

## PURCHASE INTENTION OF ELECTRIC VEHICLE IN INDIAN MARKET

Akash Singh,  
BBA,  
Galgotias University

### ABSTRACT

The adoption of electric vehicles (EVs) has been accelerated worldwide due to concerns about energy security, the environment, and technological progress. This study dives into the complex dynamics of electric car integration into the Indian automobile market in an effort to provide a comprehensive knowledge of the different ramifications of this integration. Through the use of both qualitative and quantitative methods, this study investigates the potential far-reaching effects of EV proliferation. It investigates the following: shifts in consumer behavior, the efficacy of laws and incentives, the state of infrastructure for charging electric vehicles, and the technological advances necessary to bring about these changes. A complex ecosystem with potential and challenges is revealed by important results. On the one hand, electric vehicles offer an opportunity for India to shift away from antiquated automotive technology, reduce reliance on fossil fuels, and mitigate air pollution. But problems including a lack of a reliable charging infrastructure, concerns about running out of juice, and high startup costs are preventing their widespread deployment.

**Keywords:** Electric Vehicles, Indian Market, Automotive Industry, Sustainability, Consumer Behavior, Government Policies, Infrastructure Development, Technological Advancements, Strategic Imperatives.

### INTRODUCTION

Electric vehicles, or EVs for short, are cars that get their power from an electrical source. No fossil fuels, like gasoline or diesel, are required to start these electric automobiles. So, it's obvious that these cars care about the environment. For the simple reason that the level of pollution in the country is well over what is deemed acceptable. If this kind of research were to be carried out, it would reveal that numerous cities in India rank among the world's most polluted. Electric cars, which use a battery that is charged by the electricity grid, would eliminate the need for fossil fuels in India. The main reason for the extensive adoption of EVs in India is the desire to reduce pollution. Another goal is to ensure that this precious fossil fuel is preserved for the benefit of generations to come. For the people of India, the arrival of electric cars was a turning point in history. As the country's shockingly high population continues to grow, so do the necessities of life for its inhabitants. This is why the broad use of EVs is so beneficial to both the economy and society.

### LITERATURE REVIEW

Kalyan Dash and Praveen Kumar were married in 2013. They looked at how important it was to plan ahead before rolling out the electric vehicle policy nationwide. Infrastructure that is suitable for this and the strategy's national outcome must be in place inside the government. Last year, Liao Franchao The government of India is encouraging more individuals to purchase electric vehicles in a bid to lessen air pollution. Economists' and consumers' perspectives on electric vehicles are typically compared in these types of studies. Experts agree that electric automobiles are the most eco-friendly option. As soon as Lingzhi Jin In order to adapt to a constantly shifting world, the researcher discovered that individuals must be kept apprised of the most recent technological developments. We need to get the word out about how great electric cars are for the environment. The possible benefits and drawbacks of electric vehicles in the country were the primary focus of the study, according to Mohamed (2018). There is potential for a cleaner environment, reduced gasoline consumption, government assistance, etc. But there are obstacles, like generating public interest, building the necessary infrastructure for widespread usage of electric vehicles, etc. Pritam K. Gujarati (2018) reports that

despite some improvement in the usage of electric cars, a large number of Indians continue to rely on fuel vehicles, which pose risks to both people and the environment. The study found that no amount of benevolence could persuade people to purchase electric vehicles (Anil Khurana, 2019). Electric vehicles have many advantages, but they must be completely safe before they can be widely used.

## RESEARCH METHODOLOGY

Using data collected from a representative cross-section of the population, this descriptive study intends to ascertain the breadth of information obtainable on the specified topic. Research methodology - The study uses a qualitative research style that explores the participants' ideas and reasons for participating in the study. The number of people chosen to represent the entire population in a research study is called the sample size. One hundred people will make up the sample for this investigation. Researchers in this study utilized a convenience sampling strategy to select public samples depending on how convenient it was for them to do so. I was drawn to this method because of how simple and cost-effective it is. Approach to data collection-Two types of data may be utilized in the research project: Primary data - When gathering primary data, researchers depend on first-hand reports. The major data gathering strategy for this study is a standardized questionnaire that participants fill out. Secondary data refers to information that is already available on a specific issue. The secondary data gathering technique of this study relies heavily on online research.

## RESEARCH OBJECTIVES

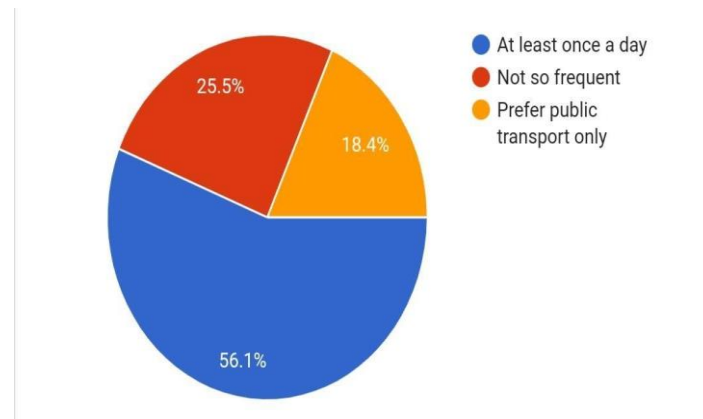
- Finding out how people think and behave with regard to EVs is the main objective.
- In order to find budget friendly way to drive car in india .
- What stops people from buying electric cars is something I'm curious about.

## DATA ANALYSIS

People were encouraged to take part in the survey by posting links to it on various social media sites; it was made using Google Forms. Respondents' levels of knowledge inform the development of a structured questionnaire. We have promised all participants that their information will be kept confidential and will not

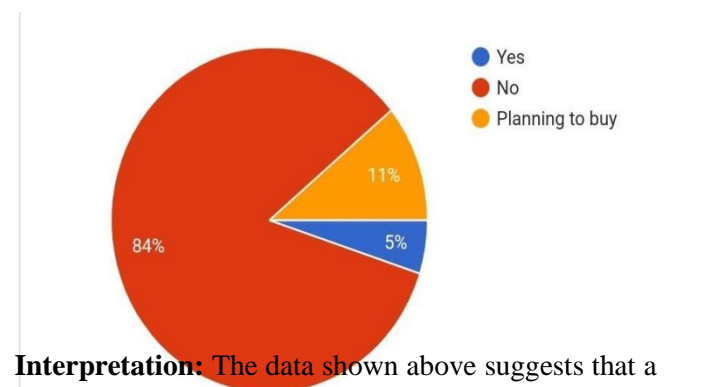
be shared with anyone else. The structured questionnaire was filled out by 62.5% men and 37.5% women out of a total of 100 candidates.

- Among those who filled out the survey, 35% were employed full-time by certain companies, 65% were college students, and 5% were professors or other academics.



**Interpretation :** From the data we have, we can deduce that 56.1% of the population uses their personal vehicles on a daily basis, 25.5% use them seldom, and 18.4% prefer to take public transportation. On a daily basis, people can't get around without their own personal vehicles.

- Do you have your own electric car?
- Yes
- No
- Planning to buy



**Interpretation:** The data shown above suggests that a significant portion of the sample does not currently own an electric vehicle; furthermore, a small percentage plans to buy one in the future. Fewer individuals are currently driving EVs or are thinking about buying one because of this.

Is driving electric car is budget friendly ?

- Yes
- No

Is Indian customers are interested to buy ev?

- . Yes
- . No

## FINDINGS

In comparison to other vehicle types, electric vehicles are deemed preferable by over half of the respondents. When considering the benefits of EVs, some members of the Indian public overlook the broader perspective. Customers aren't ready to embrace change as they are accustomed to driving fuel-powered vehicles, making it difficult for firms to gain a significant portion of the market. Since Indians are known to wait for new technology to become widely used before embracing them, the country is now waiting for more people to purchase electric automobiles. Respondents stated that India did not have the proper infrastructure for charging stations, despite the country's large population and abundance of petrol stations. They see the danger of driving an electric vehicle over long distances as an excuse not to purchase one. Quite a few people think EVs will be around for quite a while. Because of the potential good effect on the environment, they are fighting for the adoption of electric vehicles by all big car companies. Behavioral modifications are essential for the transition to e-mobility and optimizing their limited understanding of e.

## CONCLUSION

Forty percent of India's 100 million people either possess or intend to buy an electric vehicle, according to studies of the country's market for such vehicles. As a result, the Indian people are aiming for a day when all vehicles run on electricity. Making ensuring people are pleased should be the main priority, followed by influencing their behaviors to utilize fuel-based cars. For this to be achieved, meticulous preparations for the usage, maintenance, and final disposal of EV parts are essential. It seems the Indian government's aim of having the entire country rely on electric vehicles by 2030 is within reach, if the proper strategies and plans are put in place by both the government and electric vehicle producers. Electric vehicles should be priced

reasonably so that they are affordable to the general public.

The country of India would benefit greatly from an increase in the number of electric vehicles on its highways. One environmentally beneficial effect would be a reduction in the need to import gasoline and diesel. Second, it would fit well with the current worldwide movement for greener modes of transportation. Domestic automakers will have a leg up in the global market because so many foreign firms are investing in electric vehicle research and development.

By abandoning gas-powered cars in favor of electric ones, the public has taken a step toward a brighter future for the country.

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