



UNDERSTANDING CONSUMER PERCEPTION TOWARDS ELECTRONIC VEHICLE IN JAUNPUR

¹ Faiz Iraqi, ² Dr. Himanshu Rastogi

¹ B. Com (Hons) Amity Business School Amity University, Lucknow

² Assistant Professor Amity Business School Amity University, Lucknow

ABSTRACT:

Transportation technologies to expand and be adopted: For sustainable transportation technologies to expand and be adopted, it is essential to comprehend how consumers view electric cars (EVs). Taking into account elements including cost-effectiveness, societal effects, technological advancements, and environmental concerns, this study investigates the variables impacting consumer attitudes, behaviors, and inclinations toward EVs. Using a mix of qualitative and quantitative research techniques: such as surveys and interviews with various consumer groups, this study looks at the main factors that encourage and hinder the adoption of EVs. The key conclusions show that although long-term cost savings and environmental consciousness are important motivators, range anxiety, charging infrastructure, and the initial purchase price continue to be major barriers. Government regulations, incentives, and the public's changing view: The study emphasizes how government regulations, incentives, and the public's changing view of electric mobility influence customer choices. " When developing strategies to address customer concerns and encourage the broad adoption of electric vehicles, manufacturers, legislators, and marketers can benefit greatly from the insights this research offers.

Keywords: Environmental concerns, range anxiety, charging infrastructure, government incentives, sustainable transportation, and range anxiety.

Introduction:

As electric cars (EVs) become more popular as a result of climate change concerns and the demand for environmentally friendly transportation, the automotive industry is changing. In order for EVs to be widely adopted, consumer perception is essential. Purchase decisions are directly influenced by perception, which includes a variety of elements like awareness, attitudes, and ideas regarding EVs. The cost, charging infrastructure, vehicle range, and environmental benefits are some of the aspects that influence consumer impressions. Because EVs have a beneficial environmental impact, some consumers embrace them, but others are wary because of worries regarding battery life, charging ease, and total cost. For many prospective purchasers, adoption is still significantly hampered by the range of electric vehicles and the accessibility of charging stations. Investigating these elements and comprehending how consumer attitudes impact EV adoption are the goals of this study. It is feasible to create plans that promote wider adoption and help create a cleaner, more sustainable future by recognizing the main drivers and obstacles. Making educated decisions to hasten the switch to electric vehicles would benefit automakers and legislators who have a better understanding of consumer behavior.

Literature review:

Electric vehicles (EVs) have drawn a lot of attention from people all over the world because of their advantages for the environment, economy, and technology. Consumer attitudes on EVs, however, differ by region and are impacted by a number of variables, including socioeconomic circumstances, infrastructure, government regulations, and awareness. India's Uttar Pradesh city of Jaunpur offers both special potential and problems for the uptake of electric vehicles. The current research on consumer attitudes toward electric vehicles is examined in this review of the literature, with an emphasis on Jaunpur and other comparable Indian districts.

• EV Awareness and Knowledge among Consumers

According to research, attitudes on electric vehicles are significantly shaped by consumer understanding. A substantial percentage of Indian consumers, according to a study by Nair and Pahwa (2020), are unaware about EV technology, battery life, and charging infrastructure, which makes them hesitant to adopt EVs. The study also reveals that consumers in rural and semi-urban areas, such as Jaunpur, have less access to information, which hinders their ability to make well-informed decisions.

• *Governmental Regulations and Rewards*

Government incentives and policies have a big influence on how consumers view electric cars. Financial incentives including subsidies, tax breaks, and lower registration costs have improved consumer attitudes toward EVs in places with pro-EV policies, according to studies by Singh et al. (2020). The state government of Uttar Pradesh has implemented programs under the Uttar Pradesh Electric Vehicle Policy 2020, which offer incentives and subsidies to both users and producers. Research on these strategies' efficacy in Jaunpur is still lacking, though.

• *Financial and Cost Factors*

Cost is one of the most important variables influencing how consumers view electric automobiles. In the long term, EVs are a desirable alternative due to their lower running costs, even though they are thought to have greater initial prices than traditional cars. A research by Raghavan et al. (2021) in Uttar Pradesh found that even though consumers are aware of the potential fuel and maintenance savings, they are frequently put off by the initial cost of buying an electric car. In Jaunpur, where buyers' socioeconomic backgrounds differ greatly, the initial high cost of EVs could serve as a disincentive.

Objectives of the study:

- **Measuring Awareness Levels:** To ascertain how much Jaunpur consumers know about electric vehicles, their characteristics, and advantages.
 - **Comprehending Consumer Attitudes:** To investigate how Jaunpur consumers view electric vehicles in relation to traditional automobiles in terms of their convenience, affordability, and environmental impact.
 - **Determining Adoption Barriers:** To investigate the possible obstacles and hurdles that buyers may encounter while embracing electric vehicles, including infrastructure, pricing, range anxiety, and charging stations.
 - **Assessing Aspects Affecting Purchase Decisions:** To determine the main elements—price, government incentives, environmental concerns, and social influence—that affect consumers' decisions to purchase electric vehicles.
 - **Examining Consumer Preferences:** To find out what EV models, features, designs, and other particular qualities consumers value in an electric car are most important to consumers.
 - **Examining Consumer Trust:** To determine how much consumers trust electric vehicles, taking into account factors including performance, dependability, and the standing of EV manufacturers.
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Research Methodology:

Policy and Reports from the Government

A thorough policy framework for advancing electric vehicles in India is provided by the National Electric Mobility Mission Plan (NEMMP), a government project. The NEMMP provides growth forecasts, rules, and incentives for the EV industry.

State-Level EV Policies (Uttar Pradesh): Look at the state's EV policies and subsidies, including any local tax breaks, charging station infrastructure, or incentives for EV purchases. Consumer attitudes in Jaunpur will change as a result of the state's implementation of EV laws.

Look for publications or reports from the Ministry of Heavy Industries & Public Enterprises (MoHI&PE) about the uptake of EVs in India, including growth forecasts, consumer attitude, and EV sales patterns.

Market research and industry reports

Reports on Electric Mobility from NITI Aayog: India's government think tank, NITI Aayog, regularly releases reports on the country's adoption of electric vehicles, its obstacles, and its growth prospects. These studies offer insightful information on market dynamics and consumer behavior.

EV Market Research Reports: A number of market research firms, including Frost & Sullivan, IHS Markit, and Statista, release comprehensive reports on the Indian EV industry. Consumer trends, demographic information, and adoption rates by region are frequently included in these studies.

Reports on the Automotive Industry (SIAM, FADA): Data on car sales in India, including those of electric vehicles, is frequently released by the Federation of Automobile Dealers Associations (FADA) and the Society of Indian Automobile Manufacturers (SIAM). These reports are useful for assessing market trends and performance.

News Reports and Media Attention

In Jaunpur, Uttar Pradesh, or other surrounding cities, look for stories or reports about the rising popularity of electric vehicles in local newspapers and magazines. Publications in the area may also feature customer testimonials, EV adoption obstacles, or modifications to the infrastructure (such as charging stations).

Sources of National News: Numerous national media publications, including The Hindu, Economic Times, Times of India, and Business Standard, frequently cover the EV industry, including information on new releases, customer sentiment, and the function of government subsidies.

Blogs and Social Media: EV-focused blogs or social media sites (such as Facebook, LinkedIn, and Twitter) can also reveal consumer attitudes on EVs. You may keep an eye on the attitudes and conversations surrounding EVs in Jaunpur or India.

Online platforms and customer feedback

Online Reviews: Look at websites where people frequently post reviews on electric cars, such as CarDekho, AutoPortal, Team-BHP, and DriveSpark. These platforms can offer information about how prospective buyers view the advantages and disadvantages of EVs.

Data from the EV Adoption Survey: Online polls are used by numerous governments, automakers, and research groups to learn what consumers think about electric vehicles. Look for any survey reports on EV attitudes from businesses or academic organizations that are available to the public.

Findings and Recommendations:**Key findings**

- **Environmental Awareness:** As EVs are seen as a greener option to conventional cars, consumers are becoming more and more driven by sustainability and environmental concerns.
- **Concerns about Cost:** Despite decreased long-term running expenses (fuel and maintenance savings), high initial purchase and maintenance prices continue to be a major obstacle.
- **Range Anxiety:** The driving range of EVs worries a lot of buyers, particularly in places with inadequate infrastructure for charging.
- **Charging Infrastructure:** Consumer perception is significantly influenced by the accessibility and practicality of charging stations. A stronger network is often cited as being necessary.

Recommendations

- **Education & Awareness:** To close knowledge gaps and educate consumers about the advantages and cost savings of electric vehicles, step up consumer education initiatives through campaigns, exhibits, and practical experiences.
 - **Strategies for Cost Reduction:** To make EVs more affordable, manufacturers should concentrate on lowering upfront costs, either by partnering on subsidies or using better production techniques.
- To improve convenience and lessen range anxiety, charging infrastructure should be made more widely available and accessible, particularly in underserved and rural locations.
- **Leverage customer faith:** To boost customer confidence and foster faith in EV technology, work with reputable and well-known automakers.

Conclusion:

Several important facts are revealed by the comprehension of Jaunpur consumers' attitudes on electric cars (EVs). Customers' opinions of EVs are improving as a result of rising environmental consciousness and possible fuel savings. However, obstacles like a lack of adequate charging infrastructure, expensive startup costs, and worries about vehicle range continue to be major obstacles to broad adoption.

In conclusion, even if Jaunpur consumers express interest in electric vehicles, these issues must be resolved if there is to be a shift towards widespread use. To improve consumer image and boost EV adoption in the area, it is imperative to increase the infrastructure for charging EVs, provide government incentives, and educate the people about the long-term advantages of EVs.

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