

A Study on Rural Consumer Purchase Behaviour Towards E-Bike with Preference to Gorakhpur Division

Sanjay Kumar Gupta¹ and Saurabh Kumar^{2*}

¹Mangalayatan University, Aligarh U.P. India

²Institute of Business Management & Commerce, Mangalayatan University, Aligarh U.P. India

*Corresponding author's e-mail: saurabh.kumar@mangalayatan.edu.in

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ABSTRACT

The study will look at the effect of rural consumer development and their concerns on the practical capacities of consumer goods opposed to their preferences, with an emphasis on how rural consumers decide to purchase Consumer goods. Based on an assessment of innovation proprietorship and a companion of mental and social components, a theoretical system is formed and tried that incorporates proportions of ingenuity at a reception level. There should be an alternate method for controlling bike because of the consistent exhaustion of petroleum products and cost increments. The bike business in India is presenting electric bike as a solution for the area and the climate. The market entrance of electronic bike is presently very low, in spite of the public authority laying out rules with respect to them. This report will analyze the buying propensities and mentalities of Indian rural purchasers with respect to electric bike. Both essential and optional information will comprise the groundwork of the review. A review of the market and a questionnaire will be utilized to get the information. E-Bike OEM vendors, understudies, and utilized individuals would be the interest group for the information gathering. The Gorakhpur Division would be the last objective rural customer.

Keywords: E-Bike, Rural consumer, Durable goods, Purchase Behaviour, Environment, Government policies

1 Introduction

Since there are fewer moving parts to keep up with on E-Bike, their working expenses are lower, and they consume practically no petroleum derivatives, which makes them harmless to the ecosystem (petroleum). While a few E-bike used lead-corrosive or nickel-metal hydride batteries, lithium-particle batteries have since turned into the business standard because of their more drawn-out life expectancy, further developed energy maintenance, and low month to month self-release pace of simply 5%. The Tesla Model S has seen flames or blasts because of warm out of control in these batteries, notwithstanding endeavors to increment battery wellbeing. At least one electric engine driven by a battery pack are expected to push an electric bike, like an electric bike, forward and keep up with speed. Contingent upon the kind of Electric Bike, a gas-powered motor might be somewhat or completely controlled by an electric engine (ICE).

1.1 Kinds of E-Bike

Three types of E-Bike are typically mentioned when discussing them:

- 1- Battery E-Bike,
- 2- Plug-in hybrid E-Bike,
- 3- Hybrid E-Bike (HEB)

Consumer buying behaviour refers to a customer's actions that making a purchase of a good or service (both online and offline mode). This could include utilizing web indexes, leaving remarks via online entertainment posts, and different exercises. Understanding these E-Bike benefits organizations since it



empowers them to match their advertising drives more readily to prior promoting efforts that have effectively persuaded consumer to make buys.

1.2 Objective of the study

- To find out the major's key factor that influences rural consumer's bike Purchasing decisions.
- To comprehend India's burgeoning E-Bike market towards petroleum vehicle.
- To understand the rural consumers with respect to the controlled engines.
- To figure out the country purchasers act while buying E-Bike.

1.3 Preference to go Rural Area

Indian businesses currently have only two options: go global or go rural. A rural emphasis costs significantly more than a global one. It makes sense to target the local market, which is growing on a daily basis. In rural India, a significant market has emerged for a variety of goods and services, including telecommunications, healthcare, education, and financial services. The following are some of the reasons why businesses want to serve rural markets:

Urban Markets – In the urban market, a wide range of products are becoming increasingly competitive. It is becoming increasingly difficult for established businesses to maintain a share of the urban market.

Undeveloped Market – of the 638,667 communities that have been established, only 125,000 have a significant market. There are approximately 833.1 million rural residents in this large market.

Role of Electronic Media in Rural Area: The expanding reach of electronic media has significantly altered the way of life of rural consumers as a result of television shows and mobile advertising. Rural residents place a greater emphasis on lifestyle goods than urban dwellers do.

2 Literature Review

- Bhupendra Kumar Verma (2011). The following suggestions can be made to improve the efficiency of electric bike sales, according to his article, which is based on the findings of this research. By giving clients coupons and writing in various territorial dialects, it is important to expand how they might interpret the various extra highlights that an electric bicycle offers. The numerous electric bike manufacturers ought to compete openly, fairly, and honestly.
- Hatwar, N.; Bisen, A.; Dodke, H.; Junghare, A.; Khanapurkar, M. (2013). A new approach to the design of electric bikes that makes use of a hybrid battery and super capacitor system was proposed in order to improve speed, address issues related to the lengthy charging times, and extend the battery life.
- Anable & Morton, 2016 focused on determining whether consumer innovation was related to the stated preference for electric vehicles (EVs) in order to comprehend customer response to EVs. He defines consumer innovativeness as the willingness and capacity of consumers to accept novel products with novel or advanced features and functions. Electric vehicles definitely have unexpected, specialized qualities in comparison to vehicles with gas powered motors.
- The vehicle range, price premiums, operating costs, refueling habits, and alleged environmental benefits are the primary practical distinctions between EVs and conventionally powered vehicles. Therefore, EVs have been referred to as a disruptive innovation by some observers (Christensen, 1997).
- Nath, 2021. His journal says that the Indian government changed the current FAME-II (Faster Adoption and Manufacturing of Electric Vehicles-II) program in June of this year. The government narrowed the price gap between petrol-powered and electric two-wheelers by increasing the subsidy rate for electric vehicles from Rs 10,000/kWh to Rs 15,000/kWh and setting incentives at 40% of

vehicle costs instead of 20%. This strategy also supports 2,700 charging stations in the nation’s largest cities, other cities with a population of over a million, smart cities, and cities in hilly states, with the goal of having at least one charging station per 3 km x 3 km grid. Recharge stations are also planned on highways every 25 kilometers.

- Kalra, 2022 studied with 63% of consumers surveyed believing that an EV is out of their budget, the capital cost has always played a significant role in EV purchase decisions. The deficient charging framework in our country is a huge hindrance to more extensive EV reception. However, significant OEMs are also attempting to enter the EV component market in order to meet the government’s requirement for a 50% localization rate in order to be eligible for government subsidies and reduce their reliance on imports. However, he also mentioned that the electric vehicle industry is expected to experience significant growth over the next ten years due to a comprehensive infrastructure that is affordable, accessible to all consumer groups, and supports them, as well as a stable financial environment, governmental incentives, and technological advancements.

3 Research Methodology

Primary data: 100 respondents, all using the bike and other vehicles, completed questionnaires for the primary data.

Secondary data: The secondary data has been collected from different websites and bike showrooms.

Sampling technique: Based on a random selection method, all the respondents were selected from the area of Gorakhpur division.

Three blocks made up the questionnaire.

- 1 – Respondent’s information.
- 2 – Respondent is interested to move to an E-Bike or not.

4 –Responder thinks about E-Bike.

Section 1: Respondent’s information.

Table 1: Gender of the respondent

S. No.	Gender	Frequency	Percentage
1.	Male	80	80%
2.	Female	20	20%
Total		100	100%

The respondents were divided into two groups according to their gender. In table 1, the frequency and Percentage of responders are displayed. 80 responses are men, and 20 respondents are women out of 100 respondents.

Table 2: Age of the respondent

S. No.	Age	Frequency	Percentage
1.	Under 30	26	26%
2.	31-40	28	28%
3.	41-50	30	30%
4.	Above 50	16	16%
Total		100	100%

Based on the age of the respondents, the respondents were divided into 4 groups. Table 2 provides information on the frequency and Percentage of responses. There were 100 responders, of whom 26 were under 30, 28 were in the 31–40 age range, 30 were in the 41–50 age range, and 16 were above 50.

Table 3: *Qualification of the respondent*

S. No.	Qualification	Frequency	Percentage
1.	UG	57	57%
2.	PG	43	43%
Total		100	100%

Based on the respondent qualifications, the respondents were divided into two groups. Table 3 displays the frequency and Percentage of respondents. 43 respondents with PG degrees and 57 respondents with UG degrees, respectively, out of 100 respondents

Section 2: Respondent is interested to move to an E-Bike or not.

Table 4: *How likely is it that the respondent will think about purchasing an E-Bike in the next two years?*

S. No.	Buying EV	Frequency	Percentage
1.	I will purchase one	18	18%
2.	Am likely to purchase one	36	36%
3.	Thought about purchasing one, but I need information	22	22%
4.	Unlikely to purchase one	10	10%
5.	I am not sure	14	14%
Total		100	100%

On the basis of their interest in purchasing an E-Bike, the respondents were divided into 5 categories. Table 4 displays the frequency and Percentage of responders. Out of 100 respondents, 18 were certain to purchase one, 36 were likely to purchase one, 22 were debating purchasing but needed more convincing, 10 respondents indicated they were unlikely to buy and 14 indicated they were unsure about their decision.

Table 5: *Why the respondent is willing to switch to an E-Bike?*

S. No	Reason	Frequency	Percentage
1	To protect the environment	32	32%
2	Petrol price hikes	47	47%
3	Less pollution and less noisy	21	21%
Total		100	100%

The respondent had a variety of options to choose from when indicating why they would be inclined to switch to an E-Bike. Table 5 displays the frequency and Percentage of respondents. Out of 100 respondents, 32 chose environmental protection, 47 chose higher Petrol prices, and 21 chose reduced noise and pollution.

Section 3: Responder thinks about E-Bike.

Table 6: *The cost to charge an E-Bike is much less than the fuel costs for a Petrol Bike*

S. No.	Views	Frequency	Percentage
1	Agree	23	23%
2	Strongly Agree	45	45%
3	Neutral	23	23%
4	Disagree	3	3%
5	Strongly Disagree	6	6%
Total		100	100%

Based on the respondent's perspective on the statement, the respondent was divided into 5 groups. In table 6, the frequency and Percentage of responders are displayed. In a survey of 100 people, 23 people agreed

with the issue, and 45 people strongly agreed with the statement, 23 people were neutral on the issue, 6 people highly disagreed with the statement, 3 people disagreed with the statement.

Table 7: *The price of purchasing an E-Bike is comparable to that of a Petrol Bike.*

S. No.	Views	Frequency	Percentage
1.	Strongly Disagree	31	31%
2.	Disagree	28	28%
3.	Neutral	27	27%
4.	Agree	4	4%
5.	Strongly Agree	10	10%
Total		100	100%

Based on the respondent's perspective on the statement, the respondent was divided into 5 groups. In table 7, the frequency and percentage of responders are displayed. Out of 100 responses, 31 strongly disagreed with the statement, 28 disagreed with the statement, 27 were indifferent toward the statement, 4 agreed with the statement, and 10 highly agreed with the statement.

Table 8: *If the company offers an exchange value on your currently owned Bike to purchase an E-Bike, will you make the switch?*

S. No.	Will you switch	Frequency	Percentage
1.	Yes	59	59%
2.	No	6	6 %
3.	May be	35	35%
Total		100	100%

Based on whether respondents were willing to switch to an E-Bike if the company offered them an exchange value, they were sorted into three groups. Table 8 displays how frequently and how many respondents there were. In a survey of 100 people, 59 people said they would switch, 6 people said they would not, and 35 people said they might.

5 Findings

- The primary objective of the study was to comprehend customer purchasing patterns for E-Bike. Instead of using specific criteria, this was done with the fundamental characteristics of the respondents in mind. The study for this one identifies 100 respondents. This chapter highlights the study's main findings and conclusions.
- The most pressing concerns of consumers who want to switch to E-Bike are the rising costs of gasoline and bicycles. Customers are interested in switching to E-Bike because, in their opinion, they are quieter and produce less pollution, both of which would be beneficial to the environment.
- The perception that it is costly and time-consuming to charge E-Bike is the primary barrier to their purchase. People who already own a car are reluctant to switch to an E-Bike because the process involves a cost. Due to fact that they consider the cost of petrol to be manageable, some customers are reluctant to switch.
- The majority of customers are willing to purchase or switch to an E-Bike because they are convinced that the cost of charging an E-Bike is significantly less expensive than the cost of fuel for a Petrol Bike.
- Customers will be willing to trade in one of their current automobiles for an E-Bike if the business provides them with an exchange value. Others believe that they might buy an E-Bike if they are sufficiently motivated to do so. This can be accomplished by ad campaigns and efforts to raise

awareness. However, due to their sentimental attachments, some individuals strongly disagree with the idea of surrendering their owned Bike.

6 Conclusion

The majority of people who are considering purchasing an E-Bike are concerned about the environmental impact of internal combustion engine pollution. They want to switch E-Bike because they are concerned about the rising cost of gasoline. People who are most likely to buy an E-Bike are also interested in purchasing an E-Bike if the company offers a trade-in value for their current bike when they buy one. They also believe that refueling an E-Bike is significantly less expensive than refueling a petrol bike. But I also think it's hard to charge an E-Bike. The majority of Indian consumers are opposed to purchasing E-Bike due to the industry's slow growth in India's absence of infrastructure and charging stations. Additionally, consumers lack sufficient knowledge of E-Bike. Efforts to promote E-Bike, raise public awareness, and improve infrastructure would unquestionably help this industry enter the Indian auto market.

7 Questionnaire

1. Name?
2. Gender?
 - Male
 - Female
3. Age?
 - Under 30
 - 31-40
 - 41-50
 - Above 50
4. Qualification?
 - UG
 - PG
5. How likely is it that the responder will consider to Purchasing an e-bike in the next two years?
 - I will purchase one.
 - Am likely to purchase one
 - Thought about purchasing one, but I need Information
 - Unlikely to purchase one
 - I am not sure
6. Why the respondent is willing to switch to an E-Bike?
 - To protect the environment
 - Petrol price hikes
 - Less pollution and less noisy
7. Why are you not willing to switch to an E-Bike?
 - Already own a Bike
 - Can manage petrol price hike
 - Don't like riding E-Bike
 - Charging E-Bike is hectic

- E-Bike are costly
- 8. The cost to charge an E-Bike is much less than the fuel Costs for a Petrol Bike
 - Agree
 - Strongly Agree
 - Neutral
 - Disagree
 - Strongly Disagree
- 9. The price of purchasing an E-Bike is comparable to that of a Petrol Bike
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- 10. If the company offers an exchange value on your currently-owned Bike to purchase an E-Bike, will you make the switch?
 - Yes
 - No
 - May be

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References

- [1] Bhupendra kumar verma (2011) "His review expresses that based on this review, the accompanying ideas can be made to help in deals of electric bicycle more powerful"
- [2] Hatwar, N.; Bisen, A.; Dodke, H.; Junghare, A.; Khanapurkar, M. (2013). Configuration approach for electric bicycles involving battery and super capacitor for execution improvement, in Procedures of the IEEE Gathering on Smart Transportation Frameworks ITSC, 6-9 October 2013, Hague, Netherlands. Article number 6728516, 1959-1964.
- [3] Anable, J. furthermore, Morton, C., 2016. Investigating buyer inclinations towards electric vehicles: The impact of customer inventiveness. [online] Exploration Door. Accessible at: <https://www.researchgate.net/distribution/295394864_Exploring_consumer_preferences_towards_electric_vehicles_The_influence_of_consumer_innovativeness/interface/577e31d008aed807ae7ae526/download> [Accessed 24 Walk 2022].
- [4] Christensen, 1997. In his 1997 book, The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail.
- [5] Nath, S., 2021. Govt Strategies of 2021 For Auto Area To Assist with supporting EV Reception. [online] India.com | Top Most recent News from India, USA and Top public Making it known stories. Accessible at: <<https://www.india.com/business/govt-strategies-of-2021-for-auto-area-to-help-support-ev-reception-5157884/>> [Accessed 24 Walk 2022].
- [6] Kalra, R., 2022. The way to the eventual fate of electric vehicles in India. [online] Thehindu.com. Accessible at: <<https://www.thehindu.com/sci-tech/innovation/the-way-to-the-future-of-electric-vehicles-in-india/article65233617.ece>> [Accessed 24 Walk 2022].