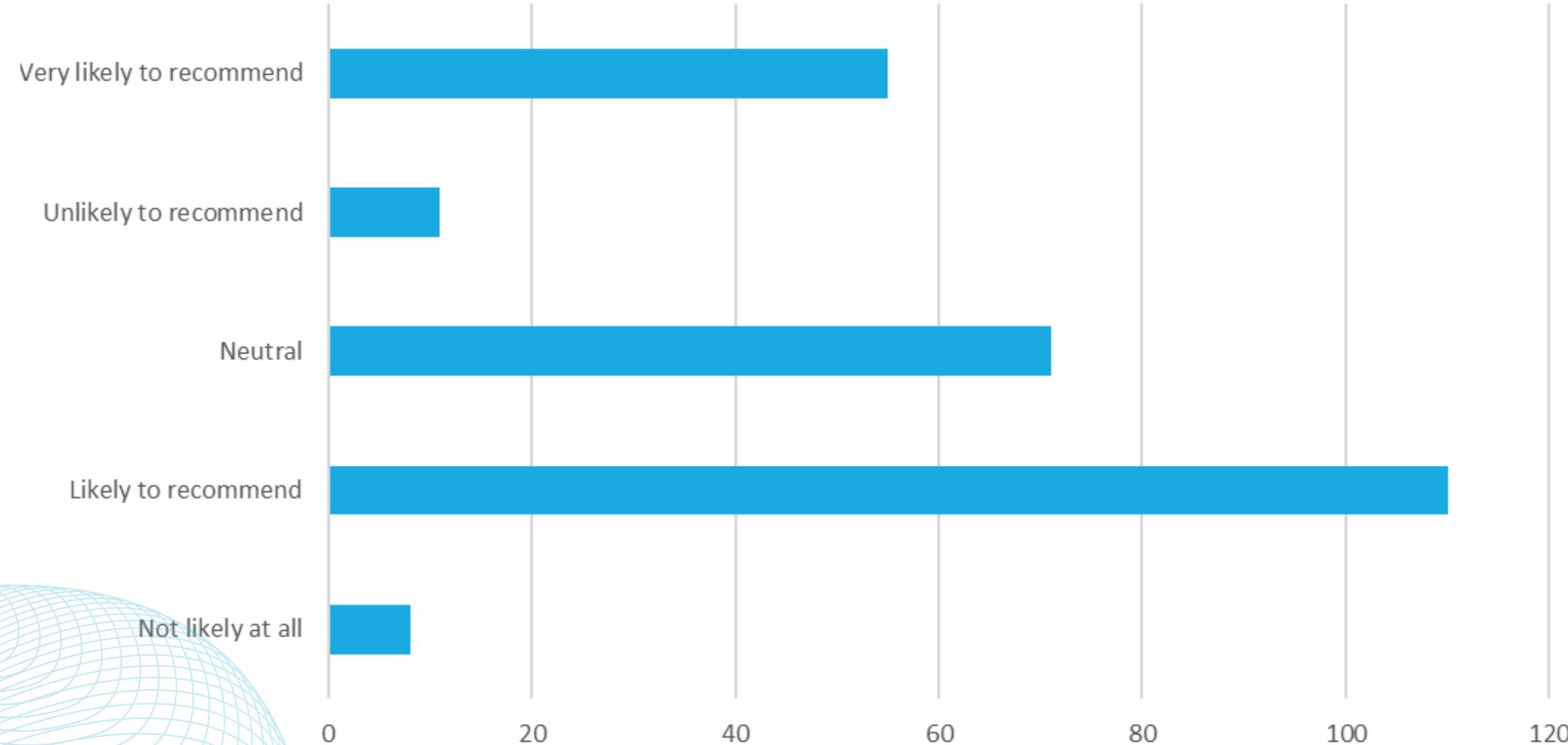


### Interpretation:

- Safety is the most influential factor, with 197 responses.
- Brand follows with 167.
- Price comes next with 127.
- Features are slightly less important, at 114.
- Milage/Range is the least influential factor, with only 68 responses.

This suggests that consumers prioritize safety and brand reputation over fuel efficiency or range when making their decisions

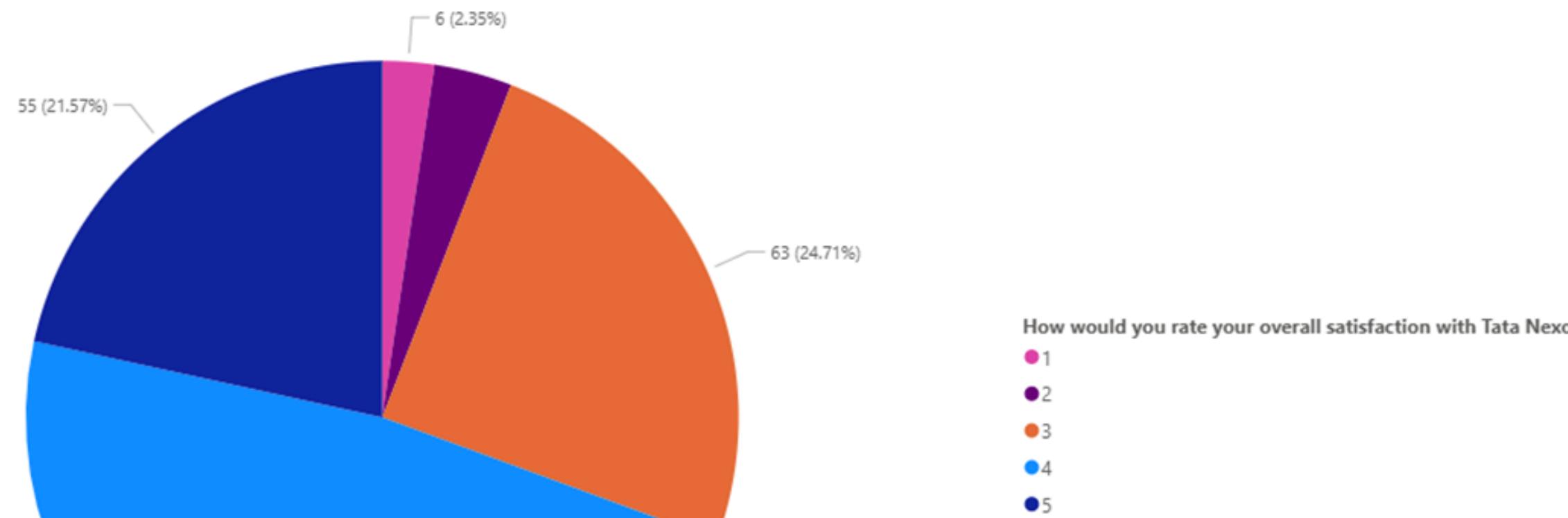
## Count of how would you recommend Nexion to others?



### Interpretation:

- 165 respondents (65%) are positive:
  - Likely to recommend (110)
  - Very likely to recommend (55)
- Neutral: 71 respondents (28%)
- Negative sentiment: 19 respondents (7%)
  - Unlikely to recommend (11)
  - Not likely at all (8)

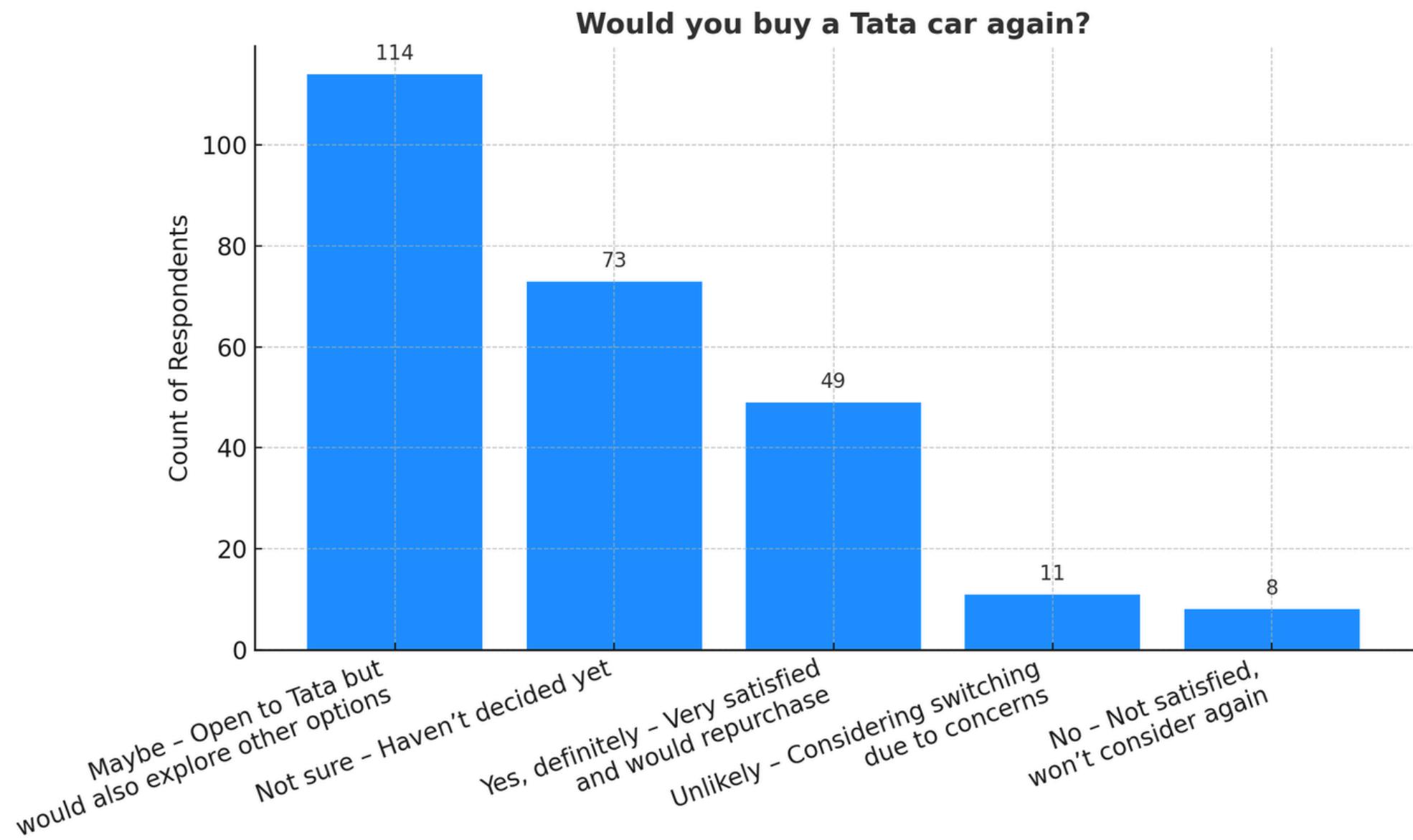
## Overall satisfaction of Tata Nexon



### Interpretation:

- Almost 69% (177) respondents are satisfied with the Tata Nexon.
- 24.71%(63) of the respondents are neutral about it.
- Rest 15 respondents are not satisfies with the product

Overall satisfaction rating	Count of overall satisfaction rating
1	6
2	9
3	63
4	122
5	55



Response Category	Count
Maybe - Open to Tata but will explore other options	114
Not sure - Haven't decided yet	73
Yes, definitely - Very satisfied and would repurchase	49
Unlikely - Considering switching due to concerns	11
No - Not satisfied, won't consider again	8
<b>Total</b>	<b>255</b>

### Interpretation:

- Positive intent:
  - Yes, definitely – 49 respondents (19%)
  - Maybe, open to Tata Nexon again – 114 respondents (45%)
- Uncertain:
  - Not sure yet – 73 respondents (29%)
- Negative sentiment:
  - Unlikely or No – 19 respondents (7%)

# FACTOR ANALYSIS

Factor analysis is a statistical method used to identify hidden patterns or relationships among many variables. It groups related variables into factors, helping to reduce data complexity and reveal the underlying structure. This technique is commonly used in psychology, market research, and social sciences.

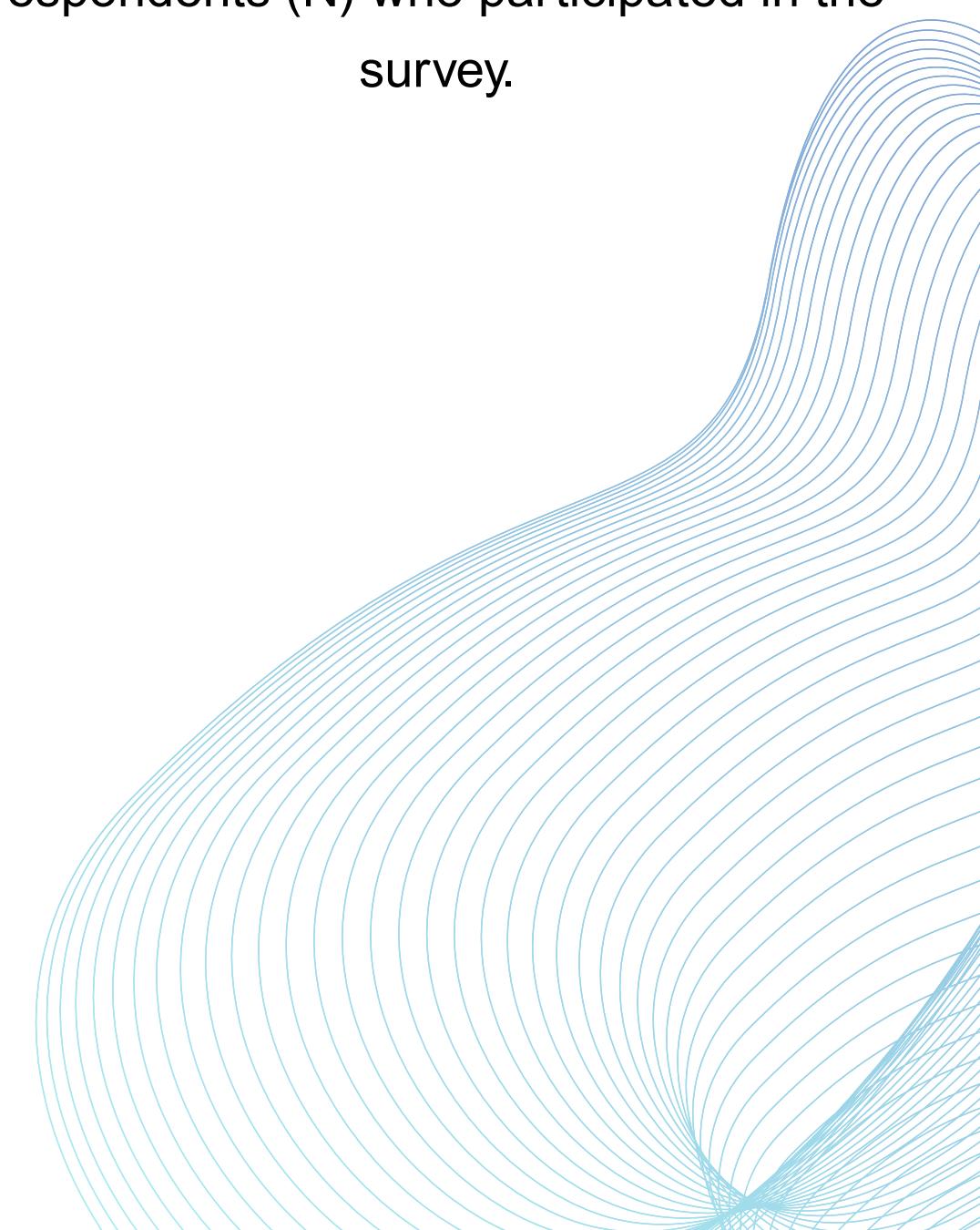
## Important terms in factor analysis

- Kaiser Criterion: Keep only those factors with eigenvalues greater than 1.
- Scree Plot: A graph that helps decide the number of factors by finding the "elbow point" where the curve flattens.
- KMO Test (Kaiser-Meyer-Olkin): Measures the suitability of data for factor analysis.
  - Value  $> 0.6$  indicates good sampling adequacy.
- Bartlett's Test of Sphericity: Checks if variables are correlated enough to perform factor analysis.
  - A significant p-value ( $< 0.05$ ) supports factor analysis.
- Rotation Methods: Used to make factor loadings easier to interpret.
  - Varimax – keeps factors uncorrelated.
  - Oblimin – allows factors to be correlated.
- Communalities: Show how much of each variable's variance is explained by the extracted factors.
- Component Matrix: A table showing initial factor loadings of variables before rotation.

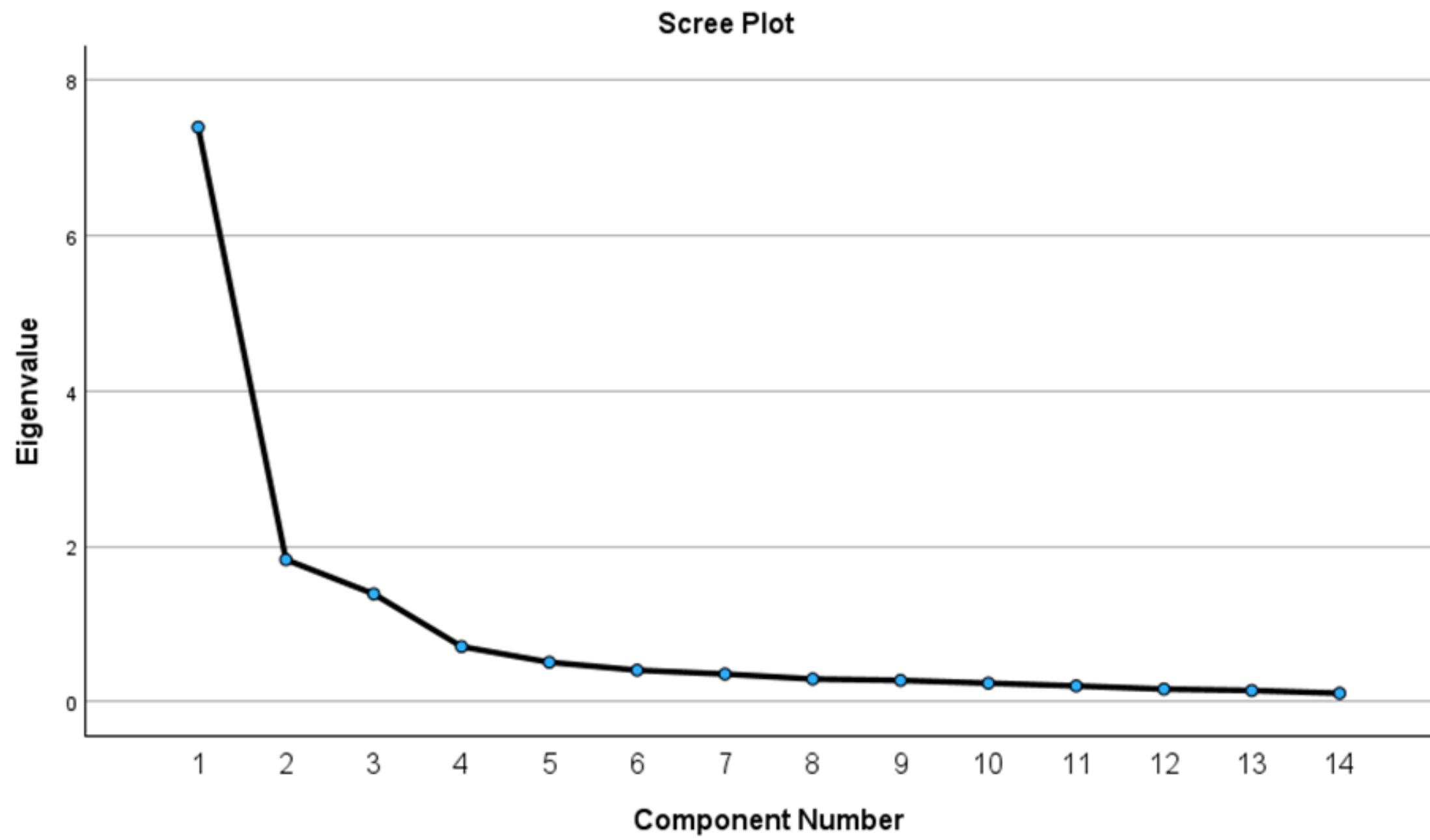
## Descriptive Statistics

	N	Mean	Std. Deviation	Variance
Performance	255	3.95	0.78	0.608
Comfort	255	3.95	0.923	0.852
Fuel efficiency	255	3.9	0.971	0.942
Features	255	3.91	0.943	0.89
After sales service	255	3.93	0.898	0.806
Highway stability at high speeds	255	4.04	0.88	0.774
Handling	255	4.13	0.972	0.945
Build quality	255	4	0.958	0.917
Braking system	255	3.87	0.921	0.848
Maintenance cost	255	3.86	0.972	0.946
Availability of accessories	255	4.04	0.906	0.821
Steering response	255	3.98	0.913	0.834
Suspension comfort	255	4.07	0.936	0.877
Safety	255	3.92	0.954	0.911

The table above gives the mean, standard deviation, variance and the number of respondents (N) who participated in the survey.



<b><u>KMO and Bartlett's Test</u></b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.882
	Approx. Chi-Square	2884.551
Bartlett's Test of Sphericity	df	91
	Sig.	<.001



**Correlation Matrix<sup>a</sup>**

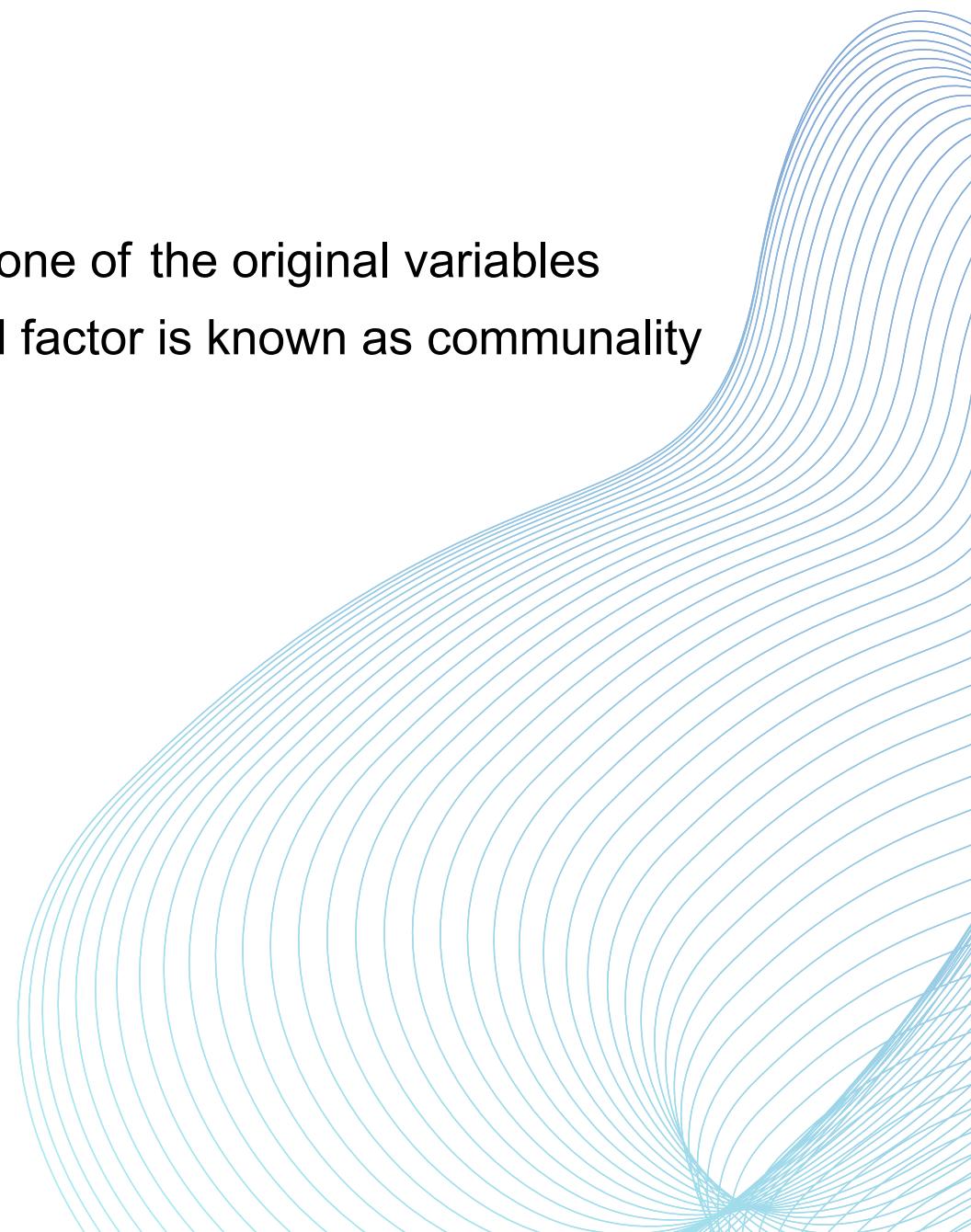
		Performance	Comfort	Fuelefficiency	Features	Aftersalesservice	Highwaystabilityathighspeeds	Handling	Buildquality	Brakingsystem	Maintenancetcost	Availabilityofaccessories	Steeringresponse	Suspensioncomfort	Safety
Correlation	Performance	1.000	.533	.519	.486	.400	.554	.372	.480	.506	.463	.549	.607	.431	.487
	Comfort	.533	1.000	.355	.348	.309	.415	.652	.646	.293	.703	.436	.382	.382	.393
	Fuelefficiency	.519	.355	1.000	.214	.642	.333	.414	.398	.236	.340	.372	.389	.705	.781
	Features	.486	.348	.214	1.000	.406	.692	.308	.514	.693	.536	.631	.638	.181	.316
	Aftersalesservice	.400	.309	.642	.406	1.000	.512	.340	.512	.422	.417	.430	.359	.610	.774
	Highwaystabilityathighspeeds	.554	.415	.333	.692	.512	1.000	.348	.538	.692	.536	.823	.706	.355	.501
	Handling	.372	.652	.414	.308	.340	.348	1.000	.719	.296	.614	.401	.379	.462	.372
	Buildquality	.480	.646	.398	.514	.512	.538	.719	1.000	.504	.819	.567	.490	.461	.530
	Brakingsystem	.506	.293	.236	.693	.422	.692	.296	.504	1.000	.533	.700	.676	.312	.382
	Maintenancetcost	.463	.703	.340	.536	.417	.536	.614	.819	.533	1.000	.570	.445	.378	.454
	Availabilityofaccessories	.549	.436	.372	.631	.430	.823	.401	.567	.700	.570	1.000	.719	.358	.469
	Steeringresponse	.607	.382	.389	.638	.359	.706	.379	.490	.676	.445	.719	1.000	.429	.423
	Suspensioncomfort	.431	.382	.705	.181	.610	.355	.462	.461	.312	.378	.358	.429	1.000	.725
	Safety	.487	.393	.781	.316	.774	.501	.372	.530	.382	.454	.469	.423	.725	1.000

a. Determinant = 9.094E-6

We use correlation matrix to check the pattern of relationship. If a majority of values are greater than 0.9 in the correlation table then we conclude that the data has the problem of multicollinearity. This is not the case with our data set. So, we satisfy one of the assumptions of factor analysis that there is not multicollinearity in the data.

<u>Communalities</u>		
	Initial	Extraction
Performance	1	0.536
Comfort	1	0.763
Fuel efficiency	1	0.818
Features	1	0.734
After sales service	1	0.711
Highway stability at high speed	1	0.806
Handling	1	0.761
Build quality	1	0.814
Braking system	1	0.76
Maintenance cost	1	0.8
Availability of accessories	1	0.777
Steering response	1	0.719
Suspension comfort	1	0.755
Safety	1	0.857

Proportion of variance in any one of the original variables which is captured by extracted factor is known as communality



Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.396	52.83	52.83	7.396	52.83	52.83	4.215	30.107	30.107
2	1.828	13.058	65.888	1.828	13.058	65.888	3.333	23.807	53.915
3	1.387	9.905	75.793	1.387	9.905	75.793	3.063	21.879	75.793
4	0.708	5.06	80.854						
5	0.507	3.619	84.473						
6	0.404	2.887	87.36						
7	0.355	2.534	89.894						
8	0.291	2.077	91.972						
9	0.273	1.951	93.923						
10	0.237	1.696	95.619						
11	0.202	1.443	97.062						
12	0.161	1.151	98.213						
13	0.143	1.019	99.231						
14	0.108	0.769	100						

Extraction Method: Principal Component Analysis.

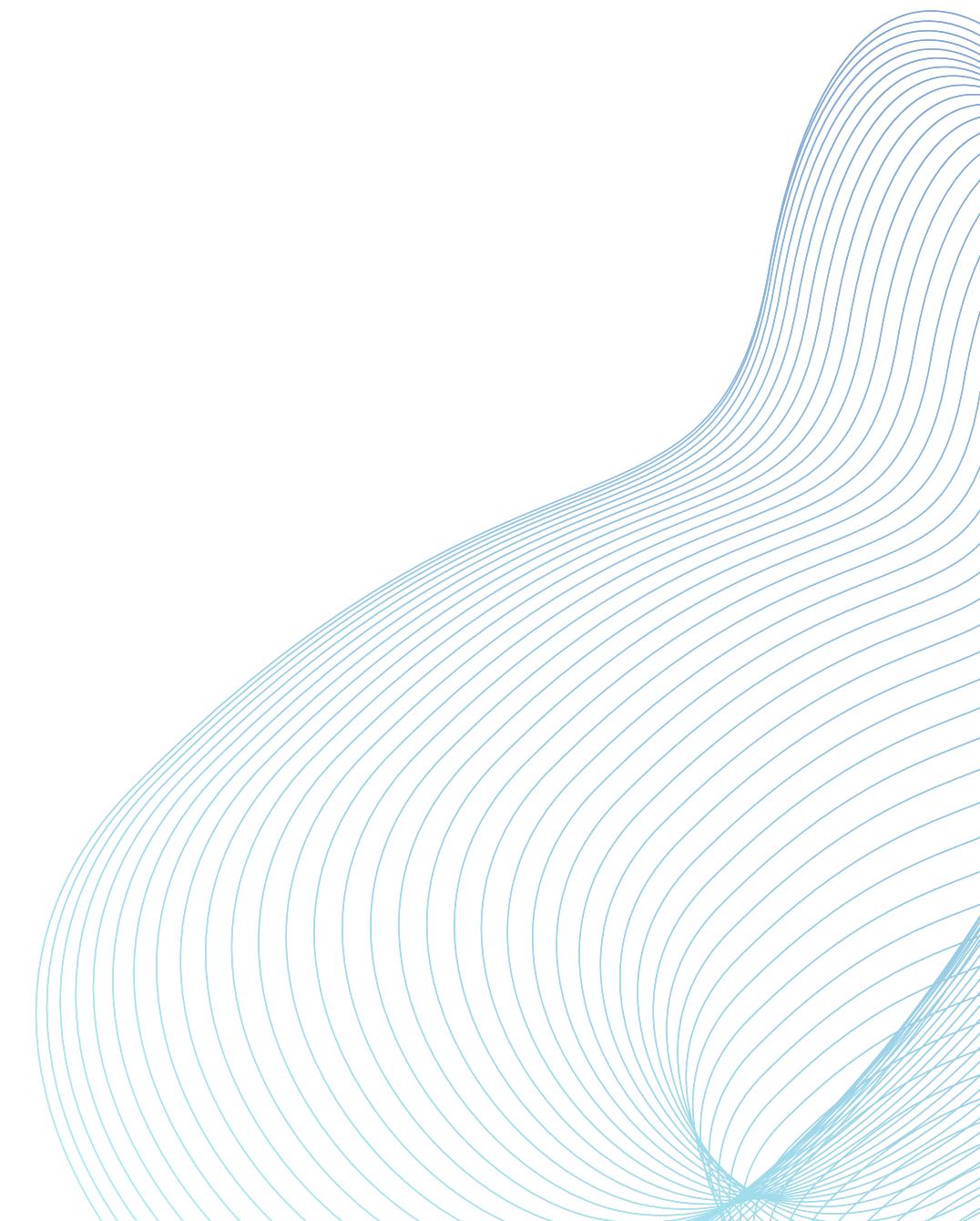
From the 14 attributes, 3 factors have been extracted, factors with Eigen values more than one are assumed to be extracted. The above table tells that after 3 factors extracted and retained. So, factor 1 explains 52.830% of total variance , factor 2 explains 13.058% of total variance and factor 3 explains 9.905% of the total variance.

## Rotated Component Matrix

	Component		
	1	2	3
Performance	0.534		
Comfort			0.829
Fuel efficiency		0.876	
Features	0.824		
After sales service		0.766	
Highway stability at high speed	0.835		
Handling			0.826
Build quality			0.767
Braking system	0.844		
Maintenance cost			0.774
Availability of accessories	0.805		
Steering response	0.784		
Suspension comfort		0.818	
Safety		0.863	
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			

a. Rotation converged in 5 iterations.

The 14 attributes were reduced to 3 using factor analyses which are free from redundancy.



# FACTOR ANALYSIS INTERPRETATION

Respondents were asked to rate the various attributes of their level of satisfaction on the scale of (1-5).

This scale was:

- 1-Extremely Dissatisfied
- 2-Somewhat Dissatisfied
- 3-Neither satisfied nor dissatisfied
- 4-Somewhat Satisfied
- 5-Extremely Satisfied

Out of the 14 variables we are able to reduce them to 3 factors through SPSS which are free from redundancy.

All the attributes with high values of factor loadings within a particular factor are grouped into that particular factor.

This is achieved by inspecting the pattern of high and low loading of each of the factors on the variables.

## Component 1: Vehicle Functionality & Build Quality

Factor	Loading Value
Performance	0.534
Features	0.824
Highway stability at high speeds	0.835
Braking system	0.844
Availability of accessories	0.805
Steering response	0.784

Component 1 groups factors related to the vehicle's on-road behaviour and structural reliability:

- Performance (0.534): Indicates how well the vehicle accelerates, handles engine response, and delivers power.
- Features (0.824): Encompasses in-car technologies and amenities enhancing driving or usability.
- Highway Stability at High Speeds (0.835): Reflects how stable and safe the vehicle feels at higher speeds.
- Braking System (0.844): Points to users' trust in the vehicle's braking capability, crucial for safety.
- Availability of Accessories (0.805): Suggests the ease of customizing or upgrading the car with available add-ons.
- Steering Response (0.784): Represents responsiveness and control, key for confident driving.

## Component 2: Efficiency & After-Sales

Factor	Loading Value
Fuel efficiency	0.876
After-sales service	0.766
Maintenance cost	0.774
Suspension comfort	0.818
Safety	0.863

This cluster emphasizes the long-term ownership value and service experience:

- Fuel Efficiency (0.876): Shows how important mileage is to users, especially in fuel-conscious markets.
- After-sales Service (0.766): Reflects satisfaction with dealership support, repairs, and warranties.
- Maintenance Cost (0.774): A key concern, indicating preference for cars that are cheap to maintain.
- Suspension Comfort (0.818): Links to smoothness of ride and comfort over bumpy roads.
- Safety (0.863): A strong safety rating is a crucial part of trust and long-term appeal.

### Component 3: Comfort & Build Experience

Factor	Loading Value
Comfort	0.829
Handling	0.826
Build quality	0.767

This factor combines aspects that relate to the immediate feel and quality of the car:

- Comfort (0.829): Represents seat support, cabin noise levels, and ergonomic design.
- Handling (0.826): Indicates how easy or intuitive the car is to maneuver.
- Build Quality (0.767): Encompasses the fit and finish of the car, materials used, and perceived durability.

# TATA NEXON SWOT ANALYSIS

## Strengths

- Great Handling & Stability
- Comfortable Ride
- Solid Build
- Personalization Options

## Weaknesses

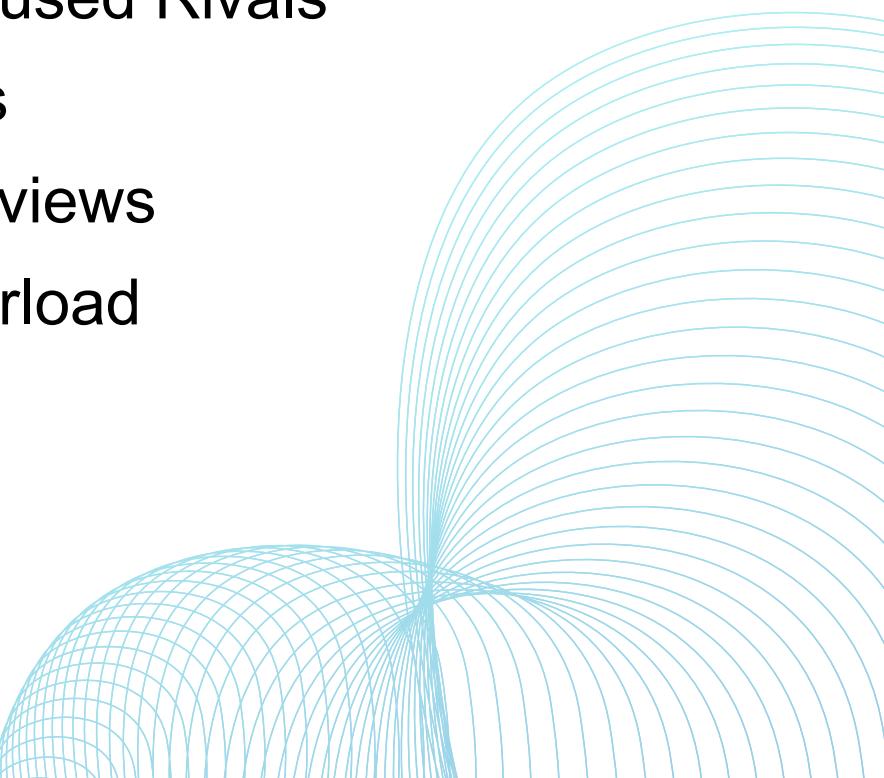
- High Maintenance Perception
- Brake Performance
- Fuel Efficiency Doubts
- Mixed Service Quality

## Opportunities

- Expand to Tier II/III Cities
- Promote CNG/EVs
- Service Packages
- Mileage Campaigns

## Threats

- Mileage-Focused Rivals
- Rising Costs
- Negative Reviews
- Service Overload



# Detailed Insights and Conclusions

## 1. Variant vs Income Level

Observation:

- Low-income (< ₹50K): Prefer base variants (XE, XM, XT).
- Mid-income (₹50K–₹1L): Opt for XZ, XZ+, XZA+.
- High-income (> ₹1L): Choose top variants and EVs.

Conclusion: Variant choice follows income level.

Strategy: Create bundled offers for each income group. Promote base variants with financing for budget buyers, while pushing tech and premium features to upper-income prospects.

## 2. Fuel Type vs Transmission

Observation:

- Petrol → mostly manual.
- Diesel → mix of manual & automatic.
- EV → only automatic.

Conclusion: Petrol remains the economical and traditional choice.

- Diesel balances power and comfort especially appealing in semi-urban/rural markets.
- EV buyers are clearly tech-forward and prefer hassle-free driving.

Strategy:

- Promote petrol-manual combos to budget-focused users.
- Diesel-automatic pairs can be marketed for performance and practicality.
- EVs should be positioned around lifestyle, sustainability, and tech.

### **3. Income vs Transmission**

Observation:

- Lower-income segments (<₹50,000) largely prefer manual transmission.
- Automatic transmission appears more frequently among buyers earning above ₹1,00,000.

Conclusion: Higher income = higher demand for comfort (auto).

Strategy:

- Emphasize manual affordability.
- Promote automatic as a lifestyle upgrade.

### **4. Fuel Type vs Income**

Observation:

- Income less than ₹50K → petrol.
- Income between ₹50K–1L → diesel.
- Income above ₹1.5L → EVs.

Conclusion: Fuel choice reflects affordability and tech adoption.

Strategy:

- Target petrol for budget buyers.
- Market diesel for long-distance users.
- Brand EVs as modern, eco-friendly options.

# Thank You

