



A Study on Consumer Buying Behavior Towards Electric Vehicles in Hyderabad

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Abstract:

Electric vehicles (EVs) are becoming an important part of sustainable transportation due to rising fuel prices, environmental concerns, and government initiatives promoting green mobility. This study aims to analyze consumer buying behavior towards electric vehicles in Hyderabad. The research focuses on factors such as awareness, affordability, environmental concerns, and charging infrastructure that influence consumer purchase decisions. A descriptive research design was adopted for the study. Primary data was collected through a structured questionnaire survey from 50 respondents in Hyderabad. Secondary data was obtained from journals, research articles, and websites related to electric vehicle adoption. The findings reveal that environmental awareness and fuel cost savings are the major factors encouraging consumers to adopt electric vehicles, while high initial cost and limited charging infrastructure remain key barriers. The study concludes that improving charging infrastructure, providing government incentives, and increasing awareness can significantly boost EV adoption among consumers. This research provides useful insights for policymakers, automobile companies, and marketers to develop strategies that encourage the use of electric vehicles in urban areas like Hyderabad.

Keywords: *Electric Vehicles, Consumer Behavior, EV Adoption, Sustainable Transport.*

Introduction:

Electric vehicles are gaining popularity across the world due to increasing environmental concerns and the rising cost of fossil fuels. Governments and automobile manufacturers are promoting electric mobility as a sustainable alternative to traditional fuel vehicles. In India, several policies and incentives have been introduced to encourage the adoption of electric vehicles.

Consumer buying behavior plays a crucial role in determining the success of electric vehicles in the market. Factors such as awareness, affordability, environmental consciousness, and infrastructure availability influence consumers' decisions to purchase electric vehicles.

Hyderabad is one of the rapidly growing metropolitan cities in India, where the demand for eco- friendly transportation is increasing. Understanding consumer buying behavior towards electric vehicles can help manufacturers and policymakers design better strategies for promoting EV adoption.

Problem Statement:

Despite government incentives and increasing environmental awareness, the adoption of electric vehicles among consumers remains relatively low. There is a need to understand the factors influencing consumer buying behavior towards electric vehicles in Hyderabad.

Literature Review:

Several researchers have studied consumer perception and adoption of electric vehicles.

Kansara and Kumawat (2024) conducted a study on consumer buying behaviour towards electric vehicles and found that environmental concerns and technological innovation play an important role in influencing consumer purchase decisions.

Srinivasan and Vadivel (2025) analyzed electric vehicle adoption trends and identified psychological, economic, and social factors that influence consumers' decision to adopt EVs.

Pranavi and M etta (2025) studied consumer perception towards electric vehicles and concluded that awareness and government incentives significantly influence consumer purchase intention.

Khajuria and Singh (2025) conducted a literature review on EV adoption and emphasized that consumer perception and environmental awareness play a major role in encouraging EV usage.

Smitha (2024) examined factors affecting consumer buying behaviour towards electric vehicles and identified cost, environmental benefits, and refueling convenience as major determinants of EV adoption.

Objectives of the Study:

1. To analyze consumer awareness towards electric vehicles in Hyderabad.
2. To identify factors influencing consumers to purchase electric vehicles.
3. To examine the challenges faced by consumers in adopting electric vehicles.

Research Questions:

1. What is the level of awareness about electric vehicles among consumers in Hyderabad?
2. What factors influence consumers to purchase electric vehicles?
3. What challenges discourage consumers from adopting electric vehicles?

Research Methodology:**• Research Design:**

The study uses a descriptive research design to analyze consumer buying behavior towards electric vehicles.

• Sample Size:

The sample size for the study is 50 respondents.

• Sample Area:

The study was conducted in Hyderabad city.

• Data Collection:**• Primary Data:**

Primary data was collected through a questionnaire survey among consumers.

• Secondary Data:

Secondary data was collected from:

- Research journals
- Websites
- Government reports
- Books

• Sampling Technique:

The study used convenience sampling technique to collect responses from consumers.

• Data Analysis:

Table 1: Awareness of Electric Vehicles

Awareness Level	Number of Respondents	Percentage
Highly Aware	18	36%
Moderately Aware	20	40%
Slightly Aware	8	16%
Not Aware	4	8%
Total	50	100%

Interpretation:

The table shows that 40% of respondents are moderately aware of electric vehicles, while 36% are highly aware. Only a small percentage of respondents are not aware of EVs. This indicates

that awareness about electric vehicles is gradually increasing among consumers in Hyderabad.

Table 2: Factors Influencing Purchase of Electric Vehicles

Factors	Respondents	Percentage
Environmental Benefits	16	32%
Fuel Cost Savings	14	28%
Government Incentives	10	20%
Advanced Technology	6	12%
Others Factors	4	8%

Findings:

- Most consumers in Hyderabad have moderate to high awareness about electric vehicles.
- Environmental concern is one of the main reasons for adopting electric vehicles.
- Fuel cost savings influence many consumers to consider purchasing EVs.
- High initial cost is a major barrier to EV adoption.
- Lack of adequate charging infrastructure discourages some consumers from purchasing EVs.

Suggestions:

- Government should expand charging infrastructure across the city.
- Automobile companies should reduce the cost of electric vehicles.
- More awareness campaigns should be conducted to educate consumers about EV benefits.
- Government incentives and subsidies should be continued to promote EV adoption.

- Companies should introduce more affordable EV models.

Conclusion:

Electric vehicles are emerging as an important solution for sustainable transportation. The study indicates that consumers in Hyderabad are increasingly aware of electric vehicles and their environmental benefits. However, certain challenges such as high initial cost and limited charging infrastructure still hinder widespread adoption. With improved government support, better infrastructure, and increased consumer awareness, the adoption of electric vehicles is expected to grow significantly in the coming years.

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