A STUDY ON CONSUMER PERCEPTION TOWARDS ELECTRIC VEHICLES IN INDIA

Ankita Priyank1, Anmol Pahawa2, Ankit Singh3

1(Student MBA, NIET/ AKTU University, India)
2(Student MBA, NIET/ AKTU University, India)

ABSTRACT

Technological innovation has its impact in each and every industry. The auto industry is no different to it. To combat global warming and climate change, the Indian government has encouraged people to move from fuel-based vehicle to electric vehicles. By 2030, Government of India intends to have an Electric Vehicle sales penetration of 30% for private cars, 70% for commercial vehicles and 80% for two or three wheelers. The government has also incentivized people for opting Electric Vehicle. With the electrification of automobiles, India’s import of fuel will reduce significantly. The rising price of fuel and issue of global warming might be one of the reason in changing perception of consumer towards Electric Vehicle. We believe, the findings of the study might be beneficial to the government, automotive manufacturers, dealers and marketers.

KEY WORDS

Electric Vehicle, Consumer Perception, Sustainability, Global Warming, Eco-Friendly Environment

INTRODUCTION

Today, India is one of the ten largest automobile markets in the world, and automobile sales need to accelerate in order to accommodate the midlevel talents of its people and grow continuously. Over the past few years, there has been a lot of discussion about oil prices, as well as the deregulation of gasoline prices. Additionally, the threat of supply disruptions in the Middle East has increased the debate on energy security and the focus on alternative driving methods. Like many other similar industries, the potential of alternative vehicles such as electric vehicles (EVs) in India depends on advances in battery technology, driving, government support, regulations, cost reduction and better payments.

Electric vehicles (EVs) use one or more electric motors for propulsion. There are three main types of electric cars used directly from external power stations. In the last few years, fuel-based transportation as transportation and the high environmental impact of fuel have driven new interest in electric vehicle transportation infrastructure. Electric vehicles differ from traditional electric vehicles as the electricity they use can be generated from a variety of sources, including fossil fuels, nuclear energy, and other energy sources such as renewable energy such as tidal energy, solar energy, wind energy, or a combination of these.
LITERATURE REVIEW
Singh Sharma (2021) in their study lists the pros and cons of the electric car industry in India. Here are some benefits: Electric cars are safer than internal combustion engines. Electricity is cheaper than gas. Electric vehicles require less maintenance than internal combustion engines. The difficulties of electric cars include electric equipment, the prices of electric cars being higher than ordinary cars, the lack of charging stations and the payment being made in a short time, causing customers to be afraid of driving for a long time. The high cost of electric vehicles is an important problem that prevents consumers from purchasing electric vehicles. To solve this problem, the government supports the use of electric vehicles in the automotive industry by providing incentives. But electric vehicles are still at least 30% more expensive because of batteries.
Karwa (2016) proposed the concept of education and training for electric vehicle owners in a study he conducted. The barrier to EV adoption is the transfer of information from dealers to consumers. Sales personnel are the first direct contact with customers. Based on regular use of electric cars, sales personnel are able to understand the value of electric cars and interact with customers. Electronic equipment should be installed in the service area and in front of the dealers. Sales personnel need to receive regular training on EVSE. Education should include mass media and simple one page sales brochures highlighting fuel savings, local energy support, and the benefits of electric vehicles.

OBJECTIVES
➢ To examine the understanding and expectations regarding the potential of alternative technologies such as electric vehicles.
➢ To discover if and when buyers will consider electric vehicles as a transportation option.
➢ To discover customers' current needs for electric vehicles that will unlock their future potential.

Research Methodology
Sample size- The responses were distributed amongst 60 People and 52 responses were received.
Research design – Exploratory
Source of data- Primary and secondary.
Statistical tool used – Survey Form.
Data presentation – Pie chart.
DATA ANALYSIS
How much subsidies you expect from the government on the price of EV?

- 30%
- 20%
- 10%
- Others

What should be expected max. speed of electric vehicle?

- 100-150 MPH
- 60-90 MPH
- Other

What should be the range of electric vehicle when fully charged?

- 150-200 KM
- 100-150 KM
- Less than 100 KM

Do you feel that electric vehicle can improve the environment?

- Yes
- No
- Maybe
- Definitely

How likely are you going to purchase an electric vehicle in the next 5 years?

- Definitely buy one
- Not expected
- Unlikely to buy one
- Likely to buy one

Publisher: Noida Institute of Engineering & Technology, 19, Knowledge Park-II, Institutional Area, Greater Noida (UP), India.
FINDINGS

- Out of our 52 respondents, a majority of 77% were students, 20% were employed and 3% were self-employed.
- Out of our 52 respondents, 62% were male and 38% were female.
- Out of our 52 respondents, 67% were interested in owning or converting their vehicle into an EV or hybrid vehicle.
- 54% of our respondents said they expect the price of an EV should be less than 5 lakhs while 38% said the price should be up to 10 lakhs and 8% were in favor of more than 10 lakhs.
- 62% of our respondents voted for public charging facility for charging their EVs, 23% were in favor of charging EVs at home while 15% said at work would be better.
- Out of our 52 respondents, 94% felt EV would have a positive impact on the environment while 6% were not in favor.
- Out of our 52 respondents, 90% felt the demand for EVs is likely to increase in the future while 10% disagreed.
- Out of our 52 respondents, 77% already have electric vehicles in their homes while 23% haven’t.
- 73% of our respondents are considering to purchase an EV in the next 5 years, while 21% haven’t considered it yet and 6% are unlikely to buy an EV.
- 46% of our respondents expect a range up to 100-150 km, 2 expected a range should to 150-200 km while 31% voted for less than 100 km.
- 87% of our respondents expected that max. speed of an EV should be 150 kmph while 13% voted for 80 kmph.
- Out of our 52 respondents, 92% were in favor of 20% of subsidies provided by the government while 8% were in favor of 10%.

CONCLUSION

Depletion of fossil fuels and continuous increase in fuel prices have necessitated the transformation of automotive energy in India. Governments are taking initiatives to combat pollution levels by promoting electric cars and subsidizing their purchase. To increase production, the government relaxed FDI norms. Various emerging brands are offering electric vehicles in India. Governments and manufacturers should work together to develop infrastructure and create a positive environment for electric vehicles. Respondents are aware of the global climate and are ready to change their preferences from conventional cars to eco-friendly cars. Cost is an important factor when considering purchasing an EV. Respondents are willing to consider Electric vehicles as a future purchase option if the infrastructure is in place. The initial cost of purchase, the reduction in the number of charging stations and the time required to recharge the batteries create limitations in increasing consumer confidence.

RECOMMENDATION

- The data in our research is limited to some areas.
- There is a lack of infrastructure and hence customers’ perception will be affected.
- The battery problem is a big problem that should be solved using resources and should not affect the environment.
- Lack of electric charging is also a big problem affecting customers who are considering purchasing an electric car.
- We see that the current prices of electric cars are very expensive, so the price should be according to the customer's ability to pay.
FUTURE SCOPE

➢ Increasing environmental awareness and government motivation lead to the adoption of electric vehicles.
➢ Second, technology has increased the efficiency and affordability of electric vehicles.
➢ Finally, the increase in payments solves many problems with the electric car.
➢ Overall, these events point to a bright future for electric vehicles in India.

REFERENCES

1. https://www.bing.com/ck/a?!&p=c9be8a16d7e68e9fJmltdHM9MTY3NzE5NgwMCZpZ3VpZD0vMzhIMigwMtv02MzVmlTY1NTYtMDU0OCozYWFrNjIjZDY0ZTIwmaW5zaWQ9NTF4Mg&ptn=3&hsh=3&fclid=238b2807-635f-6556-0548-

2. 3aac62ed64e2&psq=IMPACT+ON+EV+IN+INDIA&u=a1aHR0cHM6Ly93d3cuY2VydmltdHM9MTY3NzE5NgwMCZpZ3VpZD0vMzhIMigwMtv02MzVmlTY1NTYtMDU0OCozYWFrNjIjZDY0ZTIwmaW5zaWQ9NTI4OA&ptn=3&hsh=3&fclid=238b2807-635f-6556-0548-

3. https://www.bing.com/ck/a?!&p=42e4254cbfd0f1d1JmltdHM9MTY3NzE5NgwMCZpZ3VpZD0vMzhIMigwMtv02MzVmlTY1NTYtMDU0OCozYWFrNjIjZDY0ZTIwmaW5zaWQ9NTIhOA&ptn=3&hsh=3&fclid=238b2807-635f-6556-0548-

4. 3ac62ed64e2&psq=IMPACT+ON+EV+IN+INDIA&u=a1aHR0cHM6Ly93d3cuY2VydmltdHM9MTY3NzE5NgwMCZpZ3VpZD0vMzhIMigwMtv02MzVmlTY1NTYtMDU0OCozYWFrNjIjZDY0ZTIwmaW5zaWQ9NTIhOA&ptn=3&hsh=3&fclid=238b2807-635f-6556-0548-

5. https://www.bing.com/ck/a?!&p=4585d520c6a7a18aJmltdHM9MTY3NzE5NgwMCZpZ3VpZD0vMzhIMigwMtv02MzVmlTY1NTYtMDU0OCozYWFrNjIjZDY0ZTIwmaW5zaWQ9NTMzOA&ptn=3&hsh=3&fclid=238b2807-635f-6556-0548-

6. https://www.bing.com/ck/a?!&p=c9be8a16d7e68e9fJmltdHM9MTY3NzE5NgwMCZpZ3VpZD0vMzhIMigwMtv02MzVmlTY1NTYtMDU0OCozYWFrNjIjZDY0ZTIwmaW5zaWQ9NTF4Mg&ptn=3&hsh=3&fclid=238b2807-635f-6556-0548-

7. 3aac62ed64e2&psq=IMPACT+ON+EV+IN+INDIA&u=a1aHR0cHM6Ly93d3cuY2VydmltdHM9MTY3NzE5NgwMCZpZ3VpZD0vMzhIMigwMtv02MzVmlTY1NTYtMDU0OCozYWFrNjIjZDY0ZTIwmaW5zaWQ9NTF4Mg&ptn=3&hsh=3&fclid=238b2807-635f-6556-0548-