Consumer Behaviour Towards Acceptance of Electronic Vehicle

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ABSTRACT:

The study examines the complex landscape of consumer behaviour and its impact on the acceptance of electronic vehicles in India, addressing a critical gap in understanding the socio-technical barriers to EV adoption. The study investigates factors such as range anxiety, charging infrastructure, ergonomic design, battery technology, and psychological barriers and their interrelations influencing consumer decisions. By applying completely randomised design sampling technique, we collected data from 340 individuals from diverse demographics to test multiple hypotheses. Furthermore, the study employs tools such as descriptive analysis, ANOVA, paired sample t-test and Kruskal-Wallis tests in order to establish a correlation between the dependent and independent variables. The findings show that this range anxiety does reduce the likelihood of EV adoption at a very high significance level, thereby underscoring the need to enhance the charging infrastructure and upgrade consumer knowledge about EV capabilities. The study underscores how the charging duration and geographical coverage of charging stations are critical aspects of drivers' perceptions and readiness to switch to electric mobility. Such advances in technology as wireless charging, ergonomic features, and enhanced efficiency in batteries exerted a major influence on consumer adoption rates. Additionally, the research accentuates the influence of personal and social norms and environmental consciousness on consumer intentions, providing valuable insights for policymakers and stakeholders to promote acceptance of EVs.

Keywords: *Electronic Vehicles, Technological Advances, Environmental Awareness*

INTRODUCTION

Electric vehicles have the potential to solve integrated problems such as air pollution, depletion of non-renewable energy sources, increasing oil prices, rising oil imports and demand for "green" development. Around the world, the transportation sector is responsible for almost twenty- four percentage of all Carbon dioxide emission. This emission can be very harmful for the human health and the environment we live in. In order to improve the environment condition and reduce the oil consumption overall world in the government thing that electronic vehicles may come as a reliable source and as an alternative to diesel run and petrol run vehicles.

This detailed study provides us with an extensive overview on Indian electric mobility. Even though we are well aware about the pollution, depletion of Forest resources and other natural forest fuels the implementation of electronic vehicles market to the fullest is still in the process.

Due to technology, growth noticed in global markets and easy adaptability of the same the Indian Original Equipment Manufacturers are pursuing electronic vehicle options. In the segment it provides the Indian customers with affordable electric cars at par with global customers at the same time giving benefits such as advanced technology, superior comfort and indigenous problems, etc.

The expeditious industrialisation and commercialisation in India have led to a surge in the mobility needs and hence, incensed the demand of automobile. Currently Indian automobile industry is the world's 4th largest manufacturer of automobile, which also suggests a rising threat of global warming because of the green-house gas emission by vehicles running on fossil-fuel. In India, there are multiple incentives and programs offered by the government to launch and promote electric vehicle on roads. Despite all the efforts made by the government, India is still facing problems in installation of proper infrastructure and is struggling to get more electric cars on road. The major hurdle faced in the path of establishing a proper infrastructure for electric vehicle is that India's transport market is a very segmented market as compared to other countries majorly other developed countries.

This mode of public transportation is the most commonly used by economically weaker sections of the society. Government launched scheme

to establish infrastructure for electric vehicles affects all modes of transportation in Indian transport market. The policy aims at bringing more electric variants to every segment of transport market variant present in the transport. This study examines factors that influence energy-related investment choices in the context of the adoption of electric vehicles. It emphasises how, in the early phases of the distribution process, potential adopters' moral and social motivations are more important than their logical reasons. The results of this research point to the necessity of implementing norm-related policy measures in addition to logical incentives to successfully promote the use of electric vehicles. Our research will also highlight the limitations associated with the early phase of electric vehicle diffusion. It indicated that stability effect on the electronic vehicle will be maximum when it will be charged on the excess energy that we get from the renewable energy, preventing any of the risk to the grid stability. Hence, we must enact upon appropriate charging behaviour as it plays a keys role in user-centred design. Researchers identify non-traders in their studies as respondents who consistently choose the Electric Vehicle as either their best or worst option across multiple choice tasks. India has the capacity to achieve electric mobility in the future through optimal utilisation of current circumstances, governmental initiatives, and laws. By examining consumer behaviour, technological advancement, and policy frameworks, we find analysis of the Indian electric vehicle market and study the difficulties faced by electric vehicles as well as potential solutions. This paper examines these interconnected challenges, analysing their complexities.

Governments attempt to promote the adoption of electric vehicles but do not appear to be generating consumer interest. There are some difficulties that restrict individuals from purchasing electric vehicles. The purpose of this study was to identify and analyse the most significant barriers to electronic vehicle adoption.

Electric vehicles are marketed as a potential near-term vehicle technology for reducing reliance on fossil fuels and the greenhouse gas emissions associated with traditional automobiles. Despite the advantages of electronic vehicles, various challenges must be addressed before they are generally utilised. This study analysis insights into the opinions and perspectives of technology aficionados, who are closely connected to technological advancement and better suited to distinguish between the numerous variations between electronic and conventional automobiles.

Electric vehicles can help to promote sustainable individual road transport. Ergonomics focuses on battery electric vehicles where four core areas are: firstly, the acceptance of battery electric vehicles (e.g., perceived barriers, the effect of practical experience, range acceptance), secondly, user interaction with battery electric vehicles' range (e.g., range comfort zone, range stress, or range anxiety), thirdly, users' charging behaviour (e.g., interaction styles, green charging), and finally, eco-driving in electric vehicle usage (e.g., representation of energy flows, eco-driving control start). This analysis highlights the importance of complete awareness and support for user-resource interaction in realising electronic vehicles' sustainability potential.

II. REVIEW LITERATURE

Acceptance of Electronic Vehicle

Jabeen et al., 2018. The research paper examines the benefits of adopting electric vehicles, such as energy conservation, reduced emissions, and cost savings. It discusses methodologies like discrete choice models and the inclusion of attitudinal data, highlighting the importance of unbiased, representative data for informed policy decisions. By comparing two survey samples, the study underscores differences in demographics, attitudes, and preferences, offering insights for future research and policy interventions.

Bobeth & Kastner, 2020. Conducted a study conducted by involving household trials of electric vehicles with the possibility to replace majority travels, formerly made with conventional- fuel vehicles. The study highlighted that tracking and maintaining travel records helped participants to realise that they travel less than anticipated, offering valuable insights into adoption of electric vehicle.

Bobeth & Kastner, 2020. The document explores why people decide to buy electric cars, focusing on the impact of moral and social influences rather than just logical reasoning. It aims to distinguish between those who are likely to buy electric cars and those who are hesitant, helping manufacturers tailor their approaches. The study suggests combining different models to better understand these motivations and speed up the adoption of new energy technologies, offering useful insights for creating effective policies.

Indian Perspective

Petschnig et al., 2014. The document explores the adoption of Alternative Fuel Vehicles, focusing on factors like relative advantage, ease-of-use, and observability that shape consumer attitudes. By combining innovation adoption theories and data from online surveys, the study uses structural equation modelling to understand consumer behaviour towards AFVs. It concludes that personal and subjective norms significantly influence adoption intentions, offering insights into promoting AFVs in India to enhance individual finances and economic growth.

Singh Patyal et al., 2021. The research paper explores the challenges and benefits of electric vehicle adoption in India, highlighting issues like high costs, limited charging infrastructure, and government policy impacts. Despite eco-friendly advantages and government incentives, consumer demand remains low due to these barriers. The study identifies 13 key obstacles and uses advanced modelling techniques to provide insights for policymakers and manufacturers, aiming to enhance the adoption of electric vehicles in India.

Perceived Behavioural Control

Abrahamse et al., 2009. The research paper examines how commuting habits among office workers are influenced by self-interest and moral considerations. It finds that attitudes and perceived control impact car use for commuting, while personal norms and awareness of consequences drive intentions to reduce car use. The study suggests that promoting electric vehicles requires addressing both self-interest and moral factors to encourage a shift in commuting behaviour.

Franke et al., 2018. The document emphasises on the importance of user interaction in maximising the sustainability of battery electric vehicles. It highlights the importance of batteries efficiency and optimal charging. Low market share, range restrictions, prices, and infrastructure for charging electric vehicles are among the challenges; ergonomics can improve user experience and encourage the adoption of eco-driving techniques.

Pradeep et al., 2021. discusses the adoption of battery-electric vehicles in India which is examined in this paper using an enhanced Theory of Planned Behaviour model. Knowledge of maintenance has an indirect impact, but attitude and perception of technology are important determinants. Policymakers are advised by the study to remove obstacles and highlight the advantages of Battery Electric Vehicles for environmentally friendly urban transportation.

Psychological Factors

Chu et al., 2019. compare behavioural and psychological elements that affect consumer adoption and satisfaction of electric vehicles. Despite concerns with range and charging, early adopters are highly satisfied and emphasise environmental and financial concerns. Innovativeness, economic motives, and environmental concerns are important satisfaction criteria. To improve satisfaction, the analysis advises concentrating on lowering operational expenses and raising convenience.

Singh et al., 2020. emphasis the adoption of electric vehicles that is critical for sustainability. Using theories such as the Diffusion of Innovation and the Theory of Planned Behaviour, the meta-analysis identifies contextual, situational, demographic, and psychological aspects affecting Indian consumers. Understanding these variables can aid authorities and producers in efficiently encouraging the adoption of electric vehicles.

Range Anxiety

Bobeth & Matthies, 2018. T The study on the acceptance of electric cars emphasises the significance of societal norms, financial incentives, and range perception, a number of misconc eptions regarding range limits and encourage the use of electric vehicles, it recommends creative incentives, subsidies for public transportation, and educational initiatives. Policymakers can encourage Indian consumers to consider electric automobiles by highlighting the good characteristics and everyday usability of these vehicles. Using social norms and communicating range in a different way can boost the appeal of electric cars and aid in the fight against CO2 emissions, according to discrete choice studies.

Pevec et al., 2020. examine the problems associated with transportation-related air pollution, emphasising electric vehicles as an alternative. This research examines how EV owners and non-owners see the infrastructure for charging and range anxiety. It emphasises how crucial it is to deal with range anxiety in order to promote the adoption of electric vehicles and maximise the location of charging stations.

Electronic Infrastructure

Franke et al., 2018. The study focuses on comprehending user behaviours and approaches for electric cars in order to create charging and driving environments. Important domains encompass efficient incentives, user-interface designs, and striking a balance between energy efficiency, safety, and time. In order to achieve sustainable electric mobility systems, it emphasises the significance of ergonomics, user-centered design, and human aspects.

Oliveira et al., 2020. The research paper highlights user perspectives, charging habits, and obstacles such limited battery capacity and charging infrastructure while focusing on wireless charging for electric taxis. It uses interviews and car monitoring to inform the location and design of wireless chargers. Safety, technical viability, and a cost-benefit analysis for widespread implementation are the main issues.

Charging Infrastructure

Globisch et al., 2019. examine the variables that affect how appealing public charging stations are for electric cars. Important conclusions include the widespread inclination to pay a base charge, the preference for fast-charging stations over extensive coverage, and the importance of charging location and duration. In order to draw a variety of user groups to electro-mobility, the study recommends giving priority to fast-charging stations and takes business models into account.

Socio Demographics

Golob & Gould, n.d., 1997. Discusses the adoption of electric cars is the main topic of the document, which examines norm-directed and rational motivations in energy investment decisions. In adoption models such as TAM and NAM, it emphasises perceived benefits and accessibility. It emphasises social and moral motivations in addition to rational ones, promotes the integration of many reasons to understand adoption intentions, and makes policy recommendations to encourage the adoption of electric vehicles.

Smith et al., 2017 The research paper examines how consumers feel about electric cars and shows how some people favour conventional technologies because they care about the environment. It finds "non-traders" who oppose embracing new technology, which affects choice models' willingness-to-pay metrics. The purpose of this study is to identify biases in studies on the adoption of electric vehicles.

Environmental Factors

Egbue & Long, 2012. The paper examines adoption hurdles for electric vehicles, focusing on consumer attitudes and perceptions. It emphasises how crucial it is to overcome issues with battery technology, affordability, and sustainability in order to increase acceptability. The insights centre on the moderate to high interest of technology enthusiasts despite their reservations. These insights provide recomm endations to engineers and politicians on how to overcome socio-technical barriers and promote the benefits of electric vehicles.

de Luca et al., 2015. This paper examines models of customer behaviour for accepting new car technology, with a focus on the psychological, social, and economic factors. In order to demonstrate the trend towards sustainability, it examines opinions about electric cars and solar hybridisation kits in various towns. The study highlights the necessity of thorough modelling to accommodate a range of customer expectations and encourage the use of electric vehicles for environmental reasons.

III. HYPOTHESIS

Range Anxiety:

Range Anxiety:

Pevec et al., 2020. discusses how existing and potential electric vehicles owners perceive charging station infrastructure compared to gas stations and how different electric vehicles parameters affect range anxiety. Thus, we propose:

- (H):There is no significant difference in the acceptance and adoption of electric vehicles between individuals with high and low levels of range anxiety.
- (H1): Individuals with higher levels of range anxiety are less likely to accept and adopt electric vehicles compared to those with lower levels of range anxiety.

Electronic Infrastructure:

Oliveira et al., 2020. conducts a study on wireless charging for electric taxis. The research aimed to inform the design of wireless chargers for electric taxis based on user experiences and challenges faced by taxi drivers and interpret the basic idea of variable involved in anticipation of buyer's decision making. Thus, we propose:

- (H): The use of wireless charging technology has no significant impact on the adoption and usage of electric vehicles.
- (H1): The use of wireless charging technology has a significant

impact on the adoption and usage of electric vehicles.

Charging Infrastructure:

Globisch et al., 2019. The study discusses the lack of public charging infrastructure that is often referred to as an important barrier in the diffusion of electric vehicles. It shows the factors that influence the attractiveness of public charging infrastructure from the perspective of potential users. Thus, we propose:

- (H): Charging duration and geographical coverage do not significantly influence car drivers' evaluations of public charging infrastructure.
- (H1): Charging duration and geographical coverage do not significantly influence car drivers' evaluations of public charging infrastructure.

Perceived Behavioural Control:

Franke et al., 2018. The document discusses how ergonomics focuses on designing user-friendly interfaces, developing efficient energy man agement systems, and supporting eco-driving strategies contributing to the successful transition to electric mobility and the overall sustainability of electric vehicles. Thus, we propose that:

- (H): Ergonomic design factors such as battery efficiency, etc. have no significant impact on adoption of electric vehicles.
- (H1): Ergonomic design factors such as battery efficiency, etc. significantly impacts adoption of electric vehicles.

Indian Perspective:

Petschnig et al., 2014. The document discusses about the importance of various Perceived Innovation Characteristics on forming attitudes towards Alternative Fuel Vehicles. It provides insights into the factors influencing attitude formation and adoption behaviour towards Alternative Fuel Vehicles. Thus, we propose that:

- (H): Personal and subjective norms do not significantly influence Indian consumer's adoption intentions towards electronic vehicle.
- (H1): Personal and subjective norms significantly influence Indian consumer's adoption intentions towards electronic vehicle

Environmental Factors:

Egbue & Long, 2012. The document identifies barriers to electric vehicle adoption, focusing on consumer attitudes and perceptions. Factors like battery technology, cost, and sustainability influence consumer decisions. The research provides insights for policymakers and electric vehicle engineers to address socio-technical barriers, and how consumer attitudes and preferences are key in overcoming barriers to widespread adoption of electric vehicles. Thus, we propose:

- (H): There is no significant association between consumer's environmental awareness and their attitude towards early adoption of Electronic Vehicles.
- (H1): There is a significant association between consumer's environmental awareness and their attitude towards early adoption of Electronic Vehicles.

IV. METHODOLOGY

Data Sampling

Completely Randomized Design (C.R. Design) technique employed for data collection through google forms and email outreach, targeting college students as primary respondents with majority of adult residents from Delhi NCR region and other major urban areas in India. Approach of sampling designed to find current acceptance of electric vehicles, which show perspectives of younger generations as future potential buyers.

Descriptive Analysis conducted where sampling based on the factors like age, gender, family type, residence, education level, profession and income level helped assess the impacts of the independent variable (treatment) on the dependent variable. Normality plots drawn to assess variables with respective underlying data distribution, graphically is approximately normal. One way ANOVA – (with variants), Reliability test, paired sample test, Kruskal-Wallis test conducted with SPSS version used 27.0.1

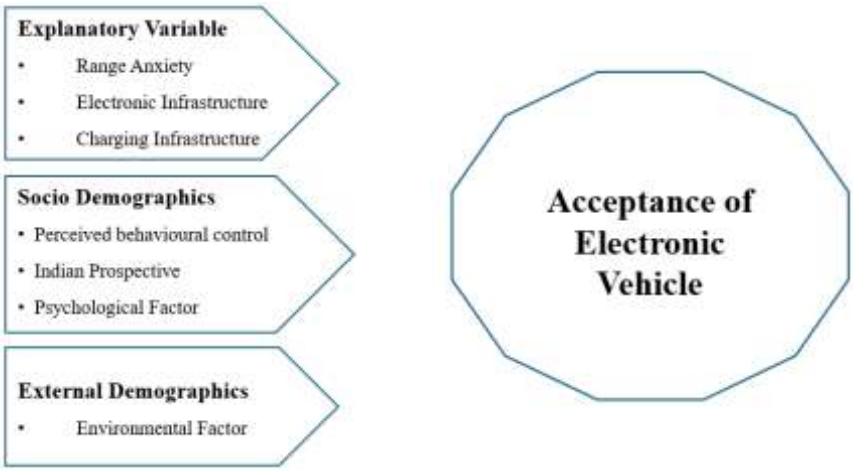

Figure IV: Research Model

V. HYPOTHESIS TESTING

Table V.1: Reliability Test

Variables	Cronbach's Alpha	No. of Items
Range Anxiety	.685	3
Electronic Infrastructure	.749	3
Charging Infrastructure	.694	4
Perceived Behavioural Control	.797	7
Indian Perspective	.679	2
Psychological Factor	.674	5
Environmental Factors	.752	3

Range Anxiety:

(H): There is no significant difference in the acceptance and adoption of electric vehicles between individuals with high and low levels of range anxiety.

(H1): Individuals with higher levels of range anxiety are less likely to accept and adopt electric vehicles compared to those with lower levels of range anxiety.

Table V.2: Hypothesis testing of range anxiety

ANOVA

RA_T

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1228.605	12	102.384	19.952	.000
Within Groups	1678.039	327	5.132		
Total	2906.644	339			

Source: Author's Calculation

Alternative hypothesis (H1) is supported with p-value (Sig.) is 0.000 stating significant difference in the acceptance and adoption of electric vehicles between individuals with high and low levels of range anxiety. Thus, the null hypothesis stands rejected. This finding highlights the importance of addressing the issue of range anxiety to promote greater adoption of electric vehicles and reduce greenhouse gas emissions from the transportation sector.

Table V.3: Hypothesis testing of Electronic Infrastructure

Independent-Samples Kruskal-Wallis Test Summary

Total N	340
Test Statistic	90.842[a]
Degree Of Freedom	12
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.

Source: Author's Calculation

The p-value (Asymptotic Sig.) is 0.000, suggests that the use of wireless charging technology has a significant impact on the adoption and usage of electric vehicles. The alternative hypothesis

- (H1) is supported. Thus, the null hypothesis stands rejected. Availability and use of wireless charging technology can have a substantial impact on the use and general adoption of electric vehicles.

Charging Infrastructure:

- (H): Charging duration and geographical coverage do not significantly influence car drivers' evaluations of public charging infrastructure.
- (H1): Charging duration and geographical coverage do have significantly influence car drivers' evaluations of public charging infrastructure.

Table V.4: Hypothesis testing of charging Infrastructure

ANOVA

CI_T

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	865.747	12	72.146	13.706	.000
Within Groups	1694.982	322	5.264		
Total	2560.728	334			

Source: Author's Calculation

The F-statistic is 13.706, indicating that the combination of charging duration and geographical coverage of public charging infrastructure has a significant impact on how car drivers evaluate the infrastructure stating (H1) as supported. Thus, the null hypothesis stands rejected. This suggests that the existence of fast-charging stations should be prioritized over close-meshed coverage with charging points when expanding the charging infrastructure.

Perceived Behavioural Control:

(H): Ergonomic design factors such as battery efficiency, etc. have no significant impact on adoption of electric vehicles.

(H1): Ergonomic design factors such as battery efficiency, etc. significantly impacts adoption of electric vehicles.

Table V.5: Hypothesis testing of Perceived Behavioural Control

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.610[a]	.372	.370	4.15755

a. Predictors: (Constant), ACP_SUM

Source: Author's Calculation

Table V.6: Hypothesis testing of Perceived Behavioural Control

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3453.689	1	3453.689	199.806	.000[b]
	Residual	5842.414	338	17.285		
	Total	9296.103	339			

a. Dependent Variable: PBC_T

b. Predictors: (Constant), ACP_SUM

Source: Author's Calculation

Table V.7: Hypothesis testing of Perceived Behavioural Control

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.942	.803		16.114	.000
	ACP_SUM	1.140	.081	.610	14.135	.000

a. Dependent Variable: PBC_T

Source: Author's Calculation

Multiple regression analysis R = 0.610 indicates a moderately strong positive correlation between the independent variable(s) and the dependent variable "Perceived Behavioural Control". The ANOVA table shows that the overall regression model stating that battery efficiency does have a significant positive impact on the adoption of electric vehicles, supporting the alternative hypothesis (H1). Thus, the null hypothesis stands rejected. Development of electric mobility system crucial and optimising user-energy interaction and system design to contribute to the successful transition to electric mobility is important.

Indian Perspective:

- (H): Personal and subjective norms do not significantly influence Indian consumer's adoption intentions towards electronic vehicle.
- (H1): Personal and subjective norms significantly influence Indian consumer's adoption intentions towards electronic vehicle.

Table V.8: Hypothesis testing of Indian Perspective

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	IND_SUM - ACP_SUM	-2.99118	2.42709	.13163	-3.25009	-2.73227	-22.725	339	.000

Source: Author's Calculation

P-value of 0.000 provides strong evidence that there is a statistically significant influence of personal and subjective norms on Indian consumers' adoption intentions towards electric vehicles. Thus, the null hypothesis stands rejected. Evolving consumer attitudes and growing concerns over environmental impact in transportation sector underscore the importance of addressing both supply-side and demand-side factors to drive the adoption of electric vehicles in India.

Psychological Factors:

(H): Psychological factors such as age, residential area, etc. do not have a significant influence on Indian consumer's intention towards adopting electric vehicles.

(H1): Psychological factors such as age, residential area, etc. have a significant influence on Indian consumer's intention towards adopting electric vehicles.

Table V.9: Hypothesis testing of Psychological Factor

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PSF_T - ACP_SUM	7.26471	3.48201	.18884	6.89326	7.63615	38.470	339	.000

Source: Author's Calculation

P-value is 0.000 provides strong evidence that there is a statistically significant difference between the means of the psychological factors and adoption of electric vehicles variables. Thus, we reject the null hypothesis. This emphasises the importance of researching consumer behaviour and variables influencing electric vehicles adoption in promoting sustainable transportation in India.

Environmental Factors:

(H): There is no significant association between consumer's environmental awareness and their attitude towards early adoption of Electronic Vehicles.

(H1): There is a significant association between consumer's environmental awareness and their attitude towards early adoption of Electronic Vehicles

Table V.10: Hypothesis testing of Environmental Factor

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	EF_T - ACP_SUM	1.20000	2.88133	.15626	.89263	1.50737	7.679	339	.000

P-value is 0.000, provides strong evidence that there is a statistically significant association between consumers' environmental awareness and their attitude towards early adoption of electric vehicles. Thus, the null hypothesis stands rejected. Addressing environmental issues and promoting the sustainability benefits of electric vehicles could benefit customer attitudes and accelerate the adoption of this technology.

VI. CONCLUSION

Our research emphasises on several key factors that impact consumer acceptance and adoption of electric vehicles. Firstly, the issue of "range anxiety" - the concern that electric vehicles may not have sufficient range to meet drivers' needs. Our findings indicate that individuals with higher levels of range anxiety are indeed less likely to accept and adopt electric vehicles compared to those with lower range anxiety. This highlights the importance of addressing range concerns through measures like improving charging infrastructure.

Another critical factor is the availability and usage of wireless charging technology for Electronic Vehicles. Our research shows that the use of wireless charging has a significant positive impact on the adoption and usage of electric vehicles. Addressing issues around the technological feasibility, safety, and cost-effectiveness of wireless charging will be crucial for widespread usage and increased EV adoption. Additionally, the study emphasises that charging duration and geographical coverage of public charging infrastructure significantly influence drivers' evaluations and perceptions, highlighting the need to prioritise fast-

charging stations over broad coverage.

The research also examined the role of psychological, ergonomic, and environmental factors in shaping Indian consumers' intentions to adopt electric vehicles. Key determinants include personal and social norms, demographic characteristics, environmental awareness, and the design and usability features of Electric vehicles. Addressing these multifaceted behavioural influences will be essential for policymakers and industry stakeholders to promote greater acceptance and adoption of electric vehicles, particularly in the Indian market. Overall, the insight from this research emphasises on the complexity of the factors leading to EV adoption and the need for a holistic approach to accelerate the transition towards sustainable mobility.

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