



A Comparative Study on Tata Nexon V/S Mahindra XUV300

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ABSTRACT

This study presents a comparative analysis of consumer preferences for the Tata Nexon and Mahindra XUV300 in Ahmedabad city, focusing on key factors such as engine performance, mileage, and safety. The research aims to explore how demographic variables like age and gender influence the preference for these two subcompact SUVs and how consumers perceive their features. Using a survey-based approach, the study tested several hypotheses, revealing significant associations between age and preference for the Tata Nexon, as well as the impact of gender on perceptions of affordability, value for money, and service costs. However, no significant relationship was found between gender and perceptions of safety or engine performance. The results highlight that while younger consumers tend to favor the Tata Nexon, both male and female consumers equally value features such as safety standards and engine performance. Based on these findings, the study suggests that Tata Motors should emphasize safety, engine performance, and value-for-money aspects in its marketing campaigns, while adopting gender-neutral messaging. The research also highlights the need for targeted marketing strategies based on age, with younger consumers being more inclined toward the Tata Nexon. The study contributes to understanding the evolving consumer behavior in the automotive sector, particularly in the subcompact SUV segment, and offers practical recommendations for improving customer engagement and product positioning.

INTRODUCTION

Automotive industry has been one of the largest and the most dynamic in India due to growing requirements, technological and sustainable developments. India now the third largest car market in the world thus presents a great opportunity for both local and foreign players in the automobile sector. Among the leading players in this competitive market are two iconic home-grown brands: There is Tata Motors Ltd, and there is Mahindra & Mahindra Ltd. Having been founded and operating for many years in the Indian automotive market, they not only influenced the local market of cars and motorcycles but also entered the international market. This research seeks to carry out a detailed comparative analysis of Tata's Nexon model automobile and Mahindra & Mahindra's XUV300 model automobile. The analysis will focus on three major aspects: engines, kilometers per gallon, and safety that have central roles in consumers' purchasing behavior.

The globalization of Indian automotive has witnessed many changes over the decades due to the rising needs of diverse and stringent automobiles with efficiency, reliability, and safety. Mahindra & Mahindra and Tata Motors have swiftly and gradually adapting the products focusing the changing needs of the market. The two firms have been pioneers in the launch of electric vehicles (EVs), in line with the emerging trend towards green products. An example of a company that has former success with its electric vehicle is Tata Motors with the Nexon EV and Mahindra & Mahindra chasing to grow its EV division, including the e2o and eVerito. However, this study will only consider their ICE which is still prevalent in the Indian market and sales.

Tata Motors: A Legacy of Innovation

Tata motors belongs to Tata group was known for its contribution towards automobile industry of the country. Originally founded in 1945, the company has grown and sales its cars in different categories including; The Passenger Vehicle, the Light commercial Vehicle, Heavy commercial Vehicle, and the Electric Vehicle. Currently, Tata Motors targets to be a market leader in compact SUVs and electric vehicles market. Tata nexon, a subcompact SUV is one of the most important models of the company that features modern design, new age features and pocket-friendly price.

Thus, Tata Motors has exhibited a capacity to develop new product and adapt to changing customer needs. The change of direction to electric cars is in line with the need to turn vacant quantities to environmental friendly options such as green cars. Readjusting to the context of the contemporary Indian environment that is characterized by a growing problem of air pollution and constantly rising fuel prices, Tata Motors has sought to transition into the production of affordable electric vehicles and one of the examples of new products developed in the context of this transition is the Nexon EV.

Mahindra & Mahindra: The Gujarat Auto and the Indian Auto Industry

The two giants in the automobile market of India and one of the oldest are Mahindra & Mahindra established in the year 1945. Gradually, Mahindra has accompanied the reputation of building fancy, strong, reliable and powerful automobiles. The company has been able to build customer loyalty through the focus on larger vehicles such as SUVs and utility vehicles especially in rural and semi urban Midwest markets. The vehicle in focus in this analysis is Mahindra's compact SUV the XUV300 that aims at the Nexon in the market place.

Over the years, Mahindra & Mahindra has always tried to invent and/ or reinvent itself to meet the dynamic demands of its consumers. The company has dedicated much resources in research and development to enhance on the performance, looks and environmental impact of the vehicles. By bringing out electric vehicles at a nascent stage such as e2o and further extending to XUV400, Mahindra clearly tries to advance into the future. As with Tata Motors, Mahindra also sustains sales of vehicles that run on traditional internal combustion engines such as the XUV300.

Key Comparison Aspects: Engine, Mileage, and Safety

Both Tata Nexon and Mahindra XUV300 are seen as one of the competitive cars in the compact SUV market as they offered many aspects that will attract consumers. Although comparing the parameters like power, speed and fuel consumption will give basic idea about their performance and consumer preference detailed study of the engines of the cars, their mileage and the safety features would provide more insight into performance and consumer choice.

1. Engine Performance

Engine forms the very core to any vehicle and both the giants, Tata as well as Mahindra have paid close attention to developing powerful and smooth performing engines. The Tata Nexon has a 1.2-liter turbocharged petrol engine along with a 1.5-liter turbocharged diesel engine. These engines provide more power, torque and lesser fuel consumptions making Nexon ideal for both, city run and high-way drives. Furthermore, the Nexon's engine is mated to a 6 speed manual transmission system or an automatic.

On the other hand, the Mahindra XUV300 comes with two engine options: are offered with a 1.2-liter turbocharged petrol engine, and another 1.5-liter turbocharged diesel engine. Both power plants are performance oriented to provide a good power to fuel ratio. The smoothness and NVH treatment they provide to XUV300 shows that Mahindra has equipped this car with perfect engines which provides comfort while driving the car. The XUV300 has also incorporated both manual and automatic transmission making the driver have a variety in choosing.

Here again both the vehicles have the competitive engines depending for the selection on the variety of power delivery, drive feel, and the fuel (petrol or diesel) that is favored by the consumers.

2. Mileage

One of the major factors that has to be put in consideration by car buyers in India is the fuel consumption this is occasioned by the . On the fuel efficiency front, both the Tata Nexon and Mahindra XUV300 have good figures in their segment and that always pleases cost-sensitive buyers.

On an ARAI benchmark test, the petrol variants of the Tata Nexon delivers a range of 17-18 km/l and the diesel variants even have a superior range of 21-22 km/l. These great economic mileage are underpinned by the car's efficient engine and aerodynamic structure and therefore, the Nexon is future proofed economically as a car.

Regarding this, the Mahindra XUV300 has far better fuel efficiency figures wherein the petrol models deliver around 17-18 km/l (ARAI tested) and the diesel models deliver around 20-21 km/l (ARAI tested). With both the mileage figures almost figures standing on par with each other between the XUV300 and the Nexon it is necessary to take into consideration driving conditions, maintenance costs and most importantly the type of fuel that is preferred.

3. Safety Features

An important factor that Indian consumers have always sought is safety, and this has been highlighted more on the back of current and forthcoming compact SUV segment where safety has become much more important. On the safety front too, Tata and Mahindra have come a long way in putting out vehicles with latest features with safety concerns as seen in the safety ratings of Tata Nexon and Mahindra XUV 300.

The use of the hi-arch has been well enhanced when the Tata Nexon scooped the 5-star safety rating from the Global NCAP confirms that the automobile is among the safest in the segment. Being from GM's stable the Nexon comes with standard safety features including dual front airbags, ABS with EBD, electronic stability control, traction control and cornering stability control. Apart from this, there are 1.5 T & G variant focused features as reverse parking camera, rear parking sensors & fsbr (front seat belt reminder).

Likewise, the overall safety of the Mahindra XUV300 has also paid off as it has bagged Global NCAP safety rating of 5 stars and falls at par with the Nexon. The XUV300 boasts features such as dual front airbags, ABS with EBD, ventilated disc brakes on all four wheels and a high strength steel body. The XUV300 also has the benefits of the front and rear parking sensors, a rearview camera system and emergency braking assistance.

Again, both cars perform remarkably when it comes to safety as more precautions are provided for a drive and occupants of a car in case of an accident. However, it may be left for small details of safety and maybe individual choice of consumers or buyers.

Having considered the major aspects that provide the compact SUVs with driving capabilities, it is true that both the Tata Nexon and Mahindra XUV300 are formidable entrants in the highly contested segment in the Indian automotive market. These two models are good due to the fact that they reflect standard features of performance, fuel consumption and safety. The two firms have also

made efforts to fulfill the growing needs of the people in the Indian market by integrating sophisticated technologies and specifications in automobiles.

This paper compared the Tata Nexon and the Mahindra XUV300, especially in terms of engine specification, fuel efficiency, and safety features which will be of great help to consumers in Ahmedabad city when making their decision on which car to purchase. The above aspects then help consumers to make a choice depending on their needs, their preference of car brands and safety.

Research Objectives :

1. To analyze the importance of engine performance in vehicle selection among different age groups
(Objective achieved in Question 6 of Questionnaire)
2. To evaluate consumer perceptions of engine power and performance of the Tata Nexon across different age groups
(Objective achieved in Question 7 of Questionnaire)
3. To assess consumer perceptions of engine power and performance of the Mahindra XUV300 across different age groups
(Objective achieved in Question 8 of Questionnaire)
4. To examine consumer satisfaction with the fuel efficiency of the Tata Nexon across different age groups
(Objective achieved in Question 9 of Questionnaire)
5. To evaluate consumer satisfaction with the fuel efficiency of the Mahindra XUV300 across different age groups
(Objective achieved in Question 10 of Questionnaire)
6. To understand the perceived safety while driving the Tata Nexon in city traffic among different age groups
(Objective achieved in Question 11 of Questionnaire)
7. To understand the perceived safety while driving the Mahindra XUV300 in city traffic among different age groups
(Objective achieved in Question 12 of Questionnaire)
8. To assess consumer opinions on the safety features of the Tata Nexon across different age groups
(Objective achieved in Question 13 of Questionnaire)
9. To assess consumer opinions on the safety features of the Mahindra XUV300 across different age groups
(Objective achieved in Question 14 of Questionnaire)
10. To analyze the likelihood of consumers recommending the Tata Nexon to family and friends based on age
(Objective achieved in Question 15 of Questionnaire)
11. To analyze the likelihood of consumers recommending the Mahindra XUV300 to family and friends based on age
(Objective achieved in Question 16 of Questionnaire)
12. To evaluate consumer perceptions of the value for money offered by the Tata Nexon across different age groups
(Objective achieved in Question 17 of Questionnaire)

13. To evaluate consumer perceptions of the value for money offered by the Mahindra XUV300 across different age groups
(Objective achieved in Question 18 of Questionnaire)

14. To assess the comfort of driving the Tata Nexon in comparison to other vehicles in the same segment, based on age groups
(Objective achieved in Question 19 of Questionnaire)

15. To assess the comfort of driving the Mahindra XUV300 in comparison to other vehicles in the same segment, based on age groups
(Objective achieved in Question 20 of Questionnaire)

LITERATURE REVIEW

About the Automotive Industry in India: The automotive industry has been dynamically changing over several decades in India. With growing demographic of the population in the income group of 25000 per annum, the changing consumer trends, and rising population of the population developing urban consciousness, the automobile market in India is one of the largest globally. While analyzing the market structure in this highly competitive industry, two largest Indian brands, Tata Motors, and Mahindra & Mahindra have emerged as the strong competitors in compact SUV segment with their competitive models. This literature review aims to explore existing studies, reports, and scholarly works that provide insight into the performance of two popular compact SUVs in the Indian market: Tata nexon and Mahindra XUV300. The comparison will focus on three key factors: potential or reliability, the driving or moving miles, car safety features since they are basic factors critical for Indian customer especially those in large cities such as Ahmedabad.

1. Tata Motors and Mahindra & Mahindra: Organization Profile and Market Multifacetedness

Tata Motors and Mahindra & Mahindra are two of the largest operating in the automotive industry in India. Tata Motors is owned by Tata Group and was established in 1945; Based in India, it has grown to offer products in segments as follows; Commercial vehicles Passenger cars, EVs. Today's customer perceives Tata Motors brand vehicles as being reliable, affordable, and technologically superior. This compact SUV was introduced in 2017 and has been well received by Tata; it includes an up-to-date design, an imposing engine, and safety measures. Also, it has become clear that Tata Motors is a market leader in electric cars segment in India with vehicles such as the Nexon EV.

Another regular player of the Indian automotive industry is Mahindra & Mahindra which was also established in the same year 1945. The company is also famous for building highly durable, SUV and Utility vehicles which are capable of handling off road terrains. Mahindra has relied on the SUV market and has developed products that fit the urban and rural market. The Mahindra XUV300 is one of the compact SUV launched in the year 2019 which has captured the interest of many car buyers due to its sleek design, other features inside the car and affordable price range. Majority of Mahindra's buyers were influenced by the company's emphasis on performance, product longevity and safety features that have made it popular among rural and semi urban consumers.

Tata Motors and Mahindra & Mahindra have different car designing philosophies but both the companies have experience good sales in India's compact SUV segment boosted by the growing need for mobility in the congested Indian city including Ahmedabad.

2. Engine Performance: Performance, Energy and Operation Perceived by the Driver

Without doubt, the engine is the single most important element of any automobile as it provides the power, and fuel efficiency, not to mention the overall feel of the car. In India where one can find both smooth tarmac and pot hole ridden city roads it is the engine drama that defines compact SUVs. The Turbo petrol and diesel power train options available in first generation Tata Nexon and Mahindra XUV300 are expected to deliver a healthy combination of performance and fuel economy.

Tata Nexon Engine Performance

The Tata Nexon offers two engine options: a 1.2-litre turbo petrol and a 1.5-litre turbo diesel. The 1.6-litre petrol engine generates a maximum output of 120 bhp / 8500 r/min and 170 Nm / 4900 r/min of torque, while the 1.6-litre diesel engine delivers 110 bhp / 6350 r/min and 260 Nm / 2000 r/min. These engines are offered with either a 6-speed mechanical with a clutch assembly, or a 6-speed automatic transmission, allowing consumers a choice of driving the car with more flexibility. The 1.5-liter diesel engine is preferred more for its lag-free torque available and because of this, the Nexon is perfect for both urban crawl and highway runs.

The Tata Nexon has been the focus of many research works most of which have revealed the efficiency and performance of its engine. AutoCar India (2023) reported that the engines of the Nexon are optimized for the Indian auto market, where both power and efficiency is paramount. The report also points that while the petrol variant may be slightly less powerful to the diesel engine, it proved to be very enjoyable for instance on congested city roads. The Nexon's diesel engine is quite the opposite and is specifically applauded for providing high low end torque, which translates to nice and powerful punch even at low rpms. Mahindra XUV300 Engine Performance to read more about the latest information on the engine performance of Mahindra XUV300.

The Mahindra XUV300 offers two engine options as well: a 1.2 litre turbocharged petrol engine and 1.5-litre turbocharged diesel engine. Petrol engine on this car produces 110 bhp and 200 Nm of torque and the diesel engine of 115 bhp with a torque of 300 Nm. Although the big-ticket prospect of dual-tone color, fun-to-drive assertion, high clarity and effective soundproofing, are noticeable in XUV300 than in Nexon, great mechanism competency offered by diesel engine of XUV300 with better torque than Nexon makes it potent performer, especially while driving on highways and inconsistent terrains. Just like the Nexon, the XUV300 offers a choice of manual and automatic gearboxes to drivers.

CarWale (2022) compared the Mahindra XUV300 with rivals in a feature comparison analysis; it was established that its diesel engine variant offers sharp throttle response and high torque output. This also could be attributed to the report that the petrol engine in the XUV300 is very responsive which makes the compact SUV suitable for all kind of terrains. However, the study found out that though the engine output powers of both the cars are nearly equivalent, the engine configured of Nexon is more efficient in fuel economy particularly in city driving.

Today, best understanding of gradual/engine performance is sought through various modes of analysis.

In terms of engine, both Tata Nexon and Mahindra XUV300 deliver great deal of output, thanks to their turbo charged engines. However, one must note that, the torque output in the diesel models is quite different with the XUV300 having marginally better figures pertaining to derivatives that come with litter more power delivery at higher speeds or over tougher terrains which some customers might prefer. On the other hand, petrol engine of nexon would be more comfortable for the consumers who are interested in better fuel efficiency in the urban area.

3. Mileage: An Analysis of Fuel Efficiency with Particular Reference to India

Another important aspect of the automobile market in India is the fuel efficiency due to the increase in fuel prices over the few last years. The Tata Nexon and Mahindra XUV300 are designed to provide optimum frugal economy on the road, though their mileage exhibits the kind of engine they come with.

Tata Nexon Mileage

The Tata Nexon petrol model gives a driving range of approximately 17-18 km/l as rated by ARAI while the diesel model gives up to 21-22km/l. According to a consumer survey by Autocar India (2022), one of the key factors responsible for the Nexon's successful run in the urban markets is its fuel efficiency. The survey shown that the 65 percent of the people given importance to the Nexon mileage, especially in petrol models, which are good for the power-to-fuel ratio for city driving.

Mahindra XUV300 Mileage

The Mahindra XUV300 offers similar range as far as the fuel efficiency is concerned, petrol the variants delivering around 17-18 km/l and diesel variants delivering 20- 21 km/l. MotorOctane's study in 2023 showed that though both XUV300 and Nexon offer near similar mileage, customers indulging in more highway driving may find slightly better diesel efficiency in XUV300's diesel variants because of the higher torque which can easily maintain high speed zones.

Analysis of Mileage

In terms of mileage both Tata Nexon and Mahindra XUV300 are quite comparable to each other, but the diesel versions in particular are higher in efficiency. Nonetheless, the gap of fuel consumption rate between the two cars is not much big, both are promising cars that provide optimum power along with efficiency for both urban and intercity drives. For consumers in Ahmedabad again the traffic situation is quite busy and long highway drives are frequent and

on both counts, the cars deliver good fuel efficiency and are reasonably cost effective in terms of daily operation.

4. Safety Features: SafeGuarding the Consumers on the Road

Another attribute Customers are very concern about safety especially those purchasing cars for use in urban areas where traffic conditions and road networks present some extra hazard. Currently there a lot of efforts from both Tata and Mahindra that ensure that the vehicles which they respectively manufacture are safe in compliance with standards in the global market.

Tata Nexon Safety Features

The Tata Nexon has received 5 star Safety Rating from Global NCAP, which places it as one of the safest cars of its kind. Basic safety trappings that come with the range are dual front airbag, ABS with EBD, ESC, cornering stability control and traction control. The above collections of the Nexon have additional attributes than those of the standard model, such as reverse parking camera, rear parking sensor, and front seat belt reminder.

The safety feature of the Nexon got special mention for being built strongly; NDTV Car & Bike carried out a safety review in 2023 lauding the car's crash test results. Requirement fulfillment was also touched on, whereby the Nexon boasts of having a rigid passenger cell, and multiple airbags, which are ushered to protect the passengers upon an event of an accident.

That's where Mahindra XUV300 rides to the rescue with a full suite of safety features which incorporate:

That is why the Mahindra XUV300 has been awarded 5 stars from the Global NCAP rating agency for safety. The safety features fitted on the package include dual front air bags, anti-lock brake system with electronic brake force distribution, front/rear car parking sensors and a rear view camera. The XUV300 has built with high-strength steel body structure besides it has more safety features like emergency braking assistance.

According to the Safety Analysis Car of Autocar India (2022), XUV300 is loaded with robust safety aspects such as side and curtain airbags, four-wheeler disc brakes and There is a very sturdy structure to safeguard occupants in case of an accident. The study also pointed that the XUV300 has one of the best safety trims in the segment.

Analysis of Safety Features

In the safety front the two vehicles TATA Nexon and Mahindra XUV300 leave no room for competition with features that are good enough for any vehicle in the international market. The fact that Global NCAP gave both of them 5-star ratings also explains why we can say that these are safe cars – universally so. However, the added safety and general structural designs of both vehicles are quite similar, and buyers might simply go by decisions of a variety of considerations like the rear parking sensors or the emergency assistance in braking system.

Tata Nexon and Mahindra XUV300 are emerging on par among the most successful compact SUVs currently available in the Indian market especially in the urban areas such as Ahmedabad. Both car models are equipped with power and fuel efficiency together with safety features and are well appreciated by the Indian buyers. Based on this literature review, the strengths and the weaknesses

of both vehicles in the areas of the engine performance, mileage, as well as safety features, are identified, which are critical to consumers in the compact SUV category. Where the Tata Nexon is offering a slightly more even spread of power and a slightly better fuel economy on the petrol models, the Mahindra XUV300 outdoes the Nex on the strength of its diesel engine at torques and safety. Finally, in terms of the relation between benefits and costs, the main difference is marginal because both vehicles are promising a high quality to price ratio, and the choice is then based on a number of factors such as personal preferences, conditions of use, and level of affinity with the brands in question.

Chi-square test for independence determines when two variables co-vary, or if they are independent of each other. In this case, the researcher will seek to determine if there is a correspondence between age group of the respondents to the Likert scale questions. One relationship under study in the research is age and the responses to the Likert scale items, formulated as follows: Null hypothesis (H_0): There is no correlation between age and the Likert scale responses, and Alternative hypothesis (H_1): There is a correlation between age and the Likert scale responses.

Here is the list of alternative hypotheses (H_1) for each Likert scale question:

1. Age and Importance of engine performance when choosing a vehicle

H_1 : There is an association between age and the importance of engine performance when choosing a vehicle.

2. Age and the engine power and performance of the Tata Nexon

H_1 : There is an association between age and the engine power and performance of the Tata Nexon.

3. Age and the engine power and performance of the Mahindra XUV300

H_1 : There is an association between age and the engine power and performance of the Mahindra XUV300.

4. Age and satisfaction with fuel efficiency of the Tata Nexon

H_1 : There is an association between age and satisfaction with the fuel efficiency of the Tata Nexon.

5. Age and satisfaction with fuel efficiency of the Mahindra XUV300

H_1 : There is an association between age and satisfaction with the fuel efficiency of the Mahindra XUV300.

6. Age and feeling of safety while driving the Tata Nexon in city traffic

H_1 : There is an association between age and the feeling of safety while driving the Tata Nexon in city traffic.

7. Age and feeling of safety while driving the Mahindra XUV300 in city traffic

H_1 : There is an association between age and the feeling of safety while driving the Mahindra XUV300 in city traffic.

8. Age and safety features of the Tata Nexon

H_1 : There is an association between age and the safety features of the Tata Nexon.

9. Age and safety features of the Mahindra XUV300

H_1 : There is an association between age and the safety features of the Mahindra XUV300.

10. Age and willingness to recommend the Tata Nexon to family and friends

H₁: There is an association between age and willingness to recommend the Tata Nexon to family and friends.

11. Age and willingness to recommend the Mahindra XUV300 to family and friends

H₁: There is an association between age and willingness to recommend the Mahindra XUV300 to family and friends.

12. Age and the perceived value for money of the Tata Nexon

H₁: There is an association between age and the perceived value for money of the Tata Nexon.

13. Age and the perceived value for money of the Mahindra XUV300

H₁: There is an association between age and the perceived value for money of the Mahindra XUV300.

14. Age and the comfort of driving the Tata Nexon compared to other vehicles in the same segment

H₁: There is an association between age and the comfort of driving the Tata Nexon compared to other vehicles in the same segment.

15. Age and the comfort of driving the Mahindra XUV300 compared to other vehicles in the same segment

H₁: There is an association between age and the comfort of driving the Mahindra XUV300 compared to other vehicles in the same segment.

Research Gap

HYPOTHESIS (Only list)

H1

H2

H3

H4.....

METHODOLOGY

Table 1. Research Methodology

Research Design	Descriptive
Sample Method	Non-Probability - Convenient Sampling method
Data Collection Method	Primary method
Data Collection Method	Structured Questionnaire
Type of Questions	Close ended
Data Collection mode	Online through Google Form
Data Analysis methods	Tables
Data Analysis Tools	SPSS and Excel
Sampling Size	208
Survey Area	Ahmedabad
Sampling Unit	Students, Private and government Job employees, Businessmen, Home maker, Professionals like CA, Doctor etc.

Source: Author's compilation

Demographic Summary

The demographic summary of the sample is as follows: A majority of participants (84.6%) are aged between 18-24 years, while smaller proportions fall within the 25-34 years (3.8%) and 35-44 years (11.5%) age ranges. In terms of gender, 65.4% of the respondents are male, and 34.6% are female. Regarding occupation, the largest group consists of students (73.1%), followed by working professionals and business owners, each at 11.5%, and a small percentage of homemakers (3.8%). In terms of monthly income, the majority (76.9%) earn less than 500,000, while 7.7% earn between 500,000-1,000,000, 11.5% earn between 1,000,000-1,500,000, and 3.8% earn above 1,500,000.

Cronbach Alpha

Table 2. Cronbach Alpha

Cronbach Alpha Value	No. of items
0.937	16

Source: SPSS Software

The Cronbach's alpha value of 0.937 for the 16 items in this study indicates excellent internal consistency. This high value suggests that the items are highly correlated with each other, reflecting a strong degree of reliability in measuring the construct. According to commonly accepted guidelines, an alpha value above 0.9 is considered excellent, implying that the scale used in this research is highly dependable for assessing the intended variable. This ensures that the results derived from the scale are robust and trustworthy.

RESULT

Add rows as per number of hypothesis you have created

Table 3. Results Of Hypothesis Testing

Sr. No	Alternate Hypothesis	Result p =	>/< 0.05	Accept/Reject Null hypothesis	R value	Relationship
H1	There is no significant association between age and the preference for Tata Nexon. In other words, age does not influence the preference for Tata Nexon.	0.000	<	H01 Rejected (Null hypothesis rejected)	0.013	Weak

H2	There is no significant relationship between gender and the preference for the Tata Nexon car brand.	0.001	<	H03 Rejected (Null hypothesis rejected)	0.118	Weak
H3	There is no significant relationship between gender and the perception of the affordability of Tata Nexon's service and maintenance costs.	0.006	<	H03 Rejected (Null hypothesis rejected)	0.021	Weak
H4	There is no significant relationship between gender and the perception of Tata Nexon as a value-for-money option in its segment.	0.044	<	H04 Rejected (Null hypothesis rejected)	0.100	Weak
H5	There is no significant relationship between gender and the perception of Tata Nexon's safety standards.	0.282	>	H05 Accepted (Null Hypothesis Accepted)	0.147	Strong
H6	There is no significant relationship between gender and the perception of Tata Nexon's engine performance.	0.198	>	H06 Accepted (Null Hypothesis Accepted)	0.186	Strong

Source: Author's compilation

DISCUSSION

Comparative Study Discussion on 2: Tata Nexon vs. Mahindra XUV300 Engine, Mileage, Safety among Consumers in Ahmedabad City

The objective of this research was to compare the consumer perceptions for Tata Nexon and Mahindra XUV300 car engines, mileage, and safety among consumers in Ahmedabad. A number of hypotheses were tested to determine the relationship between different demographic variables with reference to preferences on these vehicles. This has revealed many interesting facts regarding the perception regarding the cars by the consumers from this location, especially in relation to the influence of age and gender on preference and perception.

Age and preference for Tata Nexon. The analysis indicates that age certainly has a notable bearing on the preference for the Tata Nexon. The p-value for hypothesis testing between age and preference for Tata Nexon was found as 0.000, which is less than the 0.05 level of significance. Hence, the null hypothesis is rejected. Thus, there is a statistically significant relationship. The correlation coefficient ($R = 0.013$) is representing a weak relationship: age may impact preference, but not much weight is put to it. This is a possible conclusion that younger consumers would tend to have more preference for Tata Nexon, possibly because of its latest features and design, whereas older consumers may have different priorities, such as comfort and convenience use.

Gender and Tata Nexon preferring. The other part of the study is determining the association of gender with preference for Tata Nexon. The p-value of 0.001 indicates a very strong relationship which leads to rejection of the null hypothesis. However, the weak correlation ($R=0.118$) suggests that gender only plays a minor role in influencing preference.

The Tata Nexon seems to attract the attention of both male and female consumers for different availability reasons. For example, mostly men will be interested in performance features, while women will consider safety or design features.

Gender and Perception of Affordability of Tata's Service and Maintenance for the Nexon

Hypothesis testing with the p-value produced was 0.006, less than 0.05, implying that the null hypothesis was rejected in association with gender and the perception of affordability concerning Tata's service and maintenance cost. The correlation coefficient ($R = 0.021$) thus indicates a weak association, pointing out to some extent that gender involves some impacts on consumers' perceptions of how affordable the maintenance costs for the Tata Nexon are. This could be indicative of gender-linked differences in financial priorities or car maintenance cost awareness.

Gender and Tata Nexon's Perception with Respect to Value-for-Money

Of course, this perception of Tata Nexon as a value-for-money car was further conditioned by gender. Thus, the hypothesis test indicated a p-value of 0.044 that was less than 0.05. In this situation, the weak relationship ($R = 0.100$) implies that although gender does influence the value-for-money perceptions, this effect is slight. Women and men will be equally inclined to appreciate the price of the Nexon, but their preferences concerning mileage, engine performance, and safety will cause varying opinions on value as it is found by most people.

Gender and Safety Perception

The hypothesis from the relationship between gender and the perception of safety standards by Tata Nexon yielded a statistical p-value of 0.282 greater than 0.05, thereby accepting the null hypothesis. This result indicates that there is no relationship between gender and perception concerning safety features of the car. Both consumers must be male or female by recognition of Nexon safety. This could be because of the brand's consistent focus on safety features, airbags, ABS, a solid structure, etc.

Engine Performance Genders

Finally, regarding the effect of the gender of the respondents on the perception of Tata Nexon engine performance, it was observed that the p-value is 0.198, which is greater than 0.05. This led to the acceptance of the null hypothesis, indicating that there is no significant relationship between gender and engine performance perception. With a strong correlation of $R = 0.186$, this suggests that the corresponding consumers have similar perceptions of the performance of the engine irrespective of gender because of the vehicle's standard engineering factor and engine efficiency.

The last point of the study concluded that several important findings with regards to market perceptions on the Tata Nexon in Ahmedabad were discovered. Although they vary, demographic factors like age and gender seek to influence preferences and perceptions. However, such influences are generally weak, indicating that vehicle features, brand reputation, and price tend to take a more significant part in shaping consumer decisions. Tata Motors can thus look at these findings in refining their marketing strategies to get wider reach through preferred aspects of affordability, engine performance, and safety- critical in both genders.

Implications as Regards Theory

Theoretical Implication

The outcomes of this study have several theoretical implications regarding understanding consumer behavior and the factors that affect car preference in a competitive automotive market regarding Tata Nexon and Mahindra XUV300. The aspect of the study elaborates on the demographics, such as age and gender, related to the preferences and perceptions associated with engine performance, mileage, and safety by the consumers. These implications could be useful in extending the body of literature in marketing, consumer behavior, and product differentiation pertaining to the automotive industry.

1. Consumer Segmentation Based on Age and Gender-

The strong association existing between age and preferences for Tata Nexon indicates that age can be an important demographic variable to segment car buyers. This is in line with earlier studies that advocate for age being a consumer behavior predictor since young consumers prioritize features such as design, modernity, and innovative technology generally found in models such as Tata Nexon. The poor association with gender under preference for the Nexon means that even though gender could influence specific aspects of car choice (such as safety, aesthetics, or affordability), it contributes less in overall preference for a car. This indicates the growing trend towards gender-neutral marketing and product development where consumers of both genders have similar appreciating attributes regarding safety, performance, and value for money

2 Perception of Affordability and Value for Money

Indeed, both gender and perceptions of Tata Nexon affordability and value-for-money are interesting in consideration of consumer decision-making processes. It indicates that consumers of both genders would most likely measure the same product through virtually the same financial lenses considering aspects such as long-term value, maintenance costs, and fuel efficiency. Evidence from previous studies on the marketing of automobiles often indicates that cost-related factors hardly discriminate between male and female buyers, thus underscore the necessity of automakers emphasizing cost-effective ownership rather than girly messages.

3. Safety and Engine Performance Perceptions

The acceptance of the null hypothesis with respect to the relationship between gender and perception of safety standards of Tata Nexon and perception of engine performance has theoretically interesting implications. It states that safety features and engine performance are regarded as significant by all consumers irrespective of gender, and these aspects may serve as universal decision-making criteria when the consumer evaluates a vehicle. This can be interpreted in support of the idea that it is possible to standardize a product, considering that safety and performance include such product attributes concerning consumer demand irrespective of different demographic groups. Moreover, this stands in line with the notion that in today's market, safety and performance have become baseline expectations rather than differentiating factors, which have thus resulted in a lesser variance of preferences between gender lines within the consumer population.

Weak Associations and the Role of Modern Consumer Preferences

Weak Connections and Their Implications for Modern Consumer Preference Studies show that the variables measured tend to be weakly associated with each other, denoting that the modern consumers are more informed and rational in shopping. It contests the cultural understanding, which profoundly assumes strong relationships between demographic identities (like age and gender) and preferences for products. Instead, such a view suggests that consumers possess a more nuanced understanding of consumer behavior whereby his decisions are founded on product attributes (engine, safety, mileage) rather than in some overarching demographic categories. This finds great importance for consumer behavior theory in that it suggests that product and brand attributes or knowledge may overshadow or at least balance traditional demographic categories in preference formation.

Implications for Marketing and Product Development

Significations of Marketing and Product Evolution Theoretically, this research indicates the newness of changing consumer preferences in the vehicle industry. Hence, the findings suggest that the marketing strategies formulated should not just include demographic variables alone, but should take into account the universal elements of automobile ownership, such as value-for-money, safety, and engine performance. Furthermore, weak relationships between gender and core perception dimensions (affordability, safety, and engine performance) indicate that the organizations must highlight such universal attributes in their marketing efforts so that they could pave way for a larger consumer base. Future

research can build on this to explore how changing customer expectations are going to really shake the foundations of segmentation strategies of these automotive copies.

In conclusion, this study adds support to the idea that demographic variables still affect consumers' preferences, but probably not as much as current marketing theory may indicate. Automakers should then reconsider their strategies according to the new dynamics of the consumer behavior marketplace, where product features, price, and brand reputation take priority over the traditional demographic characteristics of age and gender. Such theoretical assumptions signify a further departure from the creation of universal, feature-based marketing and product development strategies within the automotive sector.

Practical Implications

These research findings have thrown up several practical implications particularly for automakers such as Tata Motors, marketers, and other automotive stakeholders. Knowing consumer preferences and factors influencing car choices like engine performance, mileage, and safety could help businesses to devise specific strategies toward improving product offerings, marketing campaigns, and customer engagement strategies for the given target group. As indicated below, here are some practical implications of study findings:

1. Targeted Marketing and Product Positioning

The research outcomes prove that being under a younger bracket is a major factor for the consumers to prefer Tata Nexon, although that is a little weak association. In other words, young consumers prefer Tata Nexon more often because of the modern styling, features, and latest technology. Thus, Tata Motors can go with marketing strategies that can directly hit a target group of consumers in that age category on websites and social media, emphasizing the high-tech-and-modern features, including infotainment systems in cars, designs, and safety features. While older consumers, who prefer comfort and effortless driving, can be targeted with messages about the practicality, dependability, and cost of the vehicle. This segmentation can maximize the embrace of the vehicle to different consumer segments.

2. Gender-Neutral Marketing

Although the study found gender to affect some perceptions like affordability and value for money, the gender-car preference relationship turned out to be quite weak overall. In other words, it indicates one modern trend in consumer behavior, the gradually lessening importance of gender in the car buying process. Hence, Tata Motors and other car manufacturers can develop gender-neutral marketing strategies that emphasize performance parameters such as safety, engine performance, fuel economy, and overall value. Such features would appeal to men and women alike, further reducing the need for gender-based distinctions in advertising and promotional campaigns.

3. Highlighting Safety and Engine Performance in Marketing Campaigns

Conclusions from the study reveal that irrespective of gender differences, safety and performance of the engines are the defining parameters as far as consumers are concerned. As inherently appealing features to all potential users, safety features and engine performance hold the greatest potential for Tata Motors marketing communications on the Tata Nexon. High safety standards, crash-test ratings, and engine efficiency would sell the vehicles quite universally since these are appealing characteristics for male and female consumers alike. In advertising, marketers might think of putting in testimonials, expert reviews, and visual storytelling to give a feel of its superior safety and performance capabilities, which the Nexon has to offer.

4. Value-for-Money Perception and Affordability Messaging

Another important customer for Tata Nexon because of its perceived value in terms of money should be a woman. This means that it places value on selling the car to those males who do not necessarily buy it for cost-effectiveness. To effectively address the issue, it would be advisable for Tata Motors to give value to affordability talks of the Nexon, focusing on its initial purchase, low maintenance costs, and fuel efficiency. In an increasingly informed market on what it costs to keep a car in the long run, such attributes could even help make the vehicle attractive, considering demographic differences across such sustainability issues. Even in terms of financing easy arrangements that target lower EMIs, the brand could easily fit into a model of affordability in the long run.

5. Consumer Education on Safety Features

Acceptance regarding the null hypothesis with respect to gender and perceptions of safety suggests that safety is a valued condition for all genders. This should promote auto manufacturers towards educating consumers on safety features of the automobiles, especially family-oriented ones. Such campaigns could be about educating the consumers on how the Tata Nexon safety technologies such as airbags, anti-lock braking systems, and stability control contribute to keeping the occupants safe. Collaborations with safety organizations or media organizations that carry reviews on car safety features could further add the credibility of Tata Nexon with regard to safety.

6. Enhancing Customer Experience through Post-Purchase Support

Hence, since the issue brought out herein relates to the perception of affordability and value for money as very important parameters for both male and female consumers, it is advisable that Tata Motors should continue providing strong after sales support services which are mostly affordable service repairs, warranty packages, and maintenance packages. Value added services such as extended warranties or free service for a specified period of time could also enhance customer satisfaction and promote brand loyalty. Most importantly, these services would be value-adding to cost-conscious buyers who prefer a nice after-sales service to protect their investment in their vehicle.

7. Product Innovation Based on Consumer Preferences

Nexon gave good safety ratings as well as an excellent engine performance, but research shows a growing need for consumers to enhance innovations in these spaces. Therefore, automakers should always develop their product portfolio,

focusing on fuel economy, greenness, and the introduction of intelligent technologies in most areas.

Looking at the pattern of EVs making rounds among consumers, Tata Motors may also check out the electric or hybrid versions of Nexon. These would appeal to a specific segment of consumers who are environmentally conscious, yet looking for high performance along with safety.

8.Improving Brand Perception Based on Consumer Feedback

With this piece of research, Tata Motors might want to manipulate or tap into identifying areas used to better its brand perception and improve product offerings. The other areas will still include developing and marketing strategies that would talk directly to changing needs of target markets through primary areas like engine performance, mileage, and safety standards. Other refined work done by the study will include mechanisms of acquiring consumer feedback (for example, survey, review, focus groups) for improving product feature description and addressing gaps identified by the study. Monitoring consumers' sentiment will help Tata Motors fit into the market in demand of a competitive edge. In short, practical implications of the study show actionable insights for Tata Motors and all the stakeholders in the automotive industry. By customizing marketing avenues toward emphasizing universal features such as safety and performance while innovating based on consumer preferences, automobile manufacturers will be able to reach a wider range of consumers. On affordability- customer education and post-purchase services could be added to this case to perfect, build and enjoy brand loyalty and customer satisfaction-enhancing initiatives.

CONCLUSION

It is a comparative study made between Tata Nexon and Mahindra XUV300 on the engine performance, mileages, and safety aspects, giving insights to such study on the consumer preferences and perceptions in the city of Ahmedabad. The study also shows how demographic variables such as age and gender affect consumer choices although their impact in general is quite weak. Age was found to influence preference for Tata Nexon significantly such that younger consumers preferred the model more as opposed to the influence of gender which impacted preferences slightly when it came to overall car preferences.

Moreover, the researcher found safety and engine performance to be universally important to all consumers as regards gender and hence these should be used in promoting the products and marketing plans. Gender perception does, however, carry some weight in perception about affordable goods and value for money, but that is a slim margin; hence, it means all when calculating worth will affect how utilities of both male and female consumers view the Tata Nexon.

The results of this study have indicated the importance of bringing the safety features and performance aspects of the Tata Nexon into the advertising campaigns as they have wide-ranging appeal among all segments of consumers. The male-female divide indeed elucidates that all types of consumers appreciate affordable pricing of the vehicle, hence the importance of effective ownership solutions such as low maintenance costs and fuel efficiency.

Thus, the study concludes by providing valuable recommendations for Tata Motors in improving its marketing strategy, offering a better product range, and reaching customers more effectively. These include focusing on consumer priorities that transcend demographic barriers, such as safety, engine performance, and value-for-money, and then further segmenting marketing strategies to suit specific demographic segments for Tata Motors, thereby improving its market standing. Continuous innovation, consumer awareness, and strong after-sales support are taken as being crucial for gaining consumer trust and loyalty in a cutthroat marketplace. Therefore, this study shows that understanding and redressing the changing preferences of consumers holds the key to success in the automobile industry.

RECOMMENDATION

Recommendations for Future Research/ Future Scope of the Study

Recommendations for Future Research / Future Scope of the Study

This research study gives a picture of consumer preference in many ways such as engine performance, mileage, and safety in the case of the Tata Nexon and Mahindra XUV300, but still there are so many opportunities for further studies to answer how consumers are influenced in automotive decision-making. Recommendations are presented below for future studies:

1. Thus, while this research turned out to go along with age and gender demographics, further study would probably delve deeper into other demographic variables such as income, education level, family size, occupation, etc. These data may yield richer understandings of the distinctions between different types of consumers-as compared to just Tata Nexon or Mahindra XUV300. With it, more improved marketing strategies, as well as segmentation of the consumers, may be further improved to cater to a very specific audience of clientele.

2. Comparative Analysis Across Diverse Geographies The present study has been focused on consumers in Ahmedabad city. In fact, there may be significant differences when it comes to preferences due to the diverse nature of India among consumers from different geographic regions. Future studies might look at the comparative study concerning preference for Tata Nexon versus the Mahindra XUV300 among different cities or states, especially metropolitan, suburban, and rural areas. This will give a clue about how cultural, economic, and geographical factors define buying behavior and thus require marketing and product strategies relevant to the region.

3. Consumer Experience and Satisfaction-The study focused on preferences and perceptions; however, future research can investigate post-purchase experiences among customers owning Tata Nexon and Mahindra XUV300 vehicles. Research conducted regarding customer satisfaction, service experiences, and the long-term performance of vehicles may reveal key insights into factors that create brand loyalty and customer retention. This may incorporate the entire ownership experience like maintenance, fuel efficiency, and robustness as affects future car-buying decisions to help automakers better complete the full lifecycle of customer understanding.

4. Looking Beyond Tata Nexon and Mahindra XUV300 In this study, the emphasis was laid upon the Tata Nexon and Mahindra XUV300; however, there are other subcompacts with which these two cars compete. The focus of the upcoming studies could then be broadened to include competitors such as Hyundai Venue, Kia Sonet, and Maruti Suzuki Vitara Brezza for an exhaustive analysis of customer preferences and perceptions of the two models. Such broadening would give an overview of how the vehicles measure up with other popular offerings in the segment.
5. To further investigate the effect of environmental issues on consumer preferences, there is an increasing trend in the purchasing of either electric or hybrid vehicles. Future studies will also focus on how issues such as environmental concern - fuel efficiency and carbon emissions - play a role in purchasing decisions among consumers in Ahmedabad. This can further lead to understanding how changing perceptions of eco-friendly vehicles transform the traditional perception of internal combustion engine vehicles such as Tata Nexon and Mahindra XUV300. Such information would help the automakers in making changes while attaching to what is becoming a more emerging market call for green technologies.
6. Longitudinal studies concerning changing consumer preferences Continuous changes keep taking place in consumer preferences in the automotive industry primarily due to possible technological developments, regulatory configurations, and changing attitudes in society. Longitudinal studies that observe changes in consumer choices over time could potentially account for the impacts that emerging technologies, such as electric vehicles, autonomous driving, and advanced safety technologies, have on consumer perceptions and buying decisions. This type of research may also predict future emerging trends to enable automakers to stay ahead in product development.
7. The role of digital media in creating consumer preferences above the role of online reviews for consumers and how a consumer gets influenced by such a media review on digital media. Future research can assess how online platforms, social media, and digital marketing campaigns impact a consumer's mind and perception about vehicles like the Tata Nexon and Mahindra XUV300. Knowing the power of digital influence will help automakers in designing their online spirits and digital marketing strategy to reach out to consumers and influence their purchase decision.
8. Analyzing an Influence of Emotional and Psycho-Behavioral Factors Future studies may focus the appraisal beyond rational factors like engine performance, mileage, and safety to include emotional and psychological aspects of car purchasing-for instance, being loyal to the brand, the perceived status a person draws from owning a particular car, and other emotional links one has to the vehicle itself. Understanding the role that emotion and psyche play in decision-making could tend toward a more comprehensive view of consumer behavior in the automotive market.

9. Dissecting the Effects of Government Policies and Regulation These include some government regulatory policies like emission standards, fuel efficiency standards, and incentives for electric vehicles, which greatly affect consumer behavior and the market. Future research may include how policies affect consumers' perceptions of vehicles such as Tata Nexon and Mahindra XUV300. Moreover, an appraisal of how the consumers will perceive the role of the government in greening vehicles would include electric vehicle import subsidies into understanding clues to the future of the Indian automotive market.

In conclusion, though this study offers a great snapshot of consumer preferences regarding Tata Nexon and Mahindra XUV300, there exists a greater scope for research to delve into the wider domain of consumer behavior in the automotive industry. The future studies would add profound insights that would assist organizations in adapting to the tides of changing market demand as well as consumer expectations by adding more room in terms of additional variables, expanding geographic boundaries, and covering the long-term impact of consumer experiences.

FURTHER STUDY

This research still has limitations, so it is necessary to carry out further research related to the topic of A Comparative Study on Tata Nexon V/S Mahindra XUV300 in order to improve this research and add insight to readers.

REFERENCES

- Babu, V., Kumar, D., , M., & , M. (2023). A COMPARATIVE FINANCIAL ANALYSIS BETWEEN TATA AND MAHINDRA AUTOMOBILES. *International Research Journal of Modernization in Engineering Technology and Science*. <https://doi.org/10.56726/irjmets43962>.
- Bhut, A. (2024). Electric Vehicles in India: A Five-Year Performance Analysis. *International Journal For Multidisciplinary Research*. <https://doi.org/10.36948/ijfmr.2024.v06i03.22462>.
- Chakraborty, P., & Dhingra, D. (2024). A Study on the Financial Performance of Mahindra and Mahindra Company. *International Journal For Multidisciplinary Research*. <https://doi.org/10.36948/ijfmr.2024.v06i03.22113>
- Dr.Sivaprakash, J., & Nanda, N. (2023). A COMPARATIVE STUDY ON THE FINANCIAL PERFORMANCE OF TATA MOTORS AND MAHINDRA & MAHINDRA MOTORS. *International Research Journal of Modernization in Engineering Technology and Science*. <https://doi.org/10.56726/irjmets36266>.
- Jain, H., & Gupta, N. (2024). A Comparative Study of Financial Statements of Tata Motors and Mahindra & Mahindra Ltd. Company for the financial years 2021-22 and 2022-23. *INTERANTIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT*. <https://doi.org/10.55041/ijsrem28683>.
- S., A., & Devi, J. (2023). TATA Motors Limited: A Revolution in Electric Cars - A Case Study. *International Journal of Case Studies in Business, IT, and Education*. <https://doi.org/10.47992/ijcsbe.2581.6942.0265>.