A COMPARATIVE STUDY ON ELECTRIC SCOOTER AND TRADITIONAL SCOOTERS IN MUMBAI SUBURBAN REGION

Khushi Vijan1
SIES College Of Commerce And Economics, India
Email: 2khushivijan@gmail.com

Bhum Gori2
SIES College Of Commerce And Economics, India
Email: bhumigori2002@gmail.com

Drishti Joshi3
SIES College Of Commerce And Economics, India
Email: drishtijoshi76@gmail.com

ABSTRACT
This abstract understands the slow rising demand of E scooters in contrast to traditional (normal) scooters in the Suburban region of Mumbai which is understood in terms of pricing, economical cost, impact on environment, charging facilities and sustainability. The issue of Electric scooter arises on its maintenance options and charging limitations. This paper gets us an overview of what consumers think about its performance and durability in the long run as compared to an traditional scooter and also to comprehend the response on the burn down of Electric scooters and thus to get a grasp of consumers whether they find it as a future threat or not. This analysis will help us find out whether Electric scooters are entirely fool proof replacements to Traditional scooters. Although, the problems arising are capable of being reconciled over a period of time to know the insights of consumers on both the types of scooters a research was conducted by primary method of data collection through Google forms. The questioning done was on the basis of its durability, environmental impact, performance, appearance, the retail price.

The implication of the study reveals that consumers in case of buying an electric scooter will have to bear a high initial cost, they find it less reliable due to its charging facility, repair charges, and the taxes levied on it. Inspire of, all these limitations a majority of people are content with the fact that Electric scooters are an incredible alternative to traditional scooters due to zero emissions and also on the fact of use of renewable energy.

Keywords: Electric – Scooter, Traditional scooter, Environment, Batteries, Charging Facility, Performance.

INTRODUCTION
Scooters are one of the most preferred types of vehicles among the residents of Mumbai. There are various factors involved for the huge popularity of scooters within the suburban areas of Mumbai which amounts to over 39 lakh users of two wheeled vehicles. With the stressing concerns of climate change with increasing CO₂ (carbon dioxide) emission by the traditional vehicles using combustible engines (petrol, diesel and CNG) electric scooters have proved themselves as great alternatives. Even though the basic structure of these 2 types of mobiles is similar, the differentiation can be made
through the environmental effects, economic sustainability and consumer behavior. This paper also observes the reluctance of people in Mumbai towards adopting Electric scooters over traditional scooters. E-Vehicles have been very popular in past few years with rising fuel price many people are switching to eco-friendlier option over past 3 years there was 1,360% rise in sale of EVs in Mumbai. Even with that rise in number of sales, people are still hesitant to buy E-Scooters; one of the major drawbacks of electric scooter is the initial cost of buying. One of the top selling inexpensive E-Scooter Okinawa Praise Pro retails at Rs. 84,000 with over 10,000 units sold whereas one of the latest big budget traditional scooter Honda Active 6G trades at Rest. 90,000. It is difficult to adopt this futuristic technology since many areas in Mumbai suburban region experience heavy electricity cut-offs. No proper charging stations infrastructure has proved to be hurdle in way of acceptance of electric scooter on roads of Mumbai.

REVIEW OF LITERATURE

The literature is based on 2 search engines (Research Gate, Google Scholar) to find few different papers on the research topic. To find the following papers words such as electric scooters, electric vehicles were used. While electric scooters are not the most driven vehicle on the roads of India, Sandeep Singh et al. (Singh) concluded in there study of electric scooter in Tiruchirappalli city that electronic vehicles can be used by large population in rural and urban regions by introducing new low cost E-Scooters, less of operating cost, skilled technicians, better charging infrastructure. All these add-ons can help in popularization of electric scooter. Roche et al. (roche, 2010)measured the negative impact on individual preferences after the real-life experience with electric vehicles through stated choices as there was long panel survey conducted to measure attitudinal effects of before and after using of electric vehicle. Putri et al (Putri, 2021) analysed various methods to raise consumer intention to an electric vehicle and made its customer familiar with it. They also initiated programmes about electric vehicles. They launched long term development programmes to reach many clients with correct object served to them so that it can built a good perception among the electric scooter buyers. India accounts for 18% of the carbon emissions which can be controlled by using an environment friendly alternative like electric vehicle. Using electric vehicles is good for the environment and country as it helps reduce pollution. Masurali et al. (Masurali A., 2018) concluded that the government should create measures to make people aware of such a vehicle which is effective for the environment. Pritam K. (Pritam K. Gujarathi, 2018)concludes that with increasing carbon emission there is need to search and find out obstacles in way of more sustainable and cleaner alternatives to fossil fuel using vehicles as most vehicles in India still rely on petrol, diesel etc.

STATEMENT OF THE PROBLEM

The present specifications of an electric scooter are useful to the potential users but also has some faults in it. The electric scooter launched in India has faced many burndowns in its past this was due the charging difficulties, inefficiency in its system, high tax levied, high maintenance cost, lack of skilled labour, and other such reasons. The purpose of this research is to find those reasons, understand the market situation and know the comparison with the traditional scooters.

OBJECTIVES OF THE STUDY

1. To study attitude of people towards electric scooters.
2. To analyse if electric scooters are considered as an eco-friendly alternative with respect to traditional scooters (petrol, diesel, CNG).
3. To conduct a detailed comparison of electric scooters and traditional scooters.
RESEARCH METHODOLOGY

The present study is conducted based on the primary and secondary data. The primary data is collected from the Google form which was circulated to the reviewers. This form had close ended questions. The secondary data was collected from newspaper, research paper and online articles.

The data obtained for the study is also collected from internet, websites, electric scooters company's website, and with help of other research papers related to electric vehicles. The qualitative data and analysis were achieved from websites which had shown detailed Bar graph study.

LIMITATIONS OF THE STUDY

The main focused limitation faced by the electric scooter is the lack of charging options available as most of them can be charged in conventional outlets but for a full charge 7-10 hours are required. The fast-charging option is not available yet.

DATA ANALYSIS AND INTERETATIONS

To know in-depth perception of people towards electric scooter a Google form was circulated among friends, classmates and relatives about the following topics to gain their insights towards electric scooter as compared to traditional scooters. The age group covered was from 18-25, 26-35, 36-45, 46-55 years.

Preference- The preference here is more on the side of traditional scooter which is because of the simple reason that most of them already own one.

Impact on environment- The data informs that around 64% of people find electric scooter environment friendly and the other 28% people are still left in a dilemma. According, to the reports published by the Office of Energy Efficiency and Renewable Energy of United States Department of Energy which says electric scooter has a conversion efficiency of 85%-90% which contributes greater to environment.
Rates- According to our research conducted 70% of people find it expensive to own a e-scooter as it has high maintenance cost, high battery charges, and levies high taxes.

Appearance- The electric scooter has outperformed the number for its appearance as many of the users and public in general have liked it. Along with this its users have claimed a high number for its comfort to ride the e-scooter.
Charging facility - The people in the analysis agree with its inconvenient charging facility. As per a published report in Brazil the users exchanged the discharged battery with a charged battery as the charging can take up to 7-10 hours.

Threat of burndown -
The analysis tells us that around 77% of people are aware of the burn down of electric scooter which may create a sense of fear among the masses that same could happen to their scooter as well. Hence, the use of a traditional scooter is much preferred.
RECOMMENDATIONS

First, we can start with the charging station of an electronic vehicle (EV). Easy access to charging stations will defiantly make people switch to electric scooters.

Government should try focusing on the awareness of electric scooters by giving articles, sessions, subsidizing electric scooters.

There is also harmful waste that is produced by batteries used batteries that are harmful; it needs to find an alternative for the harmful waste.

In electric scooters, there are chances of getting malfunctioned or frauds. Government should be careful and introduce new policies protect the consumers assuring them of new this new technology.

Government should adopt various new strategies to popularize and increase the sales of electronic scooter.

CONCLUSION

Looking at the responses we got from the google forms we can say that one of many reasons people prefer electric scooters is the sustainability it promises. Even though people still prefer to continue using the traditional scooters the hesitation arises because of the high initial cost of the electric scooter. People also find the appearance of electric scooters attractive and believe it is comfortable to drive. More than 76.9% people are aware of the recent burndowns of the Ola Scooters. Due to the expensive pricing of the electric scooters, people still find the traditional Scooters to be the best. From the responses we can say that 64.1% people feel that there is a positive impact in the environment with the age of electric scooter. Thus, at the end we can conclude that electric scooter is great environment friendly option to traditional scooters, there should be subsidies provided by the government to manufactures to cut down cost of the vehicle so that an average consumer can be able to afford it.

REFERENCES


6. https://gemopai.com/blog/electric-scooter-vs-petrol-scooter-which-is-the-future-choice-of-scooters#:~:text=It%20is%20more%20economical%20to,which%20is%200.25%20rs%20Fkm


8. https://www.bikewale.com/honda-bikes/activa-6g/#:~:text=Honda%20Activa%206G%20is%20a%20torque%20of%208.79%20Nm
