



# The Adoption of Tata Motors Electric Vehicles (EVs) in India: Growth from 2018 to 2025

UTSAV GUPTA

Department of Management, School of Business,  
Galgotias University, Greater Noida India

**Abstract-** The research paper looks into the adoption of Tata Motors' EVs in India from 2018 to 2025, as this period saw growing awareness about the environment, changes in consumer routines, and help from government bodies. The study gives a close look at how different factors such as expenses, trust in the brand, new technologies, and other problems influence the adoption of EVs. 60 respondents to the questionnaire revealed that Tata EVs are well-known and the penchant to buy them has been steadily rising. It was found that running cost and awareness about the environment continue to play a big role, but still, not enough people switch, mostly because it's expensive and there are not many locations to charge. The study uses the Diffusion of Innovations and the Technology Acceptance Model as existing theories to analyze the actions of people. Lastly, the paper outlines recommendations for Tata Motors and also makes suggestions to the government to drive up adoption of clean transport.

**Keywords-** Electric Vehicles, Tata Motors, EV Adoption, Consumer Behavior, India, Nexon EV, Sustainable Transport, Government Policy, Charging Infrastructure, 2018–2025.

## I. INTRODUCTION

Sustainable transportation is becoming more popular around the world, so electric vehicles (EVs) are now leaders in new automobile technologies, mainly in India. Since there is a growing problem with air pollution, increasing use of fossil fuels, and the urgency of reducing carbon emissions for transport, electric mobility is now important for the environment and for the future of the economy. Since India is switching to EVs, Tata Motors introduced the Tigor EV, Nexon EV, and Tiago EV to be a leading force in the local EV business. The FAME I & II policies and help from different states allowed the company to experience a gradual increase in consumer adoption from 2018. On the other hand, despite using modern technology and cost-cutting plans, the growth of EV's is still moderate. The study covers how many Tata Motors EVs have been adopted in India from 2018 to 2025 and looks into consumers' motivations, challenges they face, and the results of various strategies and policies.

### 3.2 Introduction of the problem

Even though India has given EVs a push by providing subsidies, incentives, and good infrastructure, some issues still prevent them from becoming widely accepted. Buying a car is expensive, charging is difficult due to the lack of

stations, batteries raise worries, and there are doubts about the ability to sell after holding the vehicle for a while. As a leading player in domestic automotive, Tata Motors has put a lot of emphasis on making new products and bringing together all aspects of the industry. Even so, it is not certain that people have become more confident or actually stick with these cryptos over the long run. At the same time, figures from sales do not fully reflect the thoughts and habits behind people's buying behaviors. To address these shortcomings, this project looked at the actual experiences and views of people concerning Tata Motors' electric vehicles for the mentioned period.

The crucial questions addressed in this study are related to the objectives present in its methodology.

The main aim of this research is to look at the use of Tata Motors' electric vehicles in India from 2018 to 2025. The study will try to achieve three main objectives:

Look at how many people and companies adopt and own Tata EVs over the years.

Look into how aware, how they perceive the company, and how satisfied they feel.

Assess the effect of government help and available infrastructure in a region.

Find out the main things that influence people's decisions to buy electric vehicles.

Give advice about how to improve Tata Motors' EV approach and shape EV laws.

Qualitative methods call for questions known as research questions.

In order to complete the study's objectives, the following research questions are made:

What is the history of Tata accepting electric vehicles in India since 2018 and until 2025?

What can be said about how Tata's electric cars are perceived by buyers in terms of cost, functions, and posing no harm to the planet?

What part have policies and infrastructure from the government played in causing Dockers to be used by ordinary people?

What influences people's decisions to own Tata EV cars?

How can Tata Motors and policy-makers take away existing obstacles to promote EVs?

This research has important value in many areas.

This research gives important details about how EVs are adopted by companies in India, which adds another perspective to studies about EVs in India as a whole. Analyzing Tata Motors, this study demonstrates how a company produces mobility solutions, keeps up with technological changes, and responds to peoples' needs and rules. The conclusions are set to guide automotive stakeholders in shaping their strategies for electric cars and let government leaders know about the effects their existing policies have. Besides, the study helps academic debate by proving how theories work in India and this will guide future research on EV adoption for each brand.

3.6 This report addresses specific aspects and sets some limits.

This study only covers how Tata Motors has introduced EVs in India since the year 2018. Information was drawn by surveying 60 people from cities and towns, looking at their feelings and opinions towards public transport services. Hybrid cars are not part of the coverage, and there is no direct comparison between this car's fuel efficiency and that of other EV makers. Shortcomings are that there are few respondents, the survey is predominantly taken by city people, and answers depend on each individual's viewpoint. Moreover, because the EV sector is developing rapidly, we may have to change our conclusions when the market situation changes. However, these obstacles do not stop the study from giving a clear view of Tata Motors' role in India's shift to electric vehicles.

## II. LITERATURE REVIEW

In the past decade, India's electric vehicle industry has changed greatly due to concerns about the environment, the economy, and effective policy making. To solve urban pollution, lessen reliance on fossil fuels, and accomplish climate goals, more people are now turning to better transportation solutions. FAME I and II, along with the National Electric Mobility Mission Plan, have greatly speeded up the process of people buying EVs in the country. The policies are created to give financial rewards, cut the goods and services tax, and help with the expansion of charging infrastructure (Business Standard, 2024). Inc42's 2025 report explains that in 2024, EV car sales in India doubled, and Tata Motors remained the leading company in the industry. The way people have used the Internet varies depending on the location or lifestyle. Big cities like Delhi, Mumbai, and Bangalore have advanced in electric vehicles due to improved infrastructure and more knowledge, but people in semi-urban and rural parts of the country are still struggling since they don't have adequate infrastructure and are rarely exposed to this technology (FT Insights, 2025). Tata Motors has used the government's efforts to boost EVs by developing an EV ecosystem with important support from Tata companies like Tata Power, Tata Chemicals, and Tata Elxsi (Chandra, 2024). The features Ziptron, OTA, and AI in the Nexon EV show that Tata wants to meet the expectations

of buyers looking for technology and electric vehicles (Autocar India, 2021). As a result, using these efforts, the experience of using Tata's EVs has gotten better and they are now seen as more trustworthy and valuable.

At the same time, people's opinions and habits have become essential for driving adoption of electric vehicles. When making their choices, Indian buyers prefer entries that are cheap to buy and use, rather than those that embrace new concepts. At first, people were not sure about EVs because they worried about having places to charge, the life span of the batteries, and the high cost of initial purchase. On the other hand, growing costs of fuel, more awareness about the environment, and persuasive marketing are little by little changing what people think (The Hindu, 2023). The company offers EVs that are deemed accessible, strong, and affordable when compared to cars that run on petrol or diesel. According to surveys from Inc42 (2025), more consumers are choosing Tata EVs, without a doubt, most likely because of the high-spec Nexon EV, which stands out because of its excellent performance, great safety, and low maintenance costs. Although there has been great progress, there are still problems stopping EVs from being widely used. Based on studies of Rajan (2024) and Tiu et al. (2023), there is still a lack of charging stations, costly battery changes, and people's lack of knowledge about electric cars. Secondly, the used market for electric vehicles is not well established and affects people's confidence when buying one. TAM and Diffusion of Innovations Theory give an effective way to study the actions of consumers in theory. Jung, Schröder, and Timme (2023) note that perceived usefulness, how easy a product is to use, and social influence play a major role in why someone decides to adopt a product, each of which is touched by visibility, product dependability, and trust in the brand. That is why Tata Motors, by focusing on low prices and new automotive tech while following policies, makes an excellent example of an EV transition in a developing economy. Still, because of the lack of academic research on brands in India, this research aims to bridge the major gaps that exist there.

## III. RESEARCH METHODOLOGY

The present study applies a descriptive approach while using quantitative data to look at the introduction of Tata Motors' electric vehicles (EVs) in India between 2018 and 2025. An explanation gives proper insight into consumer behavior as it already exists, and a quantitative approach makes it possible to accurately measure people's awareness, opinions, satisfaction, and factors that guide their choice. The purpose of the chosen method was to understand consumer behavior toward Tata's electric vehicles, mainly the Nexon EV, the Tiago EV, and the Tigor EV, and measure the effect of certain factors like cost efficiency, brand reputation, policy set by the government, and development of infrastructure. The form of data collection was a questionnaire that the participants filled out on their own, chosen for this research, and sent to a targeted group of 60 people. These people were recruited for the study because they either use Tata's electric autos or are knowledgeable about the brand's electric cars. The EV performance was studied in Delhi, Mumbai, Pune, and Bangalore, since these places have more Tata EVs and related facilities for customers. The questionnaire held different themes about the participant's background, understanding of Tata EVs, the behavior of EV purchasing, satisfaction with EV-related infrastructure, impressions on government programs, and issues in the adoption of EVs. Researchers used different types of questions like multiple-

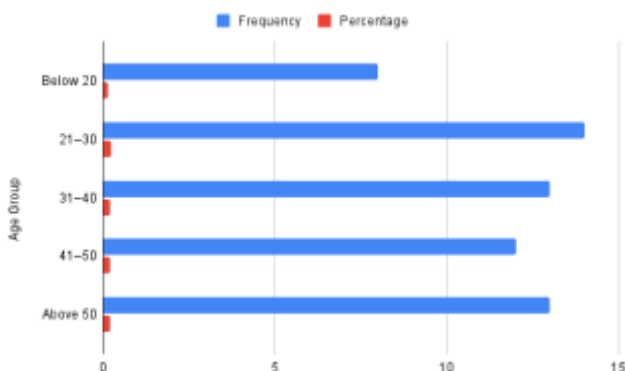
choice, Likert, and dichotomous to get regular answers that could be used for analyzing stats. Some of the questions formed in a general way to bring out specific and unique opinions. Mayan responses were analyzed by using descriptive statistics on Microsoft Excel for computing frequency, percentages, and basic correlation. Lots of trends were shown by using graphs and charts, which made it easier to see patterns in awareness, intention to purchase, satisfaction, and perception. All along the study, ethical factors were maintained, as participants were advised about the research’s aims, promised privacy, and permitted to opt out if they chose. All data collected did not include personal information, and people took part out of their own choice. In the beginning of the survey, there was a consent form so that participants understood what they were consenting to. Even though the method gives detailed results, there are some limits, like having a little sample, most interviews in cities, and respondents reporting what is seen as appropriate. Besides, the data collected reflect people’s opinions at just one point during the study period, rather than through the entire period. Even so, the selected method makes it possible to see things from the consumer’s point of view and gives a strong base for researching EVs at Tata Motors in India. The frameworks used in research, including the Technology Acceptance Model and Diffusion of Innovations, are supported by TAMS since it allows researchers to examine measurable aspects of such things as consumer habits, influence from infrastructure, and policy stimuli.

**IV. DATA ANALYSIS AND INTERPRETATION**

The chapter shows a detailed study of the data gathered from 60 respondents using a properly designed questionnaire. Statistical analysis has been used to see how many people are aware of Tata Motors’ electric vehicles, how they are adopted, and what affects their decision-making. Each of the three essential tables comes with a graph title and an explanation that explains the results.

**Table 1: Age Group Distribution of Respondents**

	Frequency	Percentage
Below 20	8	13.3%
21–30	14	23.3%
31–40	13	21.7%
41–50	12	20.0%
Above 50	13	21.7%
<b>Total</b>	<b>60</b>	<b>100%</b>



**Graph 1: Age Group Distribution of Respondents (Bar Chart)**

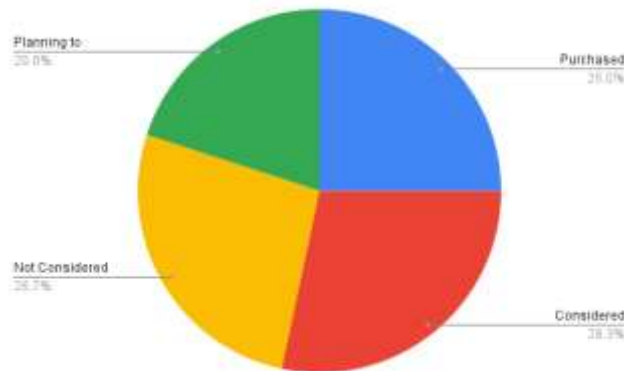
**Interpretation:**

Most of the people who answered the survey were between 21 and 30 years old (23.3%) or 31 and 40 years old (21.7%). A significant section of the sample, adding up to 41.7% of the respondents, are from the demographics older than 41 years. This mean that the company’s focus on EVs connects with

buyers of different ages, showing that Tata cars are popular among many people. Because of the even numbers, we can tell that eco-friendly cars are becoming popular with people of all ages.

**Table 2: Purchase Consideration of Tata Motors EVs**

	Frequency	Percentage
Purchased	15	25.0%
Considered	17	28.3%
Not Considered	16	26.7%
Planning to Purchase	12	20.0%
<b>Total</b>	<b>60</b>	<b>100%</b>



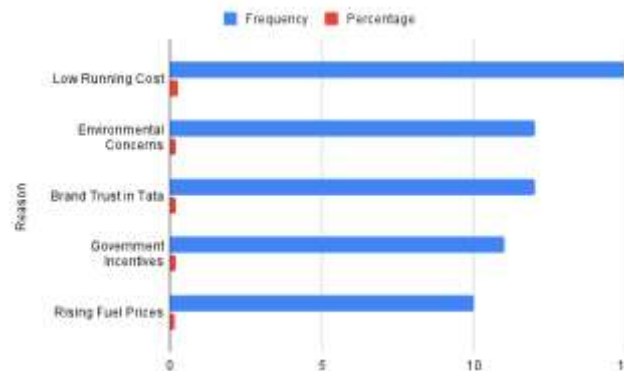
**Graph 2: Purchase Consideration of Tata EVs (Pie Chart)**

**Interpretation:**

The information suggests that 73.3% of the respondents have either made, are planning, or have considered buying a Tata electric vehicle, and only 26.7% have not done the same. Early adopters are the 25%, and the 28.3% who are currently looking into buying show that the corporate is reaching a good portion of middle-market people. People who plan to buy in the short term show great anticipation for the future. This data indicates that Tata Motors has become recognized by many, even so, a large number of consumers need to be convinced using new strategies, whether for infrastructure or by reducing prices.

**Table 3: Primary Reason for Interest in Tata EVs**

	Frequency	Percentage
Low Running Cost	15	25.0%
Environmental Concerns	12	20.0%
Brand Trust in Tata	12	20.0%
Government Incentives	11	18.3%
Rising Fuel Prices	10	16.7%
<b>Total</b>	<b>60</b>	<b>100%</b>



**Graph 3: Key Drivers of EV Adoption (Bar Chart)**

**Interpretation:**

Low cost of ownership and upkeep has convinced 25% of the surveyed group to be interested in Tata EVs. The reason

behind this is that India's consumers tend to keep their money for the future rather than just spending on the first expense. Ecological awareness and trust in the brand are both very significant, since each accounts for 20% of choice in buying products. Incentives from the government have a major impact on what people buy (18.3%), which proves the success of programs like FAME II. Out of those factors, rising fuel prices at 16.7% are also major, further proving that big economic changes are drawing consumers to electric vehicles. It shows that a number of aspects, including economics, ethics, and branding, come together in the company's decision-making process.

## V. DISCUSSION

From the information viewed in the previous chapter, it is clear that the electric cars from Tata Motors have advanced rapidly in India, but a few major problems must still be addressed. Since 90% of people are aware of Tata EVs, and 73.3% of users have decided or plan to decide on Tata EVs, this proves how well Tata reaches and supports national goals related to electric vehicles. Noticing age ranges among the respondents all the way to 85 years old, it is clear that electric vehicles are interest more and more people from a variety of age brackets, not only a small community. Out of all the respondents, one-quarter has bought a Tata EV already, while others haven't yet decided, showing there is a high possibility to increase sales with better information, attractive schemes, and strong infrastructure. As expected, potential owners are encouraged by cost-effectiveness, care for the environment, and the good reputation of the Tata brand to choose electric vehicles. Yet, the fact that government incentives influence only a handful of respondents and there is still worry about infrastructure means that even important policy interventions are not working at their best since many people do not see them clearly or they are not carried out properly. In addition, the fact that around a third of respondents have yet to consider buying an EV is probably due to worries about the initial price, the amount of charging stations, and questions about the batteries' effectiveness or resale prices. This supports what scholars discovered previously and theory shows that perceived usefulness, ease of use, and social impact are main reasons for people to use new technologies. All in all, the data states that Tata Motors helps move India towards EVs and points out that to keep growing, the company and others must involve better policies, infrastructure, support for consumers to learn, and cost-friendly financing. This case analysis of Tata Motors reflects the general story of India's electric vehicle industry, in which progress is seen but many important foundations have yet to be established for all to drive electrically.

## VI. CONCLUSION AND RECOMMENDATIONS

The study exploring the progress of EVs in India explains all the main factors affecting their adoption, highlighting what Tata Motors did while facing issues related to them from 2018 to 2025. According to the research, Tata Motors is one of the main players helping India switch to electric vehicles using its affordable, high-tech, and consumer-driven EVs. Because of the company's cooperation with group companies on battery-making, charging solutions, and digital functions, it has managed to build a valuable reputation and exposure within the EV industry. Overall, Tata's market penetration has succeeded with the public, since most people are aware of its products and intend to use them. The study also points out important factors that could block the wider usage of Blockchain technology. Problems such as paying a lot

upfront, weak availability of charging points, worry over battery life, and unawareness about FAME II are still affecting what many people decide when buying a vehicle. These problems prevent many people from buying EVs and also make it unlikely that EVs can last long in underdeveloped places. In turn, Tata Motors has to focus on changing these internal and external issues through proper strategic steps. If the company provides more fast-charging facilities in Tier-2 and Tier-3 cities, gives consumers an option to lease or go with battery-as-a-service, accepts trade-ins from ICE cars, and enhances how it supports customers after a purchase, many consumers will feel more secure. Besides, making people aware of the many benefits of electric vehicles, such as their cost, less pollution, and new innovations, may make them more likely to own an electric vehicle. Making EV incentives easier for people to understand, promptly giving out subsidies, and creating the same standards in different states are necessary in government policy. Developing the grid, setting up battery recycling, and opening local manufacturing will help the EV sector stay stable. Besides, when central policies are consistent, EVs are included in the construction of new buildings, and training future workers is done, EV use will grow in a sustainable way. The focus of this study is on Tata Motors, but it also reveals that a country's green ambitions depend on combining modern technology with pricing and easy access, as well as policies that are all directed in the same direction. They give a clear framework for understanding the behavior of people when making choices about using technology. Even though Tata Motors has achieved much, its role in the EV industry will depend on how fast and effectively the company responds to changing and discriminating people's desires in India. The steps mentioned in this document are meant to make a difference for Tata Motors and for anyone else dedicated to improving and achieving clean, efficient, and inclusive transport in India.

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