

Customer perception on Green brands of two wheelers and four wheelers in the state of Andhra Pradesh

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Though since last two decades Electric Bikes have been around but the sales of these bikes have really increased in the last five years only. This cost effective E-Bikes offer accurate solution to transport and environmental pollution problems. This survey will investigate the influential factor of Customer Satisfaction of E-Bikes users at Guntur & Vijayawada district of Andhra Pradesh. The main aim of this project is to know the Satisfaction level of the existing customers of E-Bikes. This project discussed on many of the parameters like Price, insurance facility, after sales service, Brand loyalty, quality, pick-up, battery backup, comfort, performance, availability of spare parts and installment offer. We collected the opinions of the customers regarding the service of the vehicles too. For this study a structure questionnaire has been used through personal interview with the respondents. We used ranking method to reveal the influencing factors which influence customer satisfaction. Graphical representation was provided for that data.

E-Bike: The Concept & Origin

E-Bike is the short form for Electric Bike. Electric bike was developed in Switzerland in the year of 1980. It is a battery operated vehicle with low maintenance cost and very economical also. By the utilization of this vehicle the pollution is almost zero. It works on the main principle of converting electrical energy into the mechanical energy. Here in this an electric battery plays a vital role. The battery of the vehicle can be charged easily using a power connection. Now in the present market you will find various types of vehicles with varied technology. The cost of the vehicle will differ from one to another depending upon the technology used in that vehicle. An electric power-assist system may be added to almost any pedal cycle using chain drive, belt drive, hub motors or friction drive. The power levels of motors used are influenced by available legal categories and are often limited under 700 watts.

In E-bikes rechargeable batteries like lead acid, NiCd, NiMH and Li-ion are used. Electric motorized bikes can be power-on-demand, where the motor is activated by handlebar mounted throttle or a pedaled, also known as electric assist, where the electric motor is regulated by pedaling. These have a sensor to detect the pedaling speed, the pedaling force, or both. An electric controller provides assistance as a function of the sensor inputs, the vehicle speed and the required force. Most controllers also provide for manual adjustment.

Range or pick up is a key consideration with electric bikes. It is affected by various factors such as motor efficiency, battery capacity, efficiency of the driving electronics, aerodynamics, hills and weight of the bike and rider. The range of this bike is usually stated as somewhere between 7km to 70 km and is highly dependent on whether or not the bike is tested on flat roads or hills. Some manufacturers such as the Canadian BionX or American E+ have the option of using regenerative braking, the motor acts as a generator to slow the bike down prior to the brake pads engaging. This is useful for extending the range and the life of brake pads and wheel rims.

Objectives of the Study:

- To know the user's perception about the Electric Bikes.
- To find out the awareness of consumer about the Electric Bikes.
- To find out the reason why consumer prefers to E-Bikes.
- To find out the consumer preferences towards the E-Bikes.
- To find out the post purchase experience of E-Bikes.

Research Methodology:

This study is based on collection of information from primary sources.

Sample Unit: Users of Electric Bikes in Guntur and Vijayawada were used for sample unit in this study.

Survey Area: The localities of Guntur and Vijayawada districts of Andhra Pradesh were the survey areas for the study.

Sample Size: 200 samples were used for the study.

Sample characteristics: People from different Occupations and various age groups at Guntur and Vijayawada.

Questionnaire design: Based upon the Objectives of the study a set of questions both open ended and multiple choices were framed.

Reason for Developing E-Bikes:

Global warming is a major concern all around and to save environment, there are several policies, promises and pledges. With the ever increasing emission of greenhouse gases, there is an increased fear of environment pollution at every step. With modern technology and innovation, transportation and communication have undergone a paradigm shift. Along with this, we are also experiencing the negative effects of industrialisation in the form of global warming. Under these circumstances, when there are traffic jams, when you need to run an errand at an odd hour of the day, when you need to go to work place quickly, you stumble and fumble as there are so many vehicles emitting soot and Co2 polluting the air incessantly. With increased number of fossil-fuel dependent vehicles, they not only add to greater level of pollution but are also leading to depletion of fuel resources. It is here that automobile companies felt the need to innovate motorized vehicle that will get charged through electricity and will not be depending on fossil fuels.

This led to expansion of eco-friendly initiatives and many automobile manufacturing companies invested in R&D to bring forth electric bikes that will help people save a few bucks by reducing consumption of already spiraling fuel price, besides fighting global warming. Most electric bikes are emission-free bikes and this is the USP of the company's manufacturing them in these days of global warming. It will not add to urban pollution. The only thing required is to keep this bike charged with a battery. Electric bike manufacturing is considered as a grass root movement away from fossil fuels.

Definitely, electric bikes are not the only answer to our environment problem, but it will definitely help us to treat environment better. These electric bikes will not make pollution worse and that makes e-bikes environmentally safe vehicle. It can be charged with the help of inverter and generator too. In one charge, these electric bikes can go up to 50km and has no tail pipe emissions. It also makes no noise while under operation. The best part of electric vehicle is that they can be run with no registration and license.

Features of Electric Bikes and Scooters:

Electric bikes are light in weight, trendy, efficient and eco-friendly. These vehicles are the best alternative for the conventional two-wheelers. The awareness among the customers is rapidly increasing for last few years and the electric bike market has enhanced like anything. Have a look at the unavoidable advantages of E-Bikes:

License and registration is not required for E-Bikes:

Electric two wheelers run on re-chargeable battery and uses electricity as fuel in place of fuels.

Simple designs, light weight and economical E-Bikes are very low in running and maintenance cost.

With the ease of handling, Electric two wheelers saves the commuting time in congested roads specially in urban areas.

Electric vehicles are more efficient in terms of generating usable energy from their electric engine's battery in comparison to the regular fuel conversion. In this way, E-Bikes are innovative and are an efficient mode of personal transport.

Electric bikes use electricity, therefore there is no emission of harmful gases like Carbon dioxide (CO₂) or Nitrogen dioxide (NO₂).

Government Policies towards E-Bikes:

There are as yet no official figures on the number of electric vehicles sold in the country as the industry has begun to organize itself recently. In September-2010 the society of Manufacturers of Electric Vehicles was incorporated, and it estimates two-wheeler makers and importers sold about 1,00,000 units in 2009-2010 fiscal year. This is about one-tenth of the total scooters sold in India. In order to encourage this industry the government is supposed to give the subsidies to the electric vehicle manufacturers. The United States government announced \$7,500 rebate on every electric car and the United Kingdom has made a similar announcement with the aim of moving customers away from fossil fuel-run vehicle. As per the Union ministry of new and renewable energy (MNRE) it would provide Rs 95 Crore as subsidy to electric vehicles for the remaining part of the Eleventh five - year plan. The scheme, which came into effect from November 11th 2010, seeks to give incentives up to twenty percent on ex-factory price of the vehicle. Some state governments like Madhya

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Pradesh, Kerala, Gujarat and West Bengal reduced the Value added tax (VAT) from 12.5% to 4%. Delhi state government has initiated to give 15% rebate on the purchasing of the electric vehicles. Manufacturers registered with government will get the subsidy subject to a cap of Rs 4,000 for low - speed electric two - wheelers, Rs 5,000 for high speed electric two - wheelers and Rs One lakh for cars. With these movements, it is expected to jumpstart the industry that had been standing over the past years. Considering the various environmental factors and to boost up the sales of electric vehicles more, our Union government also has to announce the common rebate policy all over the nation.

Research Findings:

The major research findings are given below:

With reference to the table no 12, it is revealed that all the customers are satisfied with the price of the vehicles.

Customers are very much satisfied with availability of spare parts in the local market. (Reference to Table no-19)

Regarding the Service after sales also customers are highly satisfied with reference to table no-14.

With reference to table no 13, Customers are very comfortable with installment facility while purchasing the vehicle.

Table no-16 is indicating that customers are completely satisfied with the Quality of the existing vehicle.

Table no-17 is referring that customers are not satisfied with the pick-up of the E-Bikes.

Recommendation & Suggestions:

More Research and developments is are required to enhance the pick- up of the vehicles so that they may compete with the traditional ones.

Producers are suggested to come up with more developed batteries and their life time has to be enhanced.

Customers are not satisfied with the insurance policy of the companies, Only in the call of when the vehicle is last they will get the compensation. In the case of accidents or any other inshap they may not get any coverage. So the insurance coverage should be applicable for accidents also.

Limitations of the study:

The sample size for this study is only 200, it may not reflect the exact opinion of all the customers.

Though we framed a good questionnaire, due to the busy schedule of respondents they may not write the accurate information and some of the respondents didn't give the complete data.

Conclusion:

Consumer perception towards E-Bike is very good. The companies have to come up with more development technology. They have to improve the pick-up and the battery life of the vehicle. In order to reduce the mass transportation problems and the environmental pollution the government has to take measures to provide the Electric Bikes on subsidized prices. Even though government announced some package in eleventh Five year plan that budget is too small and to give more aid and support in various ways. Some of the State governments already reduced their Value Added Tax (VAT) from 12.5% to 4% in order to increase the sales and usage of the electric vehicles. From Union government side it is required to implement it all over the nation. The announced packages, rebates and subsidies are not enough to cope up with the things now what we have now. The majority of electrical vehicles in India are imported only, the import duty is only 14.7% but the levying duty on spares is 24.2%. So it is desired to reduce the taxes and duties on the spare parts of the electric vehicles. Then it will be more convenient for the buyers of electric vehicles to by them and with low maintenance cost. Even the bike producers have to come up with innovative ideas, not only the Electric Bikes but also to have aplan for the Electric Rickshaws and other vehicles. As a good citizen of India, it is all our responsibility to save the environment and exploring innovative ideas and bringing them into force.

References:

1. Kotler Philip, Marketing Management, Pearson Education Inc. 11thEdition
2. Consumer Behavior- Building Marketing Strategy 9th Edit on 2003, Tata Mc Graw Hill
3. Stanton William J, Etzel Michael J, Walker Bruce J, Fundamentals of Marketing- Mc Graw Hill International Singapore-1998