

RESEARCH PAPER

Factors Driving Consumers to Purchase an Electric Vehicle in Telangana State, India

Shathaboina Raju^{1*}, Mohmed Ali², V. Rama Chandra Murthy³ and Y. Bhasker Rao⁴

¹REVA Business School, REVA University, Bangalore, India

²Department of Business Management, Vaagdevi Institute of Management Sciences, India

³Department of Business Management, Vaagdevi Engineering College, India

⁴Department of Business Management, Vaagdevi Institute of Management Sciences, Warangal, Telangana, India

*Corresponding author: rajushathaboina1984@gmail.com (ORCID ID: 0000-0001-6317-8293)

Received: 10-03-2024

Revised: 06-05-2024

Accepted: 24-05-2024

ABSTRACT

This study aims to identify and analyze the key factors influencing consumers' decisions to purchase electric vehicles (EVs) in Telangana State, India. By examining these factors, the study seeks to provide insights into the motivations behind EV adoption and contribute to a better understanding of the EV market dynamics in the region. A mixed-methods approach was employed, combining both quantitative and qualitative research methods. The study revealed several significant factors driving consumers to purchase EVs in Telangana State. Key findings include the importance of financial incentives provided by the government, growing awareness of environmental issues, increasing availability of charging infrastructure, and the potential for long-term cost savings due to lower operating and maintenance costs. Consumers also expressed concerns related to limited driving range, initial purchase price, the availability of charging stations and brand image.

HIGHLIGHTS

- The findings of this study have important implications for policymakers, manufacturers, and other stakeholders in the EV ecosystem. Policymakers can use the insights to develop effective strategies to promote EV adoption.

Keywords: Brand image, electric vehicle, environmental pollution, ecological, EV adoption, purchase decision

Due to growing concerns about climate change and air pollution, the adoption of Electric Vehicles (EVs) has got substantial pace in recent years. In India, the state of Telangana is emerging as a key player in the EV market, with a rising number of consumers opting for EVs as a sustainable and eco-friendly alternative to traditional gasoline-powered cars. However, the factors driving consumers to buy EVs in Telangana may differ from those in other regions due to various socio-economic and cultural factors unique to the state. India has the potential to grow into one of the world's largest EV markets, with the government aiming to attain 30 per cent EV adoption by 2030, according to a report by the

International Council on Clean Transportation (ICCT, 2019). Telangana has taken significant steps towards achieving this goal, with the state government launching various initiatives to promote EV adoption. These initiatives include offering incentives to EV buyers, establishing charging infrastructure, and collaborating with automobile manufacturers to set up EV manufacturing units in the state. Another study by Khan *et al.* (2020)

How to cite this article: Raju, S., Ali, M., Rama Chandra Murthy, V. and Bhasker Rao, Y. (2024). Factors Driving Consumers to Purchase an Electric Vehicle in Telangana State, India. *Econ. Aff.*, 69(02): 883-891.

Source of Support: None; **Conflict of Interest:** None



identified the lack of charging infrastructure and awareness as key barriers to EV adoption in the state.

The state government has also taken various initiatives to promote EV adoption, such as offering incentives to EV buyers, setting up charging infrastructure, and collaborating with automobile manufacturers to establish EV manufacturing units in the state (Telangana Today, 2021).

To understand the factors driving consumers to buy EVs in Telangana, several studies have been conducted in recent years. For example, a study by Kumar *et al.* (2021) found that environmental concerns and cost savings were the primary factors motivating consumers to buy EVs in Telangana.

According to a recent report by the 'Society of Manufacturers of Electric Vehicles (SMEV),' The Hindu Business Line. (2022). Telangana has emerged as one of the leading states in India in terms of EV sales, with a growth rate of over 200% in the last year alone.

Therefore, understanding the factors driving EV adoption in Telangana is crucial for policymakers, automobile manufacturers, and other stakeholders in the EV industry to develop effective strategies to accelerate EV adoption in the state. This paper aims to review the existing literature on the factors driving consumers to buy EVs in Telangana and provide insights into potential strategies for promoting EV adoption in the state.

OBJECTIVES OF THE STUDY

This study aims to identify the demographic and socio-economic factors associated with the intent to purchase an electric vehicle (EV) in Telangana, India. It also investigates the significance of cost, driving range, infrastructure, perception, and social influence on the intention to buy an EV. Additionally, the study examines the role of attitude as a mediating variable between these independent factors and the intention to purchase an electric car. Finally, the study explores the implications of these findings for policy and strategy development to promote electric vehicles in Telangana, India.

LITERATURE REVIEW

A literature review is collected to provide a comprehensive understanding of the existing

knowledge on factors driving consumers to buy an electric vehicle in world and particularly in Telangana, India. The primary purpose of a literature review is to identify gaps in existing research, to build a theoretical framework for the study, and to provide a foundation for the development of research questions and hypothesis.

(a) Demographical factors and consumer buying behaviour

According to Grewal, Levy & Kumar (2021), "different age groups have different needs and preferences, which influence their buying behavior. For example, younger consumers tend to be more tech-savvy and are more likely to shop online, while older consumers prefer traditional brick-and-mortar stores."

Kim, Fiore, & Lee (2016) found "men and women have different preferences and buying patterns. For example, women tend to be more value-conscious and are more likely to compare prices before making a purchase, while men are more likely to make impulse purchases."

According to Solomon, White & Dahl (2021) "a person's income level can determine their buying power and the types of products and services they can afford. For example, consumers with higher incomes are more likely to buy luxury goods, while those with lower incomes are more likely to focus on necessities."

Hawkins & Mothers Baugh (2021) found "education level can influence a consumer's buying behavior by affecting their knowledge and perception of products and services. For example, highly educated consumers may be more aware of the benefits and drawbacks of different products and are more likely to research products before making a purchase."

(b) Cost, charging Infrastructure, driving range, perception, attitude, social factors, motivation, and consumer behaviour

According to Hidrue *et al.* (2011), "consumers were willing to pay a premium for certain EV attributes, such as longer driving range and faster charging times".

Aksen and Kurani (2013) conducted a survey in the US and Canada to examine the role of social influence in Electric Vehicle adoption and found

that government incentives, fuel cost savings, and environmental concerns were the main drivers of EV adoption. The study also found that social influence, such as peer recommendations and media coverage, played a significant role in shaping consumer attitudes towards EVs.

The key variables influencing consumer readiness to pay for EVs, according to a survey by Su and Hung (2016) performed in Taiwan, were environmental concerns, fuel cost reductions, and the accessibility of charging infrastructure. The study also found that government incentives and vehicle performance were important considerations for some consumers.

Böckel *et al.* (2017) conducted a literature review on consumer preferences for EVs and identified several key factors driving EV adoption worldwide, including government incentives, fuel cost savings, environmental concerns, and the availability of charging infrastructure. The study also found that factors such as driving range, battery life, and performance were important considerations for some consumers.

Jiang and Lahiri (2019) conducted a meta-analysis of 68 studies on consumer willingness to pay for EVs and found that environmental concerns, fuel cost savings, and the accessibility of charging facilities were the main drivers of EV adoption. The study also found that factors such as driving range, battery life, and vehicle performance were important considerations for some consumers.

Patel *et al.* (2019) observed that cost was the most important factor for Indian consumers, with consumers willing to pay a premium for an EV if it offered cost savings over the long term. Other important factors included the availability of charging infrastructure, government incentives, and environmental concerns.

The study by Kumar and Kumar (2020) found that the key factors driving EV adoption in India were the cost of ownership, range anxiety, charging infrastructure, and the availability of government incentives. The study also discovered that shoppers who cared about the environment were more likely to think about EVs.

Jain *et al.* (2021) identified government incentives, fuel cost savings, and environmental consciousness as the main factors influencing Indian consumers' intention to purchase an EV. The study also found

that the perceived lack of charging infrastructure and range anxiety were barriers to adoption.

Singh and Mishra (2021) identified price, cost of ownership, and availability of charging infrastructure as the key factors influencing Indian consumers' decision to purchase an EV. The study also found that government incentives and environmental concerns were important factors for some consumers.

Pradhan *et al.* (2021) found that Indian consumers were more likely to purchase an EV if it was perceived as a status symbol, had an extended driving range, and had a petite charging time. The study also found that government incentives and environmental concerns were important factors for some consumers.

The above studies suggest that government incentives, fuel cost savings, environmental concerns, and the availability of charging stations are the important factors driving consumers to obtain EVs worldwide. Factors such as driving range, battery life, vehicle performance, the cost of ownership, charging infrastructure, range anxiety, government incentives, and environmental concerns are the prime factors driving consumers to purchase EVs in India.

CONCEPTUAL FRAMEWORK

Based on the literature review of factors driving consumers to purchase an electric vehicle (EV) in Telangana India, a conceptual model is developed to understand the various factors and their relationships.

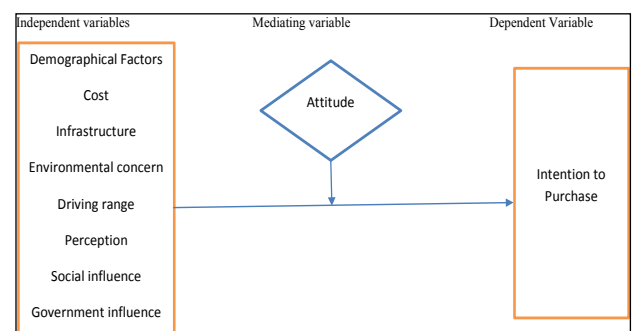


Fig. 1: A Model of conceptual framework

The Fig. 1 is a conceptual model suggests that factors such as cost, infrastructure, environmental concern, driving range, perception, social factors, and government incentives are expected to influence

the consumers intent to buy an electric vehicle. Attitude is projected to mediate the relationship between these factors and the intent to buy an EV. This conceptual model is based on the literature review of factors driving consumers to purchase electric vehicles in India and can be used to guide further empirical research. It can also be used to inform policies and strategies aimed at promoting the adoption of electric vehicles in India.

Formulation of Hypotheses

The following are the hypotheses developed based on literature review and conceptual framework as follows:

1. **H1:** The demographical factors that affect consumers intention to buy an electric vehicle.
2. **H2:** The Cost of EV influences consumer's intent to buy an electric vehicle.
3. **H3:** Availability of Infrastructure which effect consumer's commitment to buy an electric vehicle
4. **H4:** Environmental concerns, driving range, perception, social factors, government incentives and attitude influence consumers to purchase an electric vehicle.

Methodology

An explanatory research design is employed to gather data from a sample of electric vehicle owners and potential buyers in Telangana, India. A survey questionnaire was developed based on the conceptual model and the relevant literature.

A simple random sample of 300 electric vehicle owners and potential buyers were selected from different areas of Telangana, India. The sample size was determined using a power analysis. The survey questionnaire was administered to the selected sample through online and offline methods. The data was collected using Google Forms and paper-based surveys. The collected data was evaluated by using descriptive and inferential statistical methods. Multiple regression method $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_{xi} + \epsilon$ was employed to test the relationships between the independent and dependent variables.

Analysis and Results

H1: The demographical factors that affect consumers intention to buy an electric vehicle.

Table 1 indicates the coefficients of the demographical profile of sample respondents. As observed that the beta values of educational status and occupation were 0.311 and 0.982 respectively, it was observed that the change in the independent variable (IV) i.e., educational status by one unit brought the change in the dependent variable (DV) i.e., intention to purchase an EV by 0.311 and change in the I.V i.e., occupation by one unit brought the change in the D.V i.e., intention to purchase an electric vehicle by 0.982. Furthermore, it was observed the beta value of educational status and occupation were positive, which indicates the positive relationship between educational status and likeliness to purchase an EV and positive relationship between occupation and consumer's intention to purchase an EV. From the Table 1, it was observed that p-values of age, gender, educational status, occupation, and Income were

Table 1: The relationship between demographical factors and consumers intention to buy an EV

Model	Unstandardized Co-efficients		Standardized Co-efficients	t. value	Sig. value
	Beta	Std. error	Beta		
(Constant)	-.048	.098	0.00	-.490	.624
Age	-.210	.046	-.261	-4.574	.000
Gender	.406	.077	.201	5.288	.000
Educational Status	.317	.062	.311	5.099	.000
Marital status	-.124	.089	-.066	-1.386	.167
Occupation	.592	.053	.982	11.205	.000

Dependent Variable: Intention to purchase an electric vehicle.

Source: Compiled from SPSS 22 version.

less than 0.05, which means there was a significant relationship between independent variable's ("age, gender, educational status, occupation, and Income") and dependent variable (likeliness to purchase an EV). Hence, it was concluded that "age, gender, educational status, occupation, and Income influence consumer's intention to purchase an EV."

Table 2: The Summary of Model

Model	'R'	'R-Square'	'Adjusted R-Square'	'Std. Error of the Estimate'
1	.938	.881	.878	.312

Predictors: (Constant), Income, Gender, Marital status, Educational Status, Age, Occupation

Source: Compiled from SPSS 22 version.

As indicated, in Table 2, R-square value is 0.881, which means that independent variable's Income, Gender, Marital status, Educational Status, Age, and Occupation cause 88.1% change in the dependent variable i.e., intention to buy an EV.

It was concluded that there was a significant relationship between independent variables (age, gender, educational status, occupation, and Income") and dependent variable (likeliness to purchase an EV). Hence, it was concluded that "age, gender, educational status, occupation, and Income influence consumer's intention to purchase an EV." Independent variable's Income, Gender, Marital status, Educational Status, Age, and Occupation cause 88.1% change in the dependent variable i.e., intention to buy an EV.

H2: Cost of EV influences consumers intention to purchase an electric vehicle.

It was observed from the Table 3 that p-values of the cost willing to pay for EV and the cost willingness

to pay for EV compared to traditional vehicles were less than 0.05, which indicates there was a significant relationship between the cost of EV and consumer's intention to purchase an electric-vehicle. Therefore, it was concluded that cost of EV influences consumer's intention to purchase an EV.

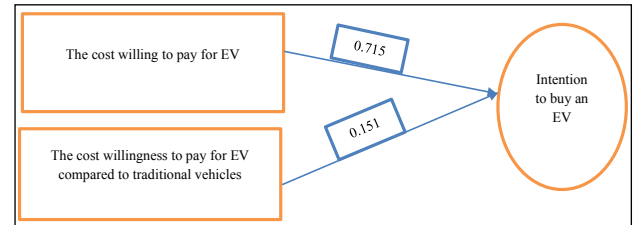


Fig. 2: The relationship between cost and consumer's intention to buy an EV

It was observed from the Fig. 2 that the standardized beta coefficients of the cost willing to pay for EV and the cost willingness to pay for EV compared to traditional vehicles were 0.715 and 0.151 respectively, it was observed that the change in the cost willing to pay for EV by one unit brought the change in the consumer's intention to purchase an electric vehicle by 0.715 and change in the cost willingness to pay for EV compared to traditional vehicles by one unit brought the change in the consumer's intention to purchase an electric vehicle by 0.151. Furthermore, it was observed the standardized beta coefficients of the cost willing to pay for EV and the cost willingness to pay for EV compared to traditional vehicles were positive, which specifies that there was a positive relationship between the cost willing to pay for EV and consumers likeliness to purchase an EV and positive relationship between the cost willingness to pay for EV compared to traditional vehicles and consumer's intention to purchase an EV.

Table 3: The relationship between cost and Intention to purchase an EV

Model	Unstandardized Co-efficients		Standardized Co-efficients	t. value	Sig. value
	Beta	Std. error	Beta		
(Constant)	-.497	.087		-5.701	.000
The cost willing to pay for EV	.773	.061	.715	12.780	.000
The cost willingness to pay for EV compared to traditional vehicles	.205	.076	.151	2.692	.008

Dependent Variable: Intention to purchase an electric vehicle.

Source: Compiled from SPSS 22 version.

It was observed that p-values of the cost willing to pay for EV and the cost willingness to pay for EV compared to traditional vehicles were less than 0.05, which indicates there was a significant relationship between the cost of EV and consumer's intention to purchase an electric-vehicle. Therefore, it was concluded that cost of EV influences consumer's intention to purchase an EV.

H3: Availability of Infrastructure which effect consumers intention to buy an EV.

It was observed from the Table 4 that p-values of the cost willing to pay for EV and the cost willingness to pay for EV compared to traditional vehicles were less than 0.05, which indicates there was a significant relationship between the cost of EV and consumer's intention to purchase an EV. Therefore, it was concluded that cost of EV influences consumer's

intention to purchase an EV. It was concluded that there was a positive relationship between the cost willingness to pay for EV compared to traditional vehicles and consumer's intention to purchase an EV.

H4: Environmental concerns, driving range, perception, social factors, government incentives, brand image and attitude influence consumers to buy an electric vehicle.

Table 5 explains that p-values of perception and social factors are less than 0.05 before applying mediating variable i.e., attitude. After applying mediating variable such as attitude, it was noticed that p-value of driving range had become less than 0.05 and p-value of perception had become greater than 0.05. Hence, it was concluded that mediating variable such as attitude causes independent

Table 4: The relationship between availability of Infrastructure and consumers intention to purchase an electric vehicle

Model	'Unstandardized Coefficients'		'Standardized Coefficients'		
	'Beta value'	Std. Error	Beta value	t. value	Sig. value
(Constant)	.891	.030		29.282	.000
Infrastructure	.347	.010	.901	35.748	.000

Dependent Variable: Intention to purchase an electric vehicle.

Source: Compiled from SPSS 22 version.

Table 5: The effect of mediating variable on the Independent Variable's and Dependent Variable before and after applying

Model	'Unstandardized Coefficients'		'Standardized Coefficients'		
	'Beta'	'Std. Error'	Beta value	't. value'	'Sig. value'
1 (constant)	.689	.032		21.382	.000
Driving range	-.016	.032	-.037	-.491	.624
Environmental Concern	.025	.014	.246	4.406	.000
Perception	.072	.013	.264	5.407	.000
Government Incentives	.027	.029	.066	.963	.337
Social factors	.212	.032	.668	6.538	.000
Brand Image	.082	.016	.324	4.207	.000
2 (constant)	.251	.038		6.663	.000
Driving range	.060	.025	.142	2.452	.015
Environmental Concern	.357	.024	.348	5.506	.000
Perception	.000	.011	-.001	-.018	.986
Government Incentives	-.025	.022	-.059	-1.150	.251
Social factors	.063	.026	.197	2.382	.018
Brand Image	.092	.017	.428	2.308	.000
Attitude towards EV	.670	.044	.708	15.201	.000

Dependent Variable: Intention to buy an electric vehicle.

Source: Compiled from SPSS 22 version.

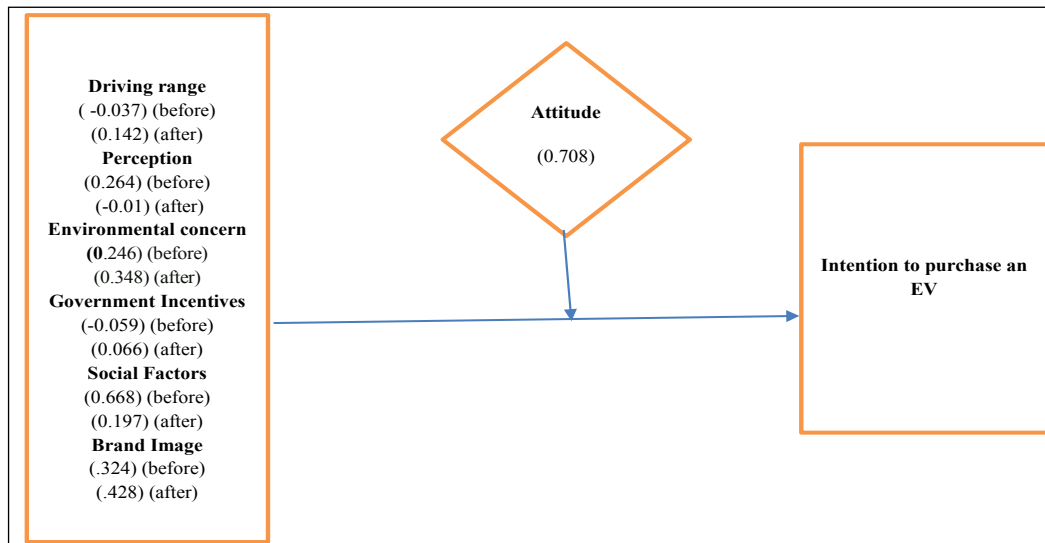


Fig. 3: The effect of mediating variable on the Independent Variable's and Dependent Variable before and after applying

variables such as driving range, perception, government incentives to change in consumer's intention to purchase an EV.

It was observed from Fig. 3 that the standardized beta coefficients of driving range, government incentives are 0.142 and 0.066 respectively changed from -0.037 and -0.059. The standardized beta coefficients of perception and social factors are -0.01 and 0.197 respectively changed from 0.264 and 0.668. It was noticed that mediating variable attitude causes independent variables such as driving range, environmental concern, perception, government incentives, social factors, and brand image. About 70 percent of the deviation in the dependent variable i.e., the consumer's likeliness to buy an EV was explained in the IV with the influence of the mediating variable.

The environmental concern surrounding traditional vehicles stems from their reliance on fossil fuels, primarily gasoline and diesel, which release a substantial number of pollutants and greenhouse gases into the atmosphere. This pollution contributes to air quality deterioration, smog formation, and various health issues for both humans and the environment. Additionally, the transportation sector is a significant contributor to global carbon emissions, a major driver of climate change. Furthermore, the shift to electric mobility can play a pivotal role in reducing the carbon footprint of the transportation sector. As countries worldwide strive to meet their climate goals outlined in agreements such as the Paris Agreement, EV adoption gains significance

as a strategy to mitigate the transportation sector's contribution to global warming. The adoption of renewable energy sources for charging EVs further enhances their environmental benefits, as it reduces the carbon intensity associated with their operation. Government incentives play a pivotal role in driving the adoption of electric vehicles. By reducing financial barriers, enhancing charging infrastructure, and implementing supportive regulations, governments can accelerate the transition towards cleaner transportation systems. These incentives not only benefit consumers by making EVs more affordable and convenient but also contribute to broader environmental and sustainability goals.

It was noticed that mediating variable attitude causes independent variables such as driving range, environmental concern, perception, government incentives, social factors, and brand image. About 70 percent of the deviation in the dependent variable i.e., the consumer's likeliness to buy an EV was explained in the IV with the influence of the mediating variable. It was concluded that the key findings include the need of financial incentives provided by the government, rising awareness of environmental issues, availability of charging infrastructure, driving range, initial purchase price, the availability of charging stations, brand image, and maintenance costs.

EVs offer significant fuel savings due to their lower operating costs, reduced reliance on fossil fuels, and efficiency advantages. These savings

are a compelling reason for consumers to consider transitioning to EVs, especially as the availability of charging infrastructure and vehicle options continues to expand. While the upfront cost of EVs may be a consideration, the potential for long-term savings in both fuel and maintenance costs positions EVs as a financially prudent and environmentally friendly transportation solution.

According to Smith, R. (2020), availability and accessibility of charging stations is crucial for EV adoption. Consumers are more likely to purchase EVs if they have convenient charging options. Range anxiety is a valid concern for many potential EV buyers, but it is a challenge that can be addressed through advancements in technology, the expansion of charging infrastructure, education, and the changing perceptions of EV ownership. As the EV market continues to evolve, range anxiety is likely to become less of a barrier, enabling more consumers to make the switch to electric vehicles with confidence.

According to Williams, L.C. (2019), technology and innovation are propelling the EV industry forward, transforming vehicles from traditional modes of transportation into cutting-edge, environmentally friendly, and integrated solutions. From battery advancements to charging infrastructure, connectivity, autonomy, and energy management, the fusion of technology and EVs is creating a pathway towards a more sustainable and interconnected future. As these innovations continue to shape the EV landscape, consumers can expect even greater convenience, efficiency, and environmental benefits from electric vehicles. Consumers may be influenced by the reputation of EV manufacturers and their commitment to sustainability.

Implications for policy and strategy development to promote electric vehicles in the Telangana State

- ♦ The study can help policymakers and businesses to identify the key factors that are driving consumers to purchase Electric Vehicles in Telangana state. This information can be used to design policies and strategies that target these factors.
- ♦ The study can provide insights into the behavior and attitudes of consumers towards electric

vehicles in Telangana state. This information can help policymakers and businesses to design effective marketing and awareness campaigns that address the concerns and motivations of consumers.

- ♦ The study can provide insights into the financial incentives that are most effective in encouraging consumers to purchase electric vehicles. Policymakers can use this information to design incentive programs that provide the greatest benefits to consumers and are most cost-effective for the government.

Overall, the study can help policymakers and businesses to develop more effective policies and strategies for encouraging the adoption of electric vehicles in Telangana state, and ultimately, to reduce the dependence on fossil fuels and promote sustainable transportation.

CONCLUSION

After examining various factors that could potentially drive consumers to purchase electric vehicles in Telangana. It can be concluded that environmental concerns, cost savings, government incentives, range anxiety, and the brand image and attitude are the key factors influence consumer's decision. With increasing petrol and diesel prices, awareness of the impact of fossil fuels on the environment, consumers are becoming more conscious and willing to replace traditional vehicle with modern vehicle having free from pollution. Furthermore, electric vehicles have lesser operating costs and offer cost savings for consumers. Government inducements such as tax credits and subsidies can also make electric vehicles more reasonable and attractive to consumers. However, range anxiety remains a concern for some consumers due to the limited driving range of electric vehicles. Finally, brand image and the alignment of brand's environmental and sustainability initiatives with consumer value also play a role in driving electric vehicle purchases.

Scope of future studies

For further studies on factors driving consumers to purchase an electric vehicle in Telangana, the following areas could be explored:

1. A market analysis of the electric vehicle market in Telangana, including sales data,

pricing trends, and supply chain analysis, can help to identify potential barriers to adoption and opportunities for growth.

2. A comparative study of electric vehicle adoption in different regions of India can help to understand how regional factors such as climate, demographics, and policies influence consumer behavior and adoption.
3. A longitudinal study that tracks electric vehicle adoption over time can provide insights into how the factors driving adoption change and evolve over time.

REFERENCES

- Axsen, J. and Kurani, K.S. 2013. Social influence and consumer preferences for electric vehicles. *Transportation Research Part A: Policy and Practice*, **49**: 207-217.
- Böckel, L., Baumann, M. and Hertwich, E.G. 2017. Consumer preferences for electric vehicles: A literature reviews. *Transportation Research Part D: Transport and Environment*, **55**: 58-67.
- Grewal, D., Levy, M. and Kumar, V. 2021. Marketing (7th ed.). McGraw-Hill Education.
- Hawkins, D.I. and Mothersbaugh, D.L. 2021. Consumer behavior: Building marketing strategy (14th ed.). McGraw-Hill Education.
- Hidru, M.K., Parsons, G.R., Kempton, W. and Gardner, M.P. 2011. Willingness to pay for electric vehicles and their attributes. *Resource and Energy Economics*, **33**(3): 686-705.
- International Council on Clean Transportation. 2019. Electric Vehicle Adoption and Resource Adequacy in India. Retrieved from: <https://www.theicct.org/sites/default/files/publications/India-EV-adoption-resource-adequacy-ICCT-Report-Sept2019.pdf>.
- Jain, A., Yadav, N. and Pathak, P. (2021). Factors influencing the purchase of electric vehicles in India. *International Journal of Automotive Engineering and Technologies*, **10**(1): 10-20.
- Jiang, C. and Lahiri, S. 2019. A meta-analysis of consumer willingness to pay for electric vehicles. *Transportation Research Part A: Policy and Practice*, **129**, pp. 1-14.
- Johnson, M.B. 2020. Economic Incentives and Total Cost of Ownership: A Comparative Analysis of Electric and Internal Combustion Engine Vehicles. *Journal of Environmental Economics and Policy*, **15**(3): 245-263.
- Khan, M.M., Kumar, R. and Kumar, V. 2020. Electric vehicle adoption in India: Insights from Telangana. *Energy Reports*, **6**: 687-694.
- Kim, J., Fiore, A.M. and Lee, H. 2016. Effects of gender and product type on online consumers' initial trust formation. *Journal of Consumer Behaviour*, **15**(2): 133-141.
- Kumar, A. and Kumar, P. 2020. An empirical study of the factors affecting consumer's perception of electric vehicles in India. *IJEEP*, **10**(3): 26-33.
- Kumar, R., Khan, M.M. and Kumar, V. 2021. Determinants of consumer willingness to pay for electric vehicles: Evidence from Telangana, India. *Journal of Cleaner Production*, **312**: 127868.
- Patel, R.K., Sharma, N. and Kumar, N. 2019. A study on factors affecting the purchase intention of electric vehicles in India. *Journal of Cleaner Production*, **226**: 959-970.
- Pradhan, S., Arora, S. and Marwah, S. 2021. Exploring consumer preferences for electric vehicles in India: An empirical study. *Transportation Research Part D: Transport and Environment*, **89**: 102693.
- Singh, A. and Mishra, D. 2021. Consumer preferences and factors influencing electric vehicle adoption in India: An empirical investigation. *Renewable Energy*, **174**: 1-13.
- Smith, R. 2020. Overcoming Range Anxiety: The Role of Charging Infrastructure in Electric Vehicle Adoption. *Energy Policy*, **137**: 111136.
- Smith, J.A. 2018. Infrastructure Development for Electric Vehicles: Challenges and Opportunities. *Transportation Planning and Development*, **28**(4): 345-362.
- Solomon, M.R., White, K. and Dahl, D.W. 2021. Consumer behavior: Buying, having, and being (13th ed.). Pearson.
- Su, Y.S. and Hung, S.Y. 2016. Determinants of willingness to pay for electric vehicles in Taiwan. *Transportation Research Part D: Transport and Environment*, **47**: 222-234.
- Telangana Today. 2021. Telangana: An emerging hub for electric vehicle manufacturing. Retrieved from: <https://telanganatoday.com/telangana-an-emerging-hub-for-electric-vehicle-manufacturing>.
- The Hindu Business Line. 2022. SMEV EV sales data shows southern states drive demand. Retrieved from: <https://www.thehindubusinessline.com/news/national/smev-ev-sales-data-shows-southern-states-drive-demand/article38138833.ece>
- Williams, L.C. 2019. Technological Advancements and Mitigating Range Anxiety: Implications for Electric Vehicle Adoption. *Transportation Research Part C: Emerging Technologies*, **40**: 123-140.

