



“A Study On Consumer Perception Towards E Bikes With Special Reference To Alathur Panchayath Of Palakkad District In Kerala.”

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Abstract :

Consumer perception of e-bikes has undergone a significant shift in recent years. Initially met with scepticism and misconceptions, e-bikes are now increasingly viewed favourably by consumers. They are seen as sustainable alternatives to traditional vehicles, offering zero emissions and reducing environmental impact. Convenience is another key factor driving consumer interest, with e-bikes providing a practical and efficient mode of transportation, particularly for urban commuting. Health benefits are also recognized, as e-bikes encourage physical activity and make cycling accessible to a wider range of people. Moreover, the cost savings over time, in terms of fuel and maintenance compared to cars, are appealing to budget-conscious consumers. The integration of advanced technology features further enhances the appeal of e-bikes, appealing to tech-savvy individuals. Overall, consumer perception has evolved positively, with e-bikes being increasingly seen as an attractive and viable option for personal mobility.

Key Words : Consumer perception , E bikes , Fuel efficiency etc..

INTRODUCTION

Going green” seems to be a string of journeys towards a sustainable world. Yet, the dependence on energy intensity around the globe increases the chances of environmental degradation over time. As reported by the International Energy Agency (IEA), the emission of carbon dioxide is viewed as one of the largest contributors to climate change, of which two-thirds is dominated by the transportation sector. The agency suggested that fuel economy could improve the efficiency of energy use for vehicles, and eventually reduce the statistics of fuel combustion emissions of the world. Therefore, the need to satisfy the vision of energy-efficiency, especially in the transportation sector, should draw the concern of every country to embrace electric vehicles. Due to resource scarcity and climate change, the automotive industry has started to re-evaluate traditional modes of transportation. The transition from internal combustion engines (ICE) to electric vehicles is one such step that is gaining support among customers. According to statistics from 2021, India has the fourth-largest automobile industry worldwide. The Indian automotive industry is seeing significant change in terms of its sustainable growth and profitability. The return of electric vehicles to the market is due to factors like improved battery technology and government regulations to maintain standards for vehicle efficiency and air quality. Electric vehicles are a crucial technology because they reduce greenhouse gas emissions, local air pollution, and vehicle noise pollution. Internal combustion engine cars (ICEVs) and electric vehicles (EVs) are compared. It is discovered that EVs offer significant environmental and financial benefits by shifting from fossil fuels to electricity.

Therefore the present study is conducted on the topic” A study on consumer perception towards e Bikes with special reference to Alathur panchayath of Palakkad District in Kerala.”

OBJECTIVES OF THE SYUDY

- To study the consumers attitude and awareness towards e- bikes
- To identify the factors which influence e-bike usage decision
- To study the perception about the environmental benefits and innovative technology in e-bikes

SCOPE OF THE STUDY

The present study helps in understanding consumers' attitudes, motivations, and barriers related to e-bike adoption, examining their preferences for different e-bike features, exploring the impact of environmental concerns and sustainability on their purchase decisions, and assessing the role of marketing strategies and pricing in influencing their choices. Additionally, such a study might delve into the demographic and psychographic profiles of potential e-bike buyers to identify target markets and tailor marketing campaigns effectively. The scope could also extend to comparing perceptions of e-bikes with traditional bicycles or other modes of transportation to provide a comprehensive understanding of consumer behavior in this evolving market.

RESEARCH METHODOLOGY

Research design

- Research design is the specific procedure or techniques used to identify, select process and analyse information about a topic. In this study descriptive and analytical research design is used, Which may focus on consumers perception towards purchasing of ebikes with special reference to Alathur panchayath.
- **Sample design**
A sample design is the framework, or road map, that serves as the basis for the selection of survey sample. This research is carried out by using convenience sampling.
- **Sample size**
The sample size taken for this study is 50 in Alathur panchayath
- **SOURCES OF DATA**
Both primary and secondary data has been used for the study.
- **TOOLS FOR ANALYSIS**
Simple percentage and Weighted Average Method has been used for analysis

LIMITATIONS OF THE STUDY

- Due to time constraints and limited resources, sampling frame for this study was Only limited to 50 respondents.
- Here the study is restricted to Alathur Panchayath only and the result may not be applicable to other areas.
- The result obtained is based on the respondents opinion so there is a chance of bias

REVIEW OF LITERATURE

This study is conducted on the factor switching cost impacting the purchase intention of electric bike or E-vehicle (EV). Based on the review of literature of the preview studies conducted by variance authors and researchers, it shows that environmental consciousness along with switching cost alone are not enough for the necessity and is not alone required for the complete analysis which will act as an insufficient measure to influence the purchase intention of E-vehicle.

1. Alamelu, R., Anushan, C. S., & Selvabaskar, S. G., 2015, conducted a study on *Preference of e-bike by Women in India—a niche market for auto manufacturers*. The results showed that no license for vehicles under 50 cc is the factor which induces the respondents to prefer e-bike. The next important factor is the comfort while driving, less weight and no fuel requirement instead it requires only a charging facility. And finally, style and design are the next important factor.

2. Wang, S., Fan, J., Zhao, D., Yang, S., & Fu, Y., 2016, conducted a study on *Predicting consumer's intention to adopt hybrid electric vehicles: using an extended version of the theory of planned behaviour model*. The results using mediating effecttest indicated that all four elements of the extended TPB model such as attitude, subjective norm, perceived behavioural control, and personal moral

norm have partially mediated effect of environmental concern on adoption intention. In addition, the results suggest that consumer's environmental concern has a significant indirect effect on adoption intention through the four elements of the extended TPB model. An increase in environmental concern may not be enough to guarantee the adoption intention increases.

3.Li, W., Long, R., Chen, H., & Geng, J., 2017, conducted a study on *A review of factors influencing consumer intentions to adopt battery electric vehicles*. This study was done on three factors, demographic factors, psychological factor and situational factor. Under situational factor, it included technical features, cost, environmental attributes, and government policy. The results found that the intention for consumers to adopt battery electric vehicles is likely to be a mixture of demographic, situational and psychological factors. And stated that one factor alone will not influence the purchase intention of electric vehicle

4.Mohiuddin, M., Al Mamun, A., Syed, F. A., Mehedi Masud, M., & Su, Z., 2018, conducted a study on *Environmental knowledge, awareness, and business school students' intentions to purchase green vehicles in emerging countries*. The study found that one of the key contributing factors responsible for the escalation of environmental concern is environmental knowledge and awareness have on university business student's creating attitude towards the environment concern, and this shows the intention and behaviour towards green vehicles purchase.

5.Motwani, D. B., & Patil, A., 2019, conducted a study on *Customer Buying Intention towards Electric Vehicle in India*. The result shows that mobility and recharging were considered as most significant attributes towards the intention to purchase an electric vehicle while Regional Transport Office norms was considered as non-significant characteristic

DATA ANALYSIS

Table showing the statements relating to perception of consumers on e-bikes

Statements	SA	A	N	D	SDA	Weighted Average	Rank
Electric bike reduce fuel cost	30	16	4	0	0	18.02	2
A fully charged battery sufficient for most of the journey	10	14	14	4	8	12.25	5
e-bikes are more fuel efficient than other bikes	12	26	12	0	0	15.94	3
Price of e-bikes are higher than other bikes	18	14	16	0	2	29.84	1
e-bikes usage will provide more status in the society	12	18	10	8	2	14.35	4

(SA-Strongly Agree -5 points ,A-Agree-4 points ,N-Neutral-3points,D-Disagree -2 points ,SDA-Strongly Disagree-1 point)

INTERPRETATION

According to the data above, most respondents feel that e-bikes are more expensive than non-electric bikes since its price is high. They also feel that e-bikes are more efficient than other types since they save money on fuel, and the least number believe that a completely charged battery will last for the majority of a ride.

OTHER FINDINGS

- 68% of the respondents were belong to the age 18-25
- Majority of the respondents were male
- Majority of the respondents were students
- 76% of respondents earn less than rupees 3 lakh per year
- 56% of the respondents own petrol engine bike

- The study reveals that 48% of the respondents prefer to drive petrol engine bike
- 56% of the respondents believe that there will be a strong demand for e-bike in future
- The study shows that 48% of the respondents learned about e-bike from advertising
- 40% of the respondents purchase e-bike due to their concern for the environment
- The study shows that 64% of the respondents have no knowledge on resale value of e-bike
- The study reveals that 60% of the respondents are less satisfied with e-bike design and availability of the power station
- 60% of the respondents tells that battery of e-bike is costly
- Majority of the respondents tells that e-bike was necessary for current circumstances
- 52% of the respondents strongly agree that e-bike are less polluting than petrol engine bike
- Most of the respondents feels that e-bike are more expensive than non-electric bike
- Weighted average statements reveals that e-bikes are more expensive than non-electric bikes since its price is high. They also feel that e-bikes are more efficient than other types since they save money on fuel, and the least number believe that a completely charged battery will last for the majority of a ride.

SUGGESTIONS

- It is preferable to use social media and other channels to promote e-bikes more.
- It is advised that if the price of the e-bike and its battery are lowered, more people will purchase them.
- It is recommended that more places should have improved power plant availability.
- It is recommended to upgrade the e-bike servicing station.

CONCLUSION

Consumer perception of e-bikes is evolving rapidly as these vehicles become more integrated into the mainstream transportation landscape. Initially met with skepticism due to concerns over cost, battery life, and environmental impact, e-bikes are increasingly recognized for their numerous benefits. They offer a convenient, eco-friendly alternative to traditional modes of transportation, appealing particularly to urban dwellers, environmentally conscious consumers, and those seeking a practical solution for reducing commuting time and effort. Consumer perception of e-bikes is evolving rapidly as these vehicles become more integrated into the mainstream transportation landscape. Initially met with skepticism due to concerns over cost, battery life, and environmental impact, e-bikes are increasingly recognized for their numerous benefits. Consumer awareness and acceptance continue to grow, the e-bike market is poised for significant expansion. Marketing efforts and word-of-mouth endorsements further solidify their reputation as a viable and attractive transportation choice.

It can be concluded that more awareness regarding e-bikes is required, as well as more advertising for them. Improving the availability of charging stations and service stations is crucial for consumer satisfaction. Additionally, respondents expressed concern about the environment, predicting a high demand for e-bikes in the future.

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