ELECTRIC SCOOTERS: INVESTIGATING PURCHASE AND POST PURCHASE CONTENTMENT AMONG BUYERS

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Abstract

This study investigates the adoption of electric scooters, focusing on the factors that influence purchase decisions and post-purchase satisfaction. Key aspects such as cost, range, charging infrastructure, design, and environmental impact are explored, along with challenges like high upfront costs and limited facilities. Data was collected from 50 electric scooter users in Alappuzha through a structured questionnaire. The findings provide useful insights for manufacturers and policymakers to encourage electric scooter adoption and improve user satisfaction, promoting sustainable urban transport. The study also would provide valuable insights to policymakers, manufacturers and researchers to develop effective strategies and initiatives that foster the adoption of electric scooters and accelerate the transition to a sustainable transportation future. In this light, the study is considered significant.

Keywords:- Electric Scooters, Buyers Commitment, Purchase Intention, Purchase Decisions, Energy Saving.

The adoption of electric vehicles (EVs), especially electric scooters, plays a crucial role in promoting sustainable transportation and reducing dependence on fossil fuels. Electric scooters are gaining popularity as a clean, affordable, and efficient mode of personal transport. However, their adoption rates differ across various regions and demographic groups. Understanding the factors that influence consumer decisions - such as cost, range, infrastructure, and environmental concerns - is essential for encouraging wider use of EVs. Educational qualifications have also been identified as

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a key factor that may shape individuals' attitudes and behaviors towards adopting electric vehicles.

This study aims to explore how educational background affects consumer choices related to electric scooter purchases, along with other influencing factors. By analyzing these aspects, the study seeks to provide insights that can help policymakers, companies, and researchers develop targeted strategies and awareness campaigns to promote EV usage and build more sustainable urban transport systems.

Statement of the Problem

This study seeks to investigate the adoption of electric scooters and understand the factors that influence consumers' decisions to purchase electric vehicles (EVs). Electric scooters have emerged as a popular mode of transport. Electric scooters vary in design, graphic and other characteristics across different demographics and regions and understanding the barriers and motivations regarding this is crucial. Simultaneously, the owning of EVs is laden with challenges such as higher upfront costs and limited charging infrastructure. By investigating the concerning factors, the current study aims to provide valuable insights for the industry, its stakeholders, policymakers, and researchers enabling the development of targeted strategies to promote the purchase of electric scooters and EVs ultimately fostering sustainable transportation systems.

Need and Significance

The study is of utmost importance due to the need for sustainable and cost-effective transportation solutions. Besides the environmental advantages, electric scooters present a promising alternative to conventional vehicles, as they offer not only reduced emissions but also potential cost savings in terms of fuel and maintenance expenses. By identifying the factors that influence electric scooter adoption and EV purchase decisions, the industry and stakeholders can develop targeted interventions to overcome barriers and promote the widespread use of these eco-friendly vehicles. This, in turn, can contribute to a significant reduction in carbon emissions, improved air quality and long-term financial benefits for individuals and communities. Moreover, understanding the salient factors in shaping EV purchase decisions is crucial for tailoring educational campaigns and raising awareness among specific segments of the population. The study would provide valuable insights to policymakers, manufacturers and researchers to develop effective strategies and initiatives that foster the adoption of electric scooters and accelerate the transition to a sustainable transportation future. In this light, the study is considered significant.

Scope of the Study

The scope of this study is to examine the factors influencing the purchase decisions of electric scooter buyers and to evaluate their post-purchase satisfaction and future purchase. This study collected data from 50 Electric Scooter users of Alappuzha. The study explores various factors that impact consumers' decisions to purchase electric scooters, such as cost, range, charging infrastructure, design, and environmental concerns. It also assess the satisfaction levels of electric scooter buyers by considering aspects like

performance, reliability, ease of use, and overall ownership experience. The research was conducted among a diverse sample of electric scooter owners, to gain a comprehensive understanding of the factors that drive purchase decisions and influence customer satisfaction.

Objectives of the Study

The study entitled Electric Scooters: Investigating Purchase and Post Purchase Contentment among buyers have the following objectives:

1. To determine the factors that influences the purchase decisions of buyers of Electric scooter.
2. To identify the challenges associated with owning an electric scooter.
3. To find out the post purchase satisfaction of buyers of Electric scooter.

Hypothesis

H0: There is no significant relationship between post purchase satisfaction and future purchase of electric scooter.

Research Methodology

The present study adopts a descriptive research design to analyze the usage patterns and preferences of electric scooter users in Alappuzha. The population of the study includes individuals who actively use electric scooters in this region. A convenience sampling method was employed to collect data, with a total sample size of 50 respondents. Primary data were gathered directly from the users through a structured questionnaire, while secondary data were sourced from research journals, books, articles, and reliable websites to support the theoretical framework. The area of study is confined to Alappuzha. The collected data were tabulated, analyzed, and interpreted using statistical tools such as averages, percentages, and charts to derive meaningful insights and conclusions.

Review of Literature

The existing literature on electric vehicles (EVs) highlights a multifaceted landscape shaped by technological, economic, and behavioral factors. A recurring theme across several studies is the presence of adoption barriers, especially in developing countries, where unclear policies, limited maintenance support, and socio-demographic factors such as education and income play a key role in influencing consumer decisions. Goel et al. (2021) and Rajper & Albrecht (2020) found that while vehicle pricing poses some challenge, policy clarity and support infrastructure are more critical for adoption. Studies by Shetty et al. (2020) and Westin et al. (2018) emphasized the influence of awareness, personal factors, and environmental beliefs on purchase behavior, showing that education and income levels are positively correlated with EV interest and usage. Furthermore, market segmentation strategies, as explored by Zarazua de Rubens (2019), revealed that price sensitivity and interest in features like vehicle-to-grid technology are pivotal in identifying near-term adopters.

Technological innovation, particularly in battery and energy management systems, is another significant focus in EV research. Hossain Lipu et al. (2021) and

Lu et al. (2013) highlighted the role of intelligent Battery Management Systems (BMS) in ensuring safety, energy efficiency, and overall performance, while Sun et al. (2019) expanded on emerging EV technologies like advanced motors and charging infrastructure. These advancements are crucial for addressing issues like overcharging, overheating, and limited range. In parallel, environmental benefits and future market growth also drive interest in EVs. Rietmann et al. (2020) forecast that EVs could make up 30 per cent of the global fleet by 2032, leading to significant CO, reduction - provided there is sustained investment in renewable energy infrastructure. Collectively, the literature underscores the need for integrated efforts across technology, policy, and consumer education to foster widespread EV adoption.

The environmental, economic, and technological dimensions of electric vehicle (EV) adoption have been widely studied, with particular attention to electric scooters as a sustainable urban mobility solution. Rietmann et al. (2020) forecast that EVs could account for 30 per cent of global passenger vehicles by 2032, significantly lowering CO, emissions if supported by renewable energy infrastructure. In developing regions, as noted by Liao et al. (2017) and Rajper& Albrecht (2020), high initial costs, limited infrastructure, and policy ambiguity remain major adoption barriers. Studies highlight that increasing environmental awareness, improving affordability, and aligning government policies with consumer interests are vital to accelerating EV integration. Research by Zarazua de Rubens (2019) reinforces the need for well-designed public awareness campaigns and targeted incentives that adapt to both economic realities and technological advancements.

The evolution of electric scooters reflects this growing interest in cleaner transportation alternatives. From their early 20th-century inception to the recent boom driven by lithium-ion battery technology, electric scooters have transformed significantly. The 2010s and 2020s have seen rapid innovation—companies like Xiaomi, Gogoro, and Ather Energy have redefined design, range, and user experience. The rise of shared scooter services such as Lime and Bird has made them a fixture in urban landscapes, addressing last-mile connectivity while reducing traffic congestion. Technological advancements, including brushless DC motors, GPS, and smart features, continue to enhance efficiency and performance. Alongside government incentives and increasing public interest, electric scooters are now viewed not only as practical and eco-friendly transport options but also as vital components in the shift toward sustainable, connected cities.

The interpretation of the data shows that among the various factors influencing the decision to purchase an electric vehicle, battery life is the most important to users, followed closely by environmental sustainability and vehicle range. This indicates that consumers value long-term usability and eco-friendliness. While factors like charging infrastructure and brand reputation are also important, purchase price and government incentives are relatively less significant. This suggests that buyers prioritize quality, performance, and

environmental impact over initial cost and financial benefits.

Levels of satisfaction regarding various factors are measured. Levels of satisfaction of the variables were analyzed using weighted mean score. The table shows how satisfied users are with different aspects of their electric scooters. The highest satisfaction scores are for overall performance and battery, both with a weighted mean score of 4.16, which means users are very happy with how the scooters perform and the battery quality. After-sale service, range, and

Table 1

Factors Influencing Decision to Purchase an Electric Vehicle

Factors	Weighted Mean Score
Vehicle Range	4.2
Battery Life	4.36
Charging Infrastructure Availability	4.12
Purchase Price	3.84
Government Incentives	3.58
Brand Reputation	4.04
Environmental Sustainability	4.22

Source: Primary Data

Table 2

Level of Satisfaction of Factors Influencing Purchase Decision

Factors	Weighted Mean Score
Overall electric scooter performance	4.16
Range	4.1
Charging infrastructure	4.1
After sale service	4.12
Maintenance cost	4.06
Battery	4.16

.Source: Primary Data

charging infrastructure also received good satisfaction ratings, showing that users feel positive about these areas as well. Maintenance cost has the lowest score at 4.06, but this is still quite high, indicating that users are generally satisfied with the low maintenance costs.

Hypothesis

H0: There is no significant relationship between post purchase satisfaction and future purchase of electric scooter.

H1: There is a significant relationship between post purchase satisfaction and future purchase of electric scooter.

Regression model is used for testing the dependence of future purchase on post purchase satisfaction. Future purchase is considered as the dependent variable and satisfaction is taken as independent variable.

The model summary table shows the coefficients of correlation (0.473) and coefficient of determination (0.224). These figures show that the variables under the study are correlated and 22.4 per cent of the variation in the independent variable is explained by the variations in the dependent variable.

The Durbin-Watson statistics is below the maximum permitted level of 2, indicating that there is no partial correlation. The ANOVA table shows the significance of the regression model proposed for the study. Since the significance value is lower than the benchmark of 0.05, it is evident that the model is significant. The coefficient table indicates the significance of independent variable and their extent of influence. The table clearly shows that the independent variable is significant and thereby influences future purchase.

Findings

This study dives into electric scooter usage from three angles: finding out why

Table 3

Summary of Multiple Regressions: Satisfaction and Future Purchase

R	R Square	Adjusted R Square	Std Error of the estimate	Durbin Watson
.473	.224	.208	.80415	1.146

Source: Primary Data

Table 4

ANOVA – Future Purchase and Satisfaction Sum of Squares

	Sum of Squares	Df	Mean Square	F	Significance
Regression	8.961	1	8.961	13.857	.001
Residual	31.039	48	.647		
Total	40.000	49			

Source: Primary Data

Table 5

Coefficients- Future Purchase and Satisfaction

	Unstandardized coefficients		Standardized coefficient	t	Significance
	B	**Standard error**	**Beta**		
(constant)	-.602	.761		-.790	.433
Satisfaction	.681	.183	.473	3.722	.001

Source: Primary Data

people buy them, figuring out the problems they might face, and checking if they are happy after buying. The major finding of the study is as follows.

a) **Demographics and Awareness:** The majority of electric scooter users are young (20–30 years) and male, with a high representation of degree holders. This indicates that younger, educated individuals are more likely to adopt electric scooters, likely due to greater environmental awareness and openness to new technology.

b) **Key Purchase Drivers:** The main motivations for purchasing electric scooters include reduced fuel expenses (84 per cent) and positive environmental impact (72 per cent). Factors like battery life and environmental sustainability were rated as highly influential in the purchase decision, showing that users prioritize long-term value and eco-friendliness.

c) **Limited Role of Government Incentives:** Only 26 per cent of users considered government incentives a factor in their decision, likely due to the discontinuation of FAME 2 subsidies. This highlights the need for consistent and visible policy support to further encourage adoption.

d) **Infrastructure and Pricing Concerns:** While most respondents occasionally or frequently use public charging stations, home charging remains a key priority for buyers. Additionally, users perceive a fair price range to be ¹ 80,000–¹ 1,40,000, with higher prices seen as unreasonable. Battery replacement cost emerged as a major ownership concern.

e) **Post-Purchase Satisfaction and Influence:** A large majority (86 per cent) are satisfied with the performance and battery of their electric scooter. Over half are willing to repurchase, and many are likely to recommend EV scooters to others. Satisfaction also plays a notable role in influencing future purchase decisions, with 25 per cent of repeat purchases based on user experience.

Conclusion

In conclusion, this study provides valuable insights into the growing electric scooter market by examining the key

factors influencing purchase decisions, user satisfaction, and future buying intentions. The research revealed that buyers are primarily motivated by environmental consciousness, fuel cost savings, and battery performance, with high satisfaction levels reported post-purchase. However, challenges such as battery replacement costs, limited charging infrastructure, and reduced government incentives continue to impact broader adoption.

The findings highlight a strong potential for market growth, especially among younger and educated demographics. Users' willingness to repurchase and recommend electric scooters underscores their long-term viability as a sustainable transportation solution. To build on this momentum, manufacturers and policymakers must work together to address existing barriers, improve infrastructure, and develop consumer-friendly policies. This will not only enhance user experience but also accelerate the transition to cleaner and more efficient urban mobility systems.

Suggestions and Recommendations

- Government bodies and private players should invest in expanding both public and home charging facilities to improve convenience and reduce range anxiety, encouraging more users to adopt electric scooters.
- Since battery replacement cost is a major concern, manufacturers should introduce affordable battery maintenance plans, extended warranties, and battery-swapping options to reduce long-term ownership costs.
- Authorities should reconsider the continuation or revival of subsidy schemes like FAME II to make electric scooters more financially accessible, especially for middle - and low-income groups.
- Educational initiatives highlighting the environmental and economic benefits of EVs should be targeted at various age and income groups to increase awareness and drive adoption, particularly among hesitant or older consumers.
- Manufacturers should regularly collect feedback from current users to refine product design, improve durability, and incorporate smart features that enhance performance, ensuring customer needs are met and satisfaction remains high.

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