



## **A STUDY ON FACTORS INFLUENCING CONSUMER PERCEPTION TOWARDS ELECTRIC VEHICLES**

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### **Abstract**

*In olden days there is a harmony between men and nature. And all the living things could sustain peacefully without having any diseases. But now the situation has almost changed. We know that the man develops so many varieties of seeds and these seeds lack the ability to resist the pests. Today the men are also having low resistance power to counter the various atmospheric diseases. The present study focused on analysing the factors influencing the customer perception towards buying behaviour of e vehicles. The present focused on analysing consumer perception towards e vehicles in four areas such as buying motives, factors influencing purchase decision, factors influencing consumer satisfaction and problems and issues relating to the purchase of E vehicles.*

**Keywords: Consumer Perception, E Vehicle.**

### **Introduction**

Technology has its own way of emergence and it works hand in hand in the automobile industry. Everyday there is new technology and innovation comes as a result. Today automobile inventors are more likely to produce environment – friendly vehicles keeping in mind the reduction of fossil fuels. Probably they are looking for a renewable source of power for the vehicles. For these electric vehicles are a more suitable option as they are non-polluting and reliable in terms of linear performance. The performance of the electric vehicle is the main factor. Whereas, fuel vehicles have their own features and benefits. As fuel vehicles need little time to be powered, but electric vehicles need a long time to get charged.

### **Statement of the Problem**

Conventional vehicles are major cause of global warming and environmental air pollution. All types of vehicles produce dust from brakes, tires and road wear. The average diesel vehicle has worse effect on air quality than the average gasoline vehicle. Compared to conventional vehicles E-vehicles are more environment friendly and less costly. Therefore, it is important to study customer perception towards e-vehicles in this current scenario

### **Objectives of the Study**

The present study has the following objectives

1. To analyse the buying motives of respondents
2. To analyse the factors influencing purchase decision E-vehicles
3. To evaluate the customer satisfaction and problems in the use of E-vehicles

### **Scope of the Study**

The satisfaction of the consumer and maximization of profit is the prime motive of every business concern. The consumers taste and preferences vary from time to time. Hence the need for this study emerged in order to analyse the customer perception towards electric vehicles from the respondents who are having E vehicles.



### Research Methodology

In the project the sampling method used is convenience sampling. People using E-vehicle are located through normal enquiry and also the questionnaire were sent to the respondents through WhatsApp and social media platform. In this research, primary data were collected by using a structured questionnaire from respondents who are the current users of E-vehicles. Sample size for the present study 50 respondents were selected.

### Analysis of the Data

The collection of data were edited and consolidated using sample satisfied tools present in the form of tables and figures, chart and percentage analysis

### Data Analysis and Interpretation

For knowing the customer perception on Electric vehicles, the study made an attempt to analyse it to the following thrust areas

1. Consumer buying motives of E-vehicles
2. Factors influencing purchase decision E-vehicles
3. Factors influencing customer satisfaction and problems in using the E-vehicle

#### 1. Data analysis-Part One- Consumer Buying Motives

For knowing the awareness, the factors considered here are buying motives, sources of brand information and word of mouth publicity. The analysis revealed the following results

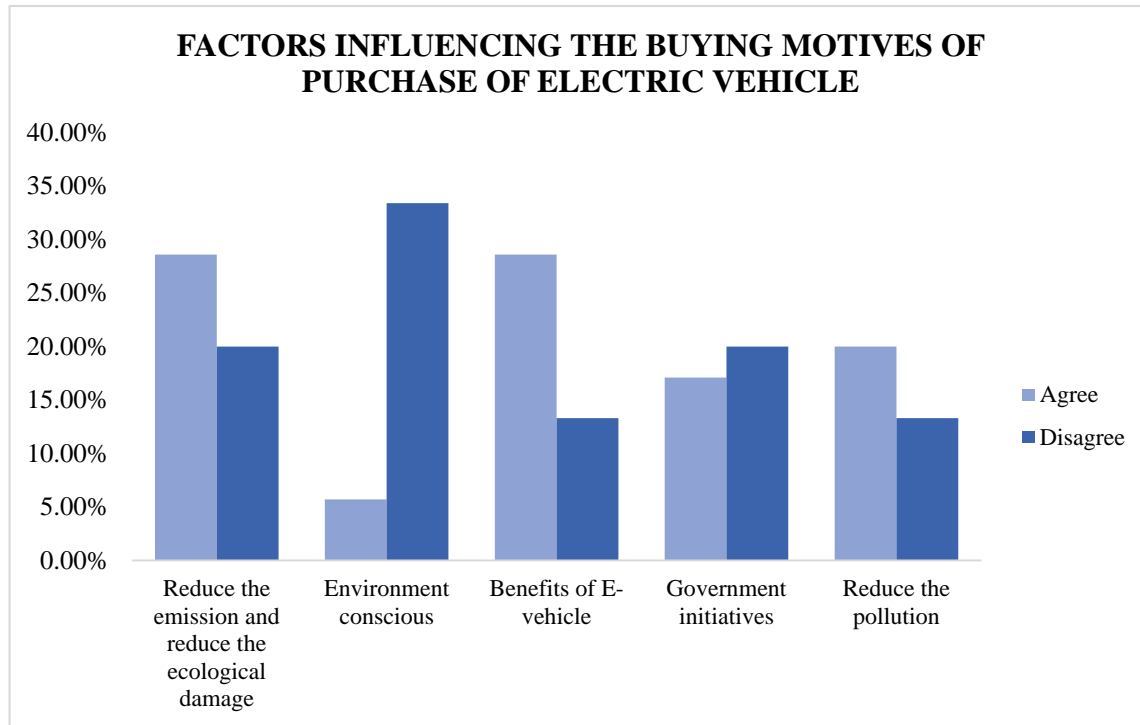
**Table No: 1,1Table showing factors influencing the buying motives of purchase of electric vehicle**

Factors	Agree	Percentage	Disagree	Percentage
Reduce the emission and reduce ecological damage	10	28.6%	3	20%
Environment conscious	2	5.7%	5	33.4%
Benefits of e-vehicles	10	28.6%	2	13.3%
Government initiatives	6	17.1%	3	20%
Reduce the pollution	7	20%	2	13.3%
Total	35	100%	15	100%

Source: Primary data



**Figure No: 4.8**



Source: primary data

**INTERPRETATION:** This table shows 28.6% of respondents agrees that the purchase of E-vehicles depends on the factor that it reduce the emission and reduce the ecological damages and 20% of respondent disagree with this statement.28.6% of respondent agrees that the purchase of E-vehicle depends on the benefits of E-vehicles and 13.3% of respondents disagree this statement.20% of respondent agrees to purchase it because it reduce pollution and 13.33% of respondents disagree it.17.1% respondent purchase it because of Government incentives and 20% of respondents disagree it.8.7% of respondent purchase it because of environment conscious and 33.4% of respondent disagree it. Therefore, from the above analysis majority of respondent agrees that the purchase of E-vehicle depends on the factor that it reduces the emission and reduce the ecological damage and majority of them disagree with the statement that it reduce pollution.

**2. Data analysis -Part Two -Factors Influencing the purchase of electric vehicles**

In this part the study made an attempt to analyse the factors influencing the purchase decision. The analysis revealed the following results

**2.1 Factors Influencing the Purchase of Electric Vehicles**

The below table shows the various factors influencing the purchase of electric vehicles analysed in respect of communication strategy, competitive pricing, good value added service and free trials and discount. The analysis shows the following results.

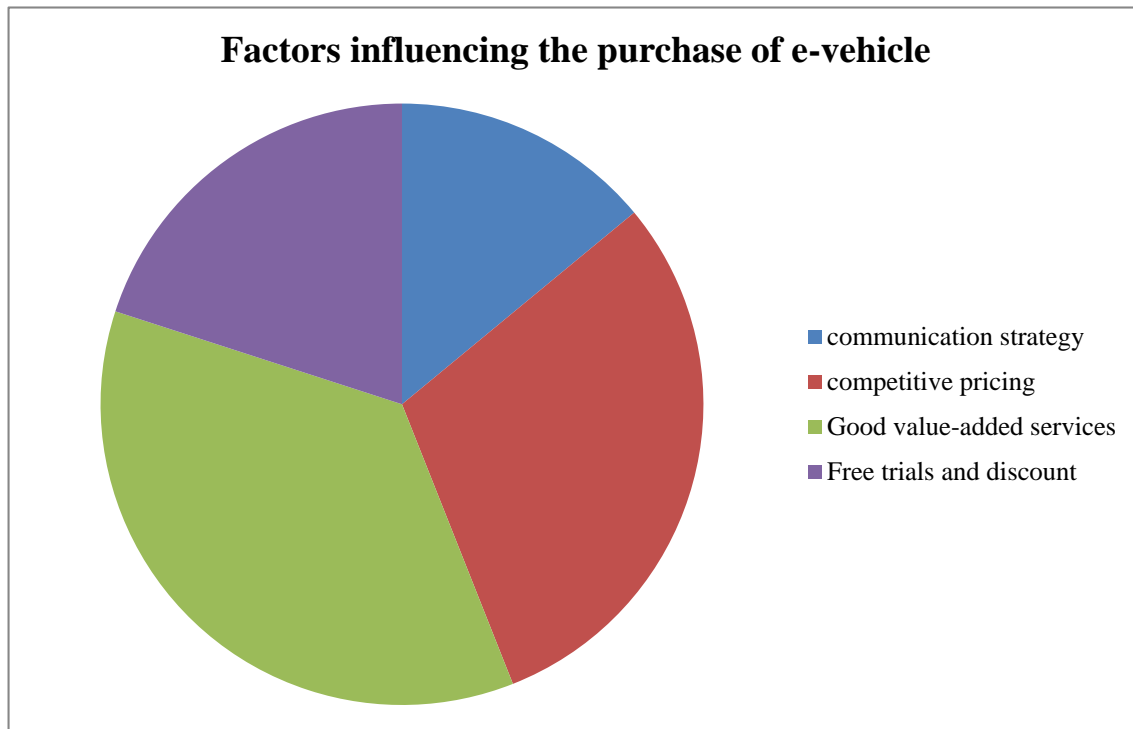


**Table No: 2.1**  
**Table Showing the Factors Influencing the Purchase of Electric Vehicles**

Factors	No of respondents	Percentage
Communication strategies	7	14%
Comparative pricing	15	30%
Good value-added services	18	36%
Free trials and discount	10	20%
<b>Total</b>	<b>50</b>	<b>100%</b>

Source: Primary data

**Figure No:4.9**



Source: primary data

INTERPRETATION: The above table shows that 36% of respondents said that the good value added services influence the purchase of E-vehicles. 30% respondents said that the competitive pricing influence the purchase of E-vehicles. 20% respondents said that the free trials and discount were influence them in the purchase of E-vehicles. 14% respondents says that the communication strategies influence the purchase of E-vehicles. Therefore the majority respondents says that the good value added service influence the purchase of E-vehicles.

### 3. Data Analysis -Three -Factors Influencing the Level of Satisfaction and Problems in the Use of Electric Vehicles

In this part the study made an attempt to analyse the factors influencing the level of satisfaction of features of electric vehicles. The analysis revealed the following results



### 3.1. Level of Satisfaction of Features of E- Vehicle

In the below table level of satisfaction of respondents in respect of features of e-vehicles was analysed by way of satisfied, highly satisfied and not satisfied. The analysed data shows the following results.

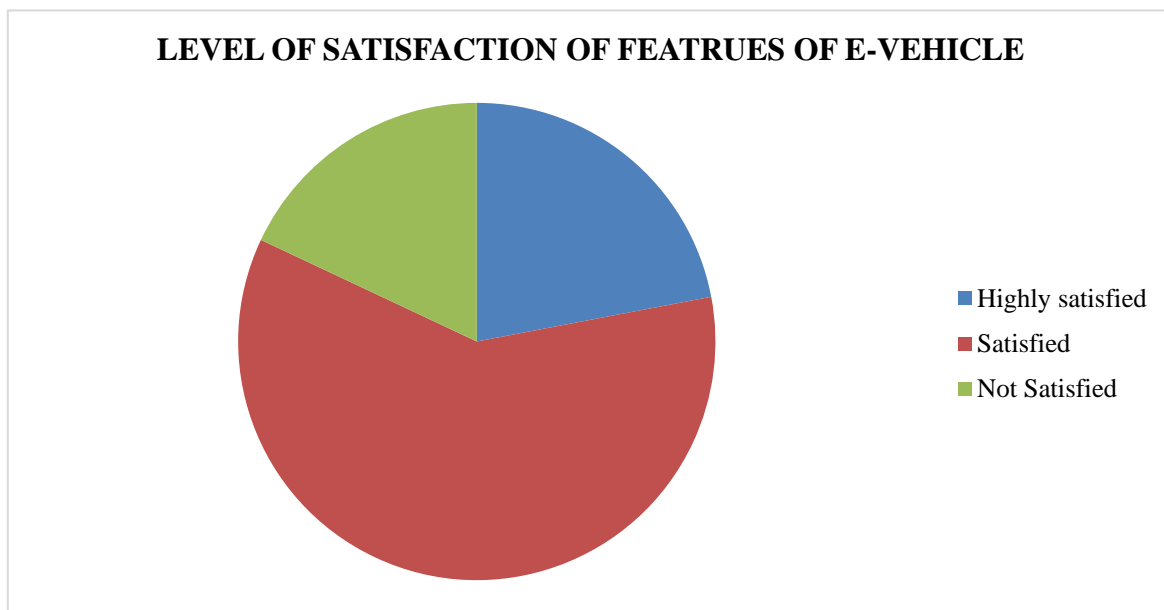
**Table No: 4.17**

**Table Showing Level of Satisfaction of Features of E-Vehicle**

Level of satisfaction	No of Satisfied	Percentage of satisfied
Highly satisfied	11	22%
Satisfied	30	60%
Not satisfied	9	18%
Total	50	100%

Source: Primary Data

**Figure No:4.17**



Source: Primary Data

INTERPRETATION: This table shows that 60% respondents were satisfied with the current features of the product. 22% respondents were highly satisfied with the current features of the product and 18% respondents were not satisfied with the current features of the product. Therefore majority of respondents were satisfied with the current features of the product.

### 3.2. Attractive Features of E-Vehicle

In this table attractive features of e-vehicle is analysed in respect of no fuel cost, safe to drive, low maintenance, more convenient, cost effective, battery life and cost and others. The data shows the following results.

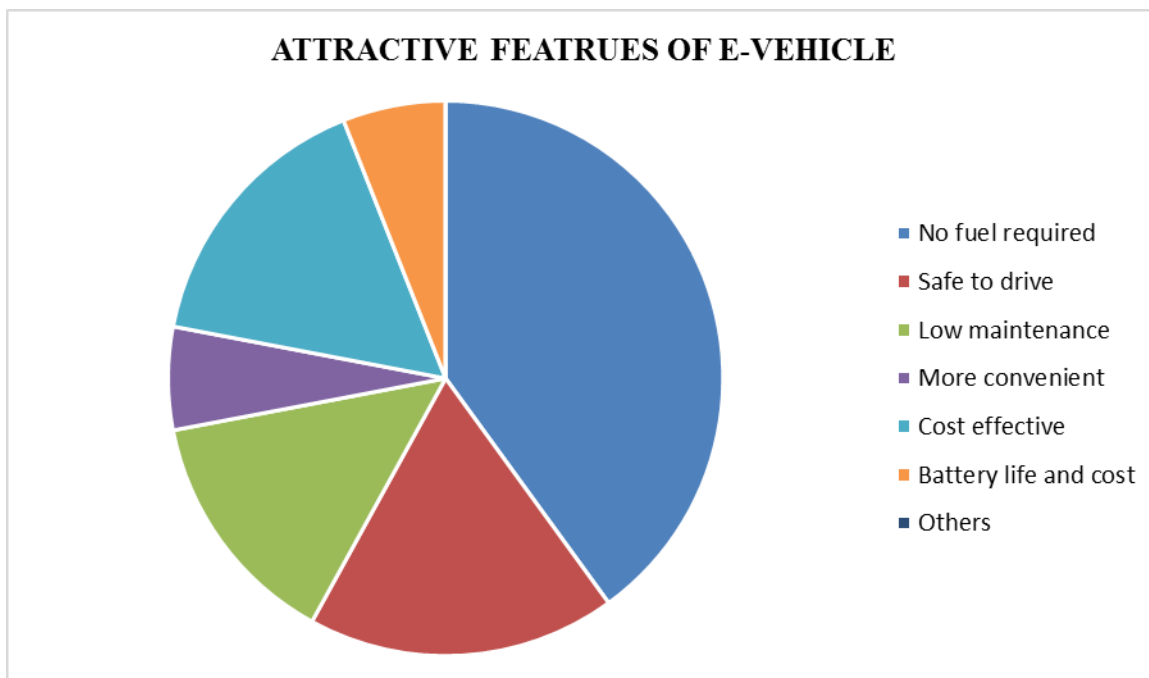


**Table No: 4.20, Table Showing the Attractive Features of E- Vehicle**

Features	No of respondents	Percentage
No fuel required	20	40%
Safe to drive	9	18%
Low maintenance	7	14%
More convenient	3	6%
Cost effective	8	16%
Battery life and cost	3	6%
Others	Nil	Nil
Total	50	100%

Source: Primary data

**Figure no:4.20**



Source: Primary Data

**Interpretation:** This table shows that 40% respondents said that the attractive feature of E-vehicle was no fuel require. 18% respondents said that the attractive feature of E-vehicle was safe to drive. 14% of respondents said that the attractive feature of E-vehicle had low maintenance. 6% respondents said that the attractive feature of E-vehicle was more convenient. 16% respondents said that the attractive feature of E-vehicle was cost effective. 6% respondents said that the attractive feature of E-vehicle battery life and cost and no other attractive features of e-vehicle were mentioned the by the respondents. Therefore majority of respondents said that the most attractive feature of E-vehicle is no fuel required.

### 3.3 Opinion Regarding the Electricity Consumption of E- Vehicle\_

In this table opinion of the respondents regarding the electricity consumption of e-vehicle is analyzed in respect of satisfied, highly satisfied, and not satisfied. The analysis of data shows the following results.



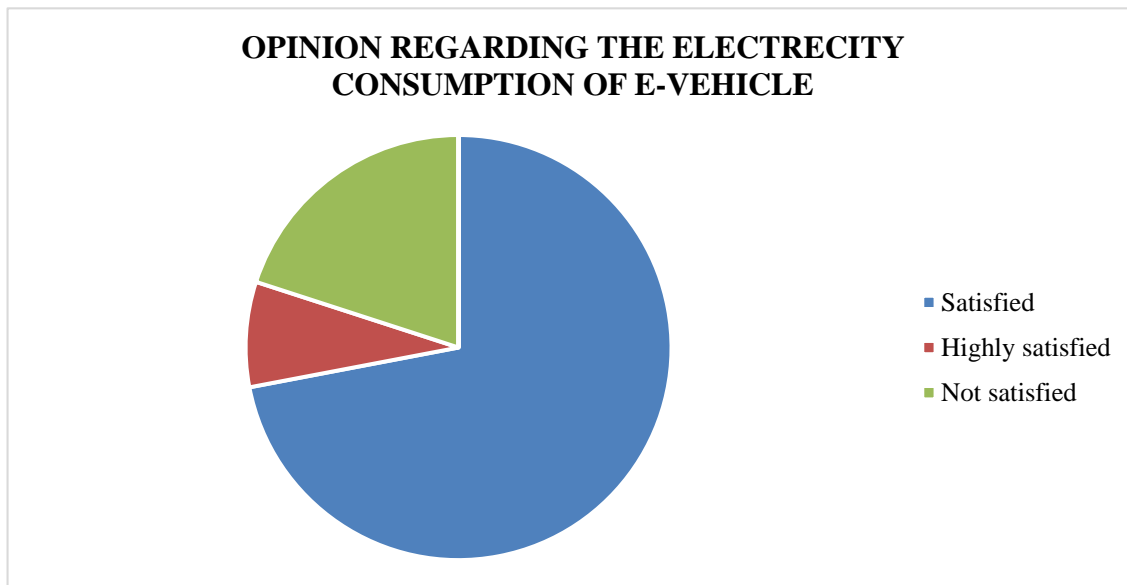
**Table No: 4.21**

**Table Showing the Opinion Regarding the Electrecity Consumption of E-Vehicle**

Facility	No of respondents	Percentage
Satisfied	36	72%
Highly satisfied	4	8%
Not satisfied	10	20%
Total	50	100%

Source: Primary data

**Figure No: 4.21**



Source: Primary Data

**Interpretation:** The table shows that 72% respondents were satisfied with the electricity consumption of E-vehicle. 8% respondents were highly satisfied with the electricity consumption of e-vehicle. 20% respondents were not satisfied with the electricity consumption of e-vehicle. Therefore, majority of respondents are satisfied with the electricity consumption of e-vehicle.

### 3.4 Opinion Regarding the Issues with E-Vehicle

In this table opinion of the respondents regarding the issues with e-vehicle is analyzed in respect having issues and not having issues. The data shows the following results.

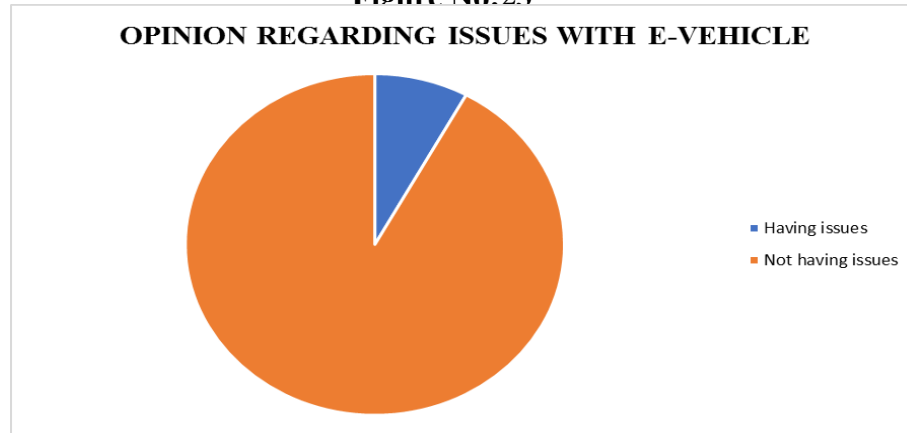
**Table No: 4.23, Table showing opinion regards the issues with e-vehicle**

Opinion	No of respondents	Percentage
Having issues	4	8%
Not having issues	46	92%
<b>Total</b>	<b>50</b>	<b>100%</b>

Source: Primary data



Figure No:23



Source: Primary Data

**Interpretation:** The above table shows that 8% respondents having issues with the e-vehicle. 92% respondents not having issues with the e-vehicle. Therefore majority of respondents having no issues with the e-vehicle.

### 3.5 Problems in Driving the E-Vehicle

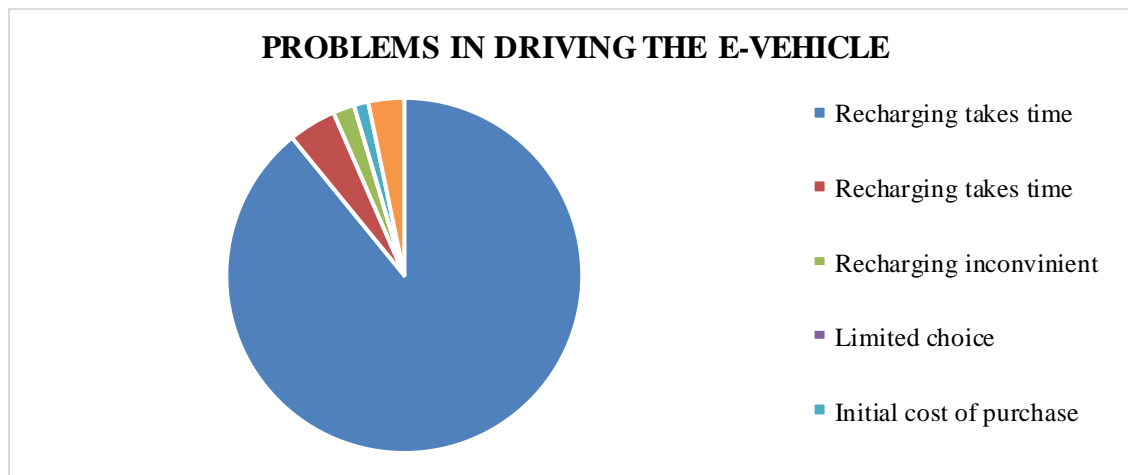
In this table problems of driving the e-vehicle was analysed in respect of recharging takes time, recharging inconvenient, limited choice, initial cost of purchase, unavailability of charging stations. The analysis of data shows the following results:

Table No: 4.24, Table Showing Problems in Driving the E-Vehicle

Problems	No of respondents	Percentage
Recharging takes time	20	40%
Recharging inconvenient	9	18%
Limited choice	Nil	Nil
Initial cost of purchase	6	12%
Unavailability of charging stations	15	30%
<b>Total</b>	<b>50</b>	<b>100%</b>

Source: Primary data

Figure no:4.24







### **Interpretation**

The above table shows that 40% respondents opined recharging takes time was the problem in driving the e-vehicle. 18% respondents opined that recharging inconvenience was the problem of driving the e-vehicle. No one opined that limited choice was a problem of driving an e-vehicle. 12% respondents opined that initial cost of purchase is the problem of driving the e-vehicle. 30% respondents opined that unavailability of charging stations was the problem of driving the e-vehicle. Therefore majority of respondents opined that recharging takes time was the problem of driving the e-vehicle.

### **Findings and recommendations of the study**

The intent of this report was to find out factors that influence consumer while purchasing vehicles and their perception towards an Electric Vehicle. Based on the survey conducted investigation and interpretation of the information gained during the assessment following findings are recorded. With regard to the analysis of buying motives, the most influential buying motives are reducing emission of fuels and ecological damage, The most important factor influencing the purchase decision was value added service of E vehicles. The most satisfying factor which influenced the customer to purchase the E vehicle was the no fuel consumption, while analysing the problems and issues relating to E vehicle was the recharging time of vehicles. The major suggestions put forward by the research are the companies should focus to add more features of the E vehicle and the companies should make initiative to make available the charging stations everywhere to reduce the time and the Govt should provide more subsidies and incentives for buying the product.

### **Conclusion**

The study is conducted to find out the level of customer perception towards Electric vehicle among the respondents in Kerala. The study revealed that most of the respondents are the satisfied users of electric vehicles. On the other hand, the main problem faced by the customers is recharging time of electric vehicle and unavailability of charging stations everywhere.

### **References**

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