



A Study on Consumer Buying Behaviour towards Electric Vehicles in Bagalkot

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Abstract

The Study undertaken for project is entitled by "A study on Consumer Buying Behavior towards EV'S in Bagalkot". As it's that there is a trend modulation in the automotive sector where it's a shift of conventional to EV's . As according to once preferences, the trends are being modulated according to the customer preferences. One of the main reasons for this change is rapid increase in the rate of fuel and increase in environmental pollution. The second comeback of the electric vehicle (EV) in little more than a decade has a much greater likelihood of success and will have a transformative effect on driving habits as well as the automotive and electric power industries. Automakers are planning to produce hundreds of thousands of vehicles per year. The purchase decisions are based on the factors that customer experience

internally and externally where they think twice before purchasing vehicle. As empirical findings are calculated using survey with 100 respondents in Bagalkot city. Primary data is collected through structured questionnaire interaction with the customers who wanted to purchase the EV'S in future. The secondary data is being collected through different websites and literature reviews which are published data. The study exhibit that Hero and Ather are two vehicle model that most of the respondents are aware and the factors that encourage them to buy EV are positive environment effect and new trends. This study reveals that most of the customers are in the age category of 36-45.

Keywords: Electric Vehicles, Consumer Buying Behaviour, Consumer Perception, Brands, Trends

Introduction

About Electric vehicle and its popularity in the market

Presented way back 100 years prior, electric cars have a steep rise in showcase due to its ubiquity today for numerous reasons as they were preferred popular vehicles. As there are two sort of vehicles mainly it's cross over, plug in half breed a hybrid, plug-in hybrid or all-electric, the appeal for electric drive vehicles will carry on to mount as prices drip and consumers look for ways to save money at the refuel stations. presently more than 3 percent of new vehicle sales, electric vehicles sales could to grow to nearly 7 percent or 6.6 million per annum worldwide by 2020. With this growing interest in electric vehicles, As taking a look at where this technology has been and where it's going. Travel back in time with us as we explore the history of the electric vehicles.

The birth of electric vehicle

It is difficult to pinpoint the innovation of electric vehicles. As it's a sequel of cracks from battery to electric engines which was done way back in 1800's, it was first breakthrough to run electric vehicle on road in prior portion of the before time where innovators from different parts of the countries like Netherland, Hungary, united states they began to create a shape to the small-scale electric vehicles which is battery powered. After the tiny changes over the vehicles the electric vehicles evolution started with the other innovators where one of the British innovators created first fuel electric vehicle. And the big break through happened in way back 1890 in united states where six passenger electric vehicle which is having the capacity to carry the people and travel with the speed of 14 miles per hour which is created by William Morrison from there it created an urge towards electrified vehicles. Over the next minimal period of time the electrified vehicles has been made their way to road in the form of taxis in 1900 with the minimal fleet of 60 in the New York, united states from their the rise in sales started to begin.

Natural resources provoke the interest in electric vehicle

According to forecast prediction upcoming years with the period of 20-30 years the advancement of technology as well as supply of crude oils which is necessary to the engines acts as the basic component to run cross hybrid vehicles using the fuel. Fully electrified cars an reduce the dependency over the fuel. When it comes to sales rate of electric vehicle the change in the rate of the sales towards electric vehicles has only one percent worldwide according to the study in the year 2016 where the exact 0.2 percent of vehicles were spotted on the road according to mckinsey which is known for management consultancy they predicted by 2030 the battery electric vehicle that is plugged in vehicles it takes a rise of 20% of yearly sales as customers are provoked towards electric vehicles due to its efficiency as well as performance the natural resource which acts as bridge between vehicles and customers the high rate of adoptability can be seen in the future days.

A recent set up for electric vehicles

While all the begins and blocks of the electric vehicle manufacturing in the subsequent half of the 20th century assisted the globe the real potential of the technology, the actual regeneration of the electric vehicle didn't take place until about the start of the 21st century. It was one of two events that ignited the fascination towards electric vehicles.

The initial twisting point is the introduction of the Toyota Prius. Available in Japan in 1997, the Prius became the globe's first bulk-produced hybrid electric vehicle. In 2000, the Prius was out internationally, and it became an immediate accomplishment with personalities, helping to boost the outline of the car. To make the Prius a reality, Toyota used a nickel metal hydride battery a technology that was supported by the Power Department's investigation. Since then, increasing gasoline values and rising concern about carbon smog have aided give rise to the Prius the best-selling hybrid worldwide during the past decade. Prior to Toyota, Honda has released its first hybrid electric vehicle since 1900 in united states.

The other occasion that assisted redesign electric vehicles was the declaration in 2006 that a small Silicon Valley start-up, Tesla Motors, would begin making a comfort electric sports car that could go more than 200 miles on a specific charge. In 2010, Tesla obtained at \$465 million loan from the Department of Power's Loan Programs Office a loan that Tesla reimbursed a full nine years early to establish a production facility in California. In the sharp time since then, Tesla has gained wide praise for its cars and has become the biggest auto manufacturing employer in California.

Tesla's proclamation and consequent achievement provoked many big auto makers to speed up work on their own electric vehicles. In late 2010, the Chevy Volt and the Nissan LEAF were announced in the U.S. marketplace. The early commercial accessible plug-in hybrid, the Volt has a gasoline engine that complements its electric drive once the battery is drained, permitting consumers to drive on electric for most journeys and gasoline to expand the vehicle's variety. In difference, the LEAF is an all-electric vehicle (frequently called a battery-electric vehicle, an electric vehicle or just an EV for little), indicating it is only run by an electric engine.

An outline for mass production of electric vehicles in India

India is a one of the largest manufacturers of automotive products worldwide and has a unique innovation towards the automation on vehicles. As part of innovation the India is setting up new trend in the field of electrifying the vehicles which could reduce the dependency on combustion vehicle as combustion vehicles tend to require more fuel which could impact on environment as combustion vehicle has aggressive response in the form high emission which results in carbon dioxide smog in the environment. One more impact on consumers is fluctuation in the price of petrol and diesel which has bad impacts on combustion vehicles now a days. According to experts in next 10-15 years the electrified vehicles tend to create havoc in the automotive market which can create more employment opportunities and improvisation in the technology which clears the path towards generation of new technical aspects implementing in the vehicles

to give the better efficiency to the vehicle. As of now the electric vehicles on road can be seen few in numbers as the perception, beliefs and values of the customers hold them to purchase electrified vehicles. Now a days the trend is changing, and customers are preferring the electric vehicle due its contribution towards nature as well as technology. Enhanced EV implementation will impact more and various natural resources, as well as various industries, diverse geographies, and levels of carbon discharges. Indeed, environmental worries figure sharply in most customers' choices to purchase an EV. Wanting to help the environment was the number-one given reason (by a considerable margin).

Buyer Behaviour Towards EVs in India

For many of the people, Buying Two-wheeler which is a slack process as the consumers take into consideration where many factors influence internally and externally which affects on decision of buying. Particularly in India, the buying process involves complex decisions where consumers face difficulty in gathering the information. According to market research stake holders for purchasing two wheelers are Females where they are more concerned about the attributes like efficiency, safety and affordability whereas male purchaser overview on performance, aesthetics (Interiors and style), and specifications. Also, generally, male purchaser are more concerned and have that tendency towards Electric vehicles.

When buyers think of shifting to electric vehicles, the viability of the automobile sector is majorly affect by elements like incentives on disposing used vehicles, usefull and effective government policies, and decreasing the rate of GST. Purchasers has strong belief that Ev producers need to inculcate and take the responsibility towards approach system in the market. Consumers are very curious to know that if they shift to Ev what is the total fuel cost they are saving. If the producers of Ev can forecast long term fuel saving, then they can acquire mass number of buyers easily where they can have that strong gut feeling to the producers that the buying decision of vehicles will be in the favor for Ev. The today's generation is lead by unceasing, innovative and has concern towards environment preservation for long term benefits. Ev are basically green technology which does not affect the nature where most of the consumers are more likely to be a environmental ambassadors for green conservation. Thus, on an average the availability of these emission free vehicles, spares and battery also affects the consumer mindset in a bigger section. Most of the studies shows that consumers are very passionate about converting to vehicles with zero rate of emission.

Consumers' Behaviour Post Covid-19

Consumer behaviour towards electric vehicle has been changing the world after the pandemic. As to safeguard themselves from the novel coronavirus the use of public transport which includes Buses, Cabs, Metro and Auto rickshaws. As the level of fear towards coronavirus which changed the preference levels of consumer from public to private mode of transportation. The Present Tendency towards Ev Industry specifically for customers who are dependent on Two-wheeler vehicle to travel for precise amount of distance within city which includes the customers like Food Delivery, Students and other service-based

Industries as a tool for labour force. As it's a secured and more cost-efficient mode of Ride, the Ev sector is future trend which secured the future market to create a Evolution in automobile sector. People are more concerned towards their health and families health during the pandemic where they tend to avoid congested transportation, even now people tend to believe that Ev are the efficient vehicle for city purpose to fulfill the required needs like supplying Medicines and Food.

Reviewed Papers

Lingzi Jin, Peter Slowik (2017), in the article "Electric vehicles consumer awareness" published in the journal "The international council on clean transport". The objectives of this review aimed to systematically identify that to know what extent the consumers are aware about electric vehicles and to know the initiations taken by the government to promote the electric vehicle to the market. which are basically beneficiary for nature which reduces the dependence on oil. Most of the consumer doesn't know the actual benefits from electric vehicles. To create awareness among the customers the government has taken some of remedial measures to create recognition programs on electric vehicles. As initial development the electric vehicles failed to impress the consumers and also sales declined due to different abstracts, and it's been a big break for the vehicles to get more exposure in the market as its seen that the number of vehicles increased in number during the year 2010 was 5,00,000 and in the year 2016 the rate of vehicles increased to 7,50,000 this is where its being increased enormously to reach millions. When it is compared with early market growth. The awareness programs tend to create more impact on consumers as they tend to give more attention towards the things that are being given information that the consumers are unaware. Basically, in awareness programs the government take initiation to give product information with the help of tourism, subsidies, tax exemptions for buying electric vehicles by initiating these types of local programs by government. A Likert 7-point scale was opted for the pre-test questionnaire, based on response where given options vary from 1 for strongly disagree to 7 for strongly agree. 120 questionnaires were distributed, and 114 questionnaires were Gathered. To make the research results more reliable, for accurate analysis of a project the test were conducted on the pre-test questionnaire to remove fluctuate questions and to establish the relative and distinct of the questions. In this study, Cronbach's software was used to evaluate the constant frequency between the questionnaires of respondents and dimensions, in order to test the reliable of the scale. The outcome of this reviewed study is how government takes initiation to promote electric vehicles to reduce the use of fossil fuels usage which has impact on environment and the efforts which are being taken by the officials to help the consumers to buy the electric vehicles and expand the market.

Mr Nattpon Dolcharumanee (2018), in the article "Factors Affecting the Decision for Purchasing Electric Vehicles" Published in the "Bangkok University" The objectives of this reviewed article helps to know the various factors like price, availability, service after sales, view of the vehicle, charging outlets, efficiency of the battery used, plug in and non-plug-in charging vehicles which affects the decision of purchasing electric vehicle. In an electric vehicle (EV), a battery which acts as a storage of energy for the vehicle where it need

recharge after certain duration in the charging outlets as in EV. The vehicles are of two types one with charging facility and another one with onboard plug-in facility which is located in the tail of the vehicle in this situation the choice of selecting the vehicles depends on the basis of needs here the needs of individuals changes from person to persons with quality which involves day today exercise, values, and beliefs these play an important role for purchase decision. Questionnaire has been collected from 400 respondents based on buying decision and government policies where they have used binary Logitech software to analyse the data. The outcome from this study will be based on consumer behaviour towards buying decision and government policies which affects factors like price, availability, infrastructure of refuel station.

Mrinal Pandey, Midhun Mohan, Dr.K.Subha (2021), in the article “Customer Perception Towards Purchase Intention” published in the “Journal of Emerging Technologies and Innovative Research (JETIR)” The objectives of this journal is to know the buying intension of the customers and to know what affects the intension of buying the electric vehicle according to their view on EVs and to know the impact towards purchase decision as benefits towards environment. As it’s known that the automobile sector has been changing dynamically due to change and shift towards usage of resources accordingly by using renewable energy as a key factor. Purchase intension will depend upon the reasons like Risk, Innovativeness, Cost Incurred, Environmental benefits etc. Even the Government has taken an forward step to initiate the electric vehicle by giving deadlines to vehicle users. The main reason for this is to reduce combustion vehicles on road. during this study the data was fetched from the primary sources and 150 questionnaires were framed for the capable customers from those 102 responses have been received to interpret the data here to analyse the data Cronbach’s alpha is used to know increased parallel sequence for the questions. The conclusion drawn from this journal is as most of the customers depend on the aspects like schemes from government to purchase the vehicle, charging outlet if its plug-in vehicle and to look after the risk and the cost incurred to repair the vehicle. People who are looking for innovative things has tendency to purchase the electric vehicle and they will be the early adopters.

Gabriel Pedrosa and Helena Nobre (2019) article named “The influence of consumer mobility concerns on electric vehicle adoption” was published in the journal “world review of intermodal Transportation Research”. As from past decades the users are always stick on to the only vehicle who have comfort riding as compared to electric vehicles as electric vehicles are complicate to operate and drive as compared to fuel vehicles. The main issue with drivers now a days when compared with stock vehicles electric vehicles are difficult to adopt in day-to-day life. In this study to adopt EV Mobility affects 3 factors such as type of charger, stock vehicle availability, support systems. In this reviewed paper in depth interview method is used to take feedback from the drivers to gain the in deep information regarding the study as its qualitative type of research where the feeds are collected by telephonic conversation. The outcomes from this study are to adopt electric vehicle in substitute with stock vehicles is difficult that in the comfort perspective of the customers due to its features and challenges on the road conditions.

Craig Morton (2011) article named “Electric Vehicles: Will Consumers get charged up?” Published in the conference paper. The objectives of this reviewed conference paper is to know consumer purchase intentions based on the evolution of the market from stock to electric. changes in The environmental situations which is caused by vehicles is depend on the contribution of carbon dioxide to the environment where in future days the dependency on the fuel vehicles will reduce on the basis of evolution of electric vehicles in the market. As the start-up in the market it’s difficult for the consumer to accept it the main motive of electrifying the vehicles to the market is to reduce the carbon target to the environment to stop further effects to the nature by implementing the EV to the market. As here the main challenge is to know consumer pre-judgement on these types of vehicles its important when customers are willing to buy on the basis of their technology with technical performance. The outcomes from this conference paper is that to adopt innovative product its difficult for the consumers where they think twice to take the buying decisions on their pre-instinct’s around them.

Aakarsh Ram (2020) article named as “consumer behaviour towards electric vehicles” published in the journal “international journal for research” the objectives of this viewed study is to know that consumer awareness towards electric vehicles in the market and to understand wheather they spend money to buy. when customers wants to buy vehicles, they are influenced by their family members. But to reduce environment pollution government launching BS6 vehicles to market to reduce the percentage of carbon dioxide emission, but it can be replaced by electric vehicle that depends on the buyers. The study reflects that people are more worried about its long durability feature such small range as people in India love travelling in their own vehicles and the safety of the car as it runs on a battery which is quite new for the people and its durability. The factors that influence customers in purchasing of electric vehicles are not only about the design and development of electric vehicles that suits customer demands. This study has adopted descriptive and exploratory research method to collect the information and survey method is used to gather the feedbacks from respondents from 60 people and its done based on demographic aspects like Gender, Age, qualification, income of the respondents. The outcomes from this reviewed study consumer behaviour is not only affected by internal factors but also from external sources also where buying of electric vehicles is mainly dependent on durability, safety and long duration battery in the vehicle.

Nagraj Navalgund and Gurudas Nulkar (2020) Article named as factors influencing purchase intension towards E-Vehicles among the potential Indian consumer- A study on Karnataka Region published in the Paper “Journal of Social Sciences” The Objectives of this reviewed study is to know the EV adoption in the state of Karnataka and to know consumer behavioural and attitudinal factors towards E-mobility. There is a serious problem of neglecting natural environment which is predictably grave proposal for pollutions of all forms and disasters of natural resources are abound. In the wake of this, there is an increasing concern for the environment and the adoption of accountable behaviour among consumers to address the devaluation of the environment. This present study is an strive to understand the basic attitudinal and behavioural factors influencing the consumer adoption of electric-vehicles (E-mobility) in the state of Karnataka. As due

to concern towards environment it's an deluge for consumer to transverse the alternatives for the purpose of transportation in this study structured questionnaires were framed to gather the information from the customers and the total sample frame was 400 and they have used 5 Likert scale rating method in the questionnaire and 384 were gathered for data analysis. The outcomes from this study are consumer behaviour which impact on buying intension are basically based on motives and alternatives of consumer where factors like attitude towards price, which is negligible to buy the vehicle, which doesn't cost much in the market.

Bireswar Dutta and Hsin -Ginn Hwang 2021 Article named "consumer purchase intensions of green electric vehicles: the influence of consumers technological and environmental consideration" published in the journal "Multidisciplinary digital publishing institute" the objectives this reviewed research paper is to know the influences that affect the purchase intension like technology and environmental factors which acts as a drive force towards the purchase of EVs. Other than the factors like purchasing price, charging facility and maintenance of the battery. The purpose of the study is to explore barriers that affects consumers intention to adopt feasible electric vehicles (EV) based on the theory of planned behaviour model. to analyse the research model, using 262 valid responses. The findings of the study explored how attitude, subjective norm, and perceived behavioural control significantly influenced users' feasible consumption intentions. The outcomes from this reviewed research paper is that most of the purchaser wants to buy green vehicles but the influences like technology, price, infrastructure which will be main impact on individuals which will be the abstract for the buyers.

Ankita Nagpal (2020) Article titled "Consumer's perception towards electric vehicles" published in the article "Psychology and Education" Analysing the important and key factors which affect consumers' the purchasing intention of consumer and their actual purchasing behaviour with respect electric vehicles as a substantial percentage of the demand for oil and gas comes from the vehicle owners (For Indian Cities) the main factors affecting the adoption of electrical vehicles are acquirement cost, operational cost, maintenance cost, vehicle range, charging infrastructure usually individual behaviour is affected by three things behaviour attitude which is a assessment of individual how the impact of EV on them in positive or negative on electric vehicles whether its eco-friendly or cost effective, subjective norms basically express the level to which an individual might perform a particular action under some influence. It could be due to their friends, family, media, service providers, celebrities in some cases, perceived behaviour control Perceived behaviour control represents the individual's perception of the difficulty of performing certain behaviour. It basically refers to the perception of people regarding their ability to perform a given behaviour. This is influenced by the resources and opportunities; the more resources and the opportunities an individual has, the stronger the perceived behaviour will be. The Questionnaires were framed for metropolitan city people using 5 Likert scale and the analysis was done in SPSS software. The outcomes from this reviewed study is to know how individual react in certain situations when it comes to buying of

electrical vehicles. Electric vehicles have attracted the attention of India's policy makers as clean technology.

Gurudath M.N and Dr Meena rani (2021) Article titled as "Consumer Purchase intension Towards electric vehicle" published in the journal "Pal Arch's" The objective of this reviewed study is to know the purchase intension and behaviour towards electric vehicles when scarcity of oil and resources are decreased and to know the potential customers buying the vehicles. The opportunities for India's mobility future are massive. As an oil import dependent country, the energy scarcity is another challenge. Electric vehicle is a new way of transportation having no air, noise pollution and an environmentally friendly way to commute. Contemporary environmental concerns are thrusting the manufacturing and sales of Electric vehicles. The purpose of this paper is to explore the role of performance features, financial benefits, environmental concerns, social influence, cost of ownership and infrastructure support on purchase intention of Indian consumers towards Electric Vehicles The study focuses on exploring purchase intentions with key marketing factor influencing buying decision of Electric Vehicles. The outcome from this study are adopting new technology which is evolution in the history of automobile which reduces the emission rate as well as noise pollution which will be environment friendly.

Problem Statement

A few studies have been conducted on Consumer Behaviour towards Electric vehicles. The research is based on consumer behaviour in Bagalkot. In this research attempt is made to examine the Consumer Behaviour towards electric vehicles. Due to evolution in the sector of automobile it is seen that the shift of consumers from conventional to non-conventional type of vehicle which is very necessary for the next generation due to aspects like emission and decreased in rate of resources which is being a main impact on consumers today. The overall project on consumer behaviour was done in Bagalkot, hence A study on consumer behaviour and purchase intensions towards EV in Bagalkot city is carried out.

Objectives of the study

- To study the awareness about electric vehicles in Bagalkot.
- To know the factors influencing customers to purchase electric vehicles
- To know the factors affecting customers to purchase electric vehicle.
- To study customer mobility towards Electric Vehicles.

Research Methodology

➤ **Type of Research: Descriptive research**

The study is purely descriptive as the problem statement has been identified to describe the problem areas in the project

➤ **Source of data:**

Primary data: where first-hand information is collected through structured questionnaire

Secondary data: where the research information is fetched from the different sources like journals, articles, and conference papers. To study the consumer buying behaviour towards electric vehicles

➤ **Sample plan:**

Sample frame: Bagalkot

Sample unit: Youths and adults

Sample method: Convenience sampling

Sample size: 100

➤ **Tools for analysis:** SPSS

➤ **Mode of collection data:** Survey (Questionnaires)

➤ **VARIABLES**

➤ 1. Awareness

➤ 2. Brand

➤ 3. Sources of information regarding vehicle

➤ 4. Price

➤ 5. Quality

➤ 6. Availability

➤ 7. Service station



Scope of the study

The scope of the study is to know the “Consumer buying behaviour towards electric vehicles in Bagalkot”, here in this study it mainly focuses on consumer awareness, factors influencing purchasing of the electric vehicles and adoption of electric vehicles instead of stock vehicles. Electric vehicles (EV) are the future, not only for transportation but also Electric Vehicles which could save energy and protect environment which is an important part of strong smart grid and will be the trend of automotive industry in the future. This study further helps the electric vehicle dealers whether to establish the outlet in Bagalkot city in upcoming days and also this study helps to know the adoption rate as compared to combustion vehicles in day-to-day life of the customers.

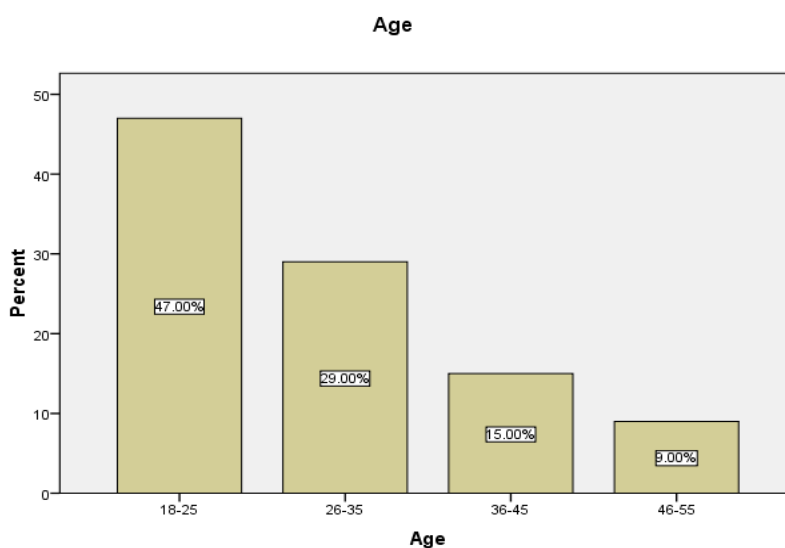
Limitations of the study

The output of this Project is applicable only to Bagalkot population. The customers responses are not accurate as they are biased. Customers doesn't want to spend their quality of time spending to answer the questionnaire.

Results and Analysis

1. Age

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	47	47.0	47.0	47.0
	26-35	29	29.0	29.0	76.0
	36-45	15	15.0	15.0	91.0
	46-55	9	9.0	9.0	100.0
	Total	100	100.0	100.0	



Analysis

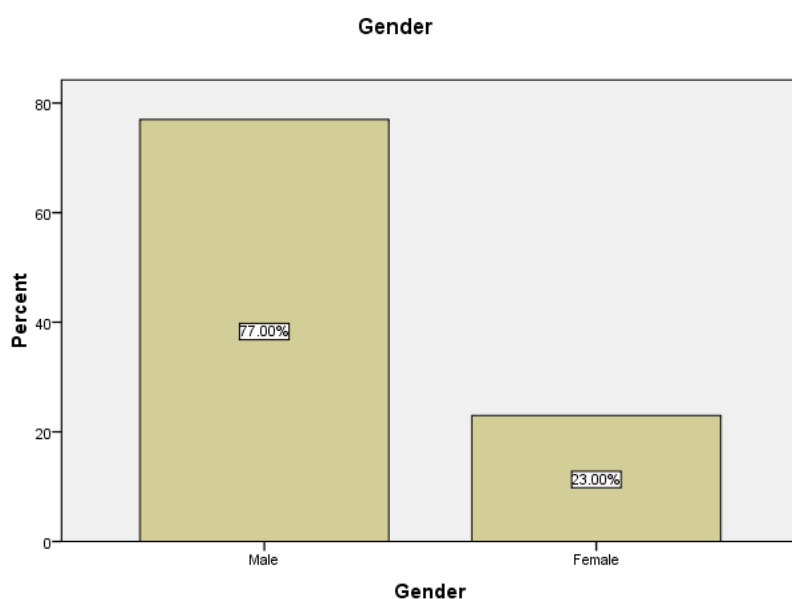
The above graph shows that different age intervals from 18-55 where 18-25 have 47% of respondents, 26-35 have 29% of respondents, 36-45 have 15% of respondents and 46-55 have 9% of respondents.

Interpretation

From the above analysis it can be inferred that, majority of the respondents are between the age group of 18-25 years, followed by 26-35 years group, as they are the most in numbers compared to the upper age groups.

2. Gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	77	77.0	77.0	77.0
	Female	23	23.0	23.0	100.0
	Total	100	100.0	100.0	



Analysis

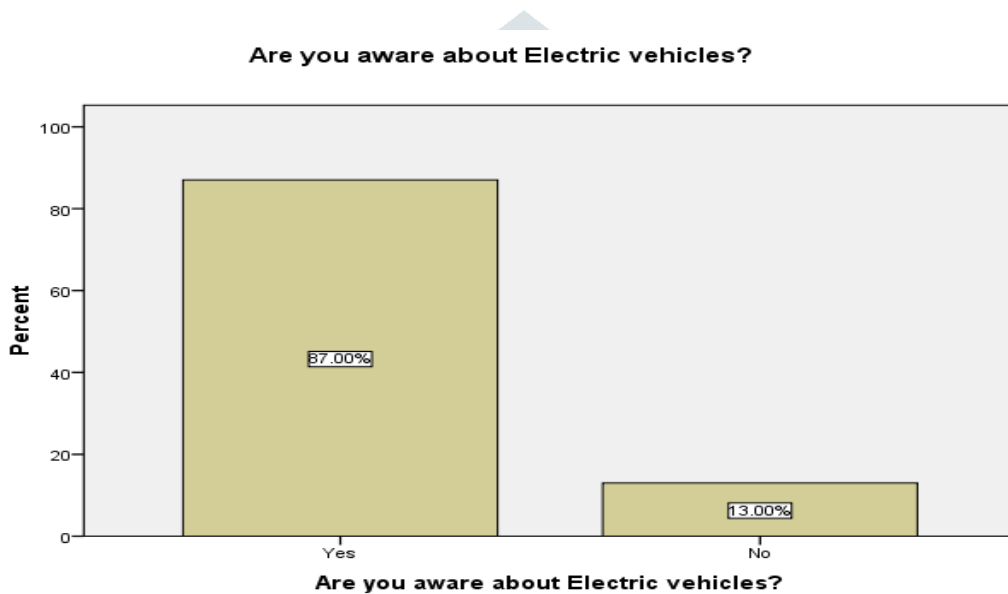
The above graph shows information regarding gender where 77% of respondents are male and 23% of respondents are female.

Interpretation

From the above analysis it can be inferred that, majority of the respondents are male and remaining quarter of the numbers are females. The reason for this might be, today's generation are most users of the two wheelers.

3. Are you aware about Electric vehicles?

Are you aware about Electric vehicles?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	87	87.0	87.0	87.0
	No	13	13.0	13.0	100.0
	Total	100	100.0	100.0	



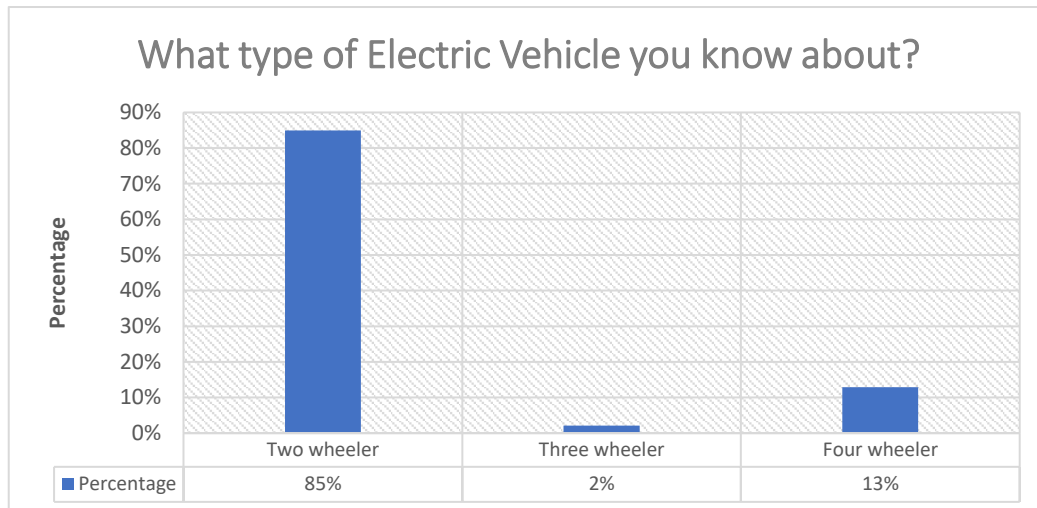
Analysis

The above graph shows that, among 100 respondents, 87% of the respondents are aware about electric vehicles and 13% of respondents are unaware about the electric vehicles.

Interpretation

The majority of respondents are aware about electric vehicles as it is because of advertising strategies used by the companies where they are conducting a events like Auto expos and initiations taken by the government to launch the electric vehicle into the market. The government providing special discounts and offers for the people who purchases the electric vehicle which enhances the sales of electric vehicles. Whereas very few of the respondents are unaware about EVs as it maybe they are not interested in automotive industry and they are not aware about recent developments made in automotive industry.

4. What type of Electric Vehicle you know about?



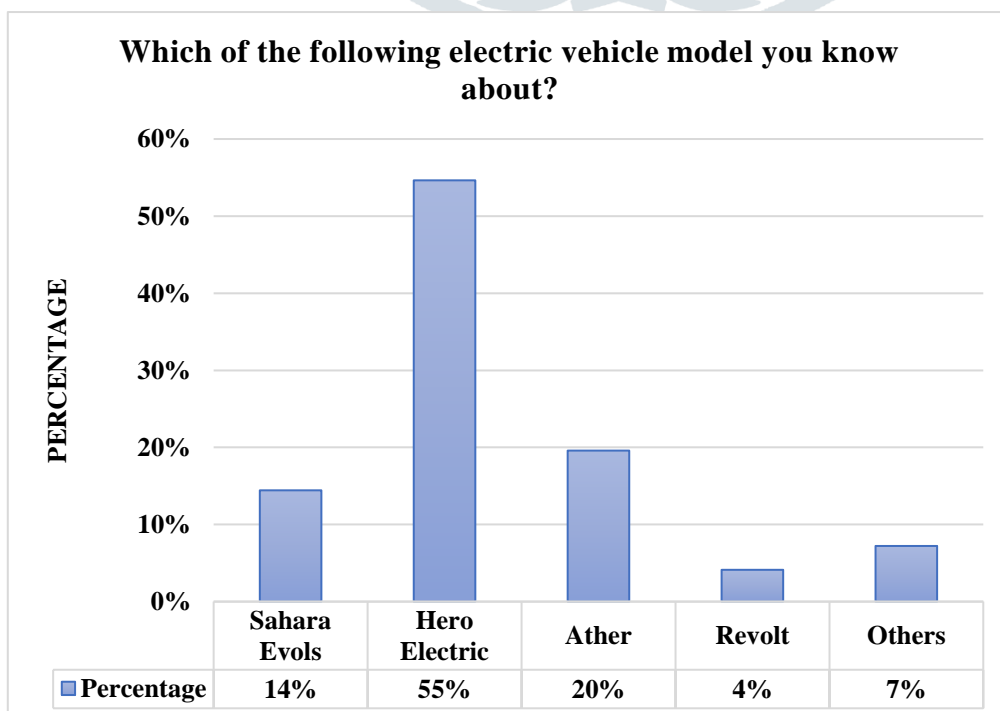
Analysis

Among 87 respondents, 85% of the respondents have opted for two-wheeler, 13% of people have chosen four-wheeler and 2% are known about three-wheeler.

Interpretation

The predominance of people are known about two-wheeler as it may be there are enormous level of ev outlets all over the urban cities and the promotional activities organised by the two wheeler companies to attract the customers where the customers are more vulnerable to the two wheelers now a days which is an easy mode of transportation.

5. Which of the following electric vehicle model you know about?



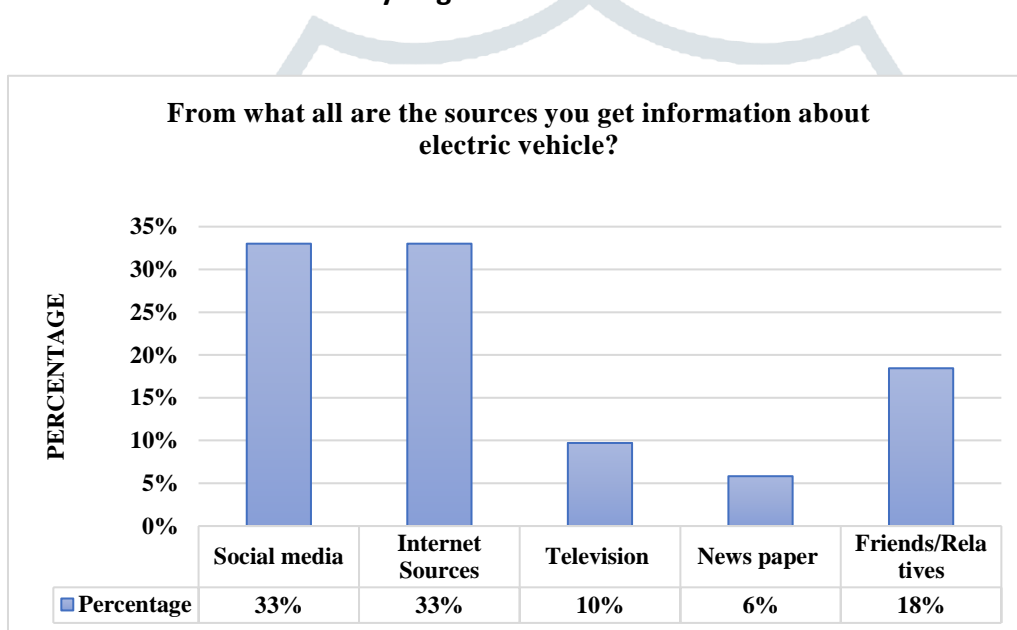
Analysis

The above graph shows among 87% of the respondents, 55% of respondents are known about Hero electric,20% of respondents known about ather,14% of respondents known about Sahara evols,4% of respondents known about revolt and 7% of respondents have chosen another brand EV.

Interpretation

Majority of people having a knowledge about Hero electric vehicle model where the purchase intension towards the model will be high when it is compared to other company ev models. To purchase vehicle customers always prefer models which is having an effective positioning in the minds of the customers where their tendency of buying vehicle depends on the brand and models offered by the company.

6. From what all are the sources you get information about electric vehicle?



Analysis

The above graph indicates among 87 respondents, 33% of respondents get information through social media,33% of respondents gather information through Internet sources,18% of respondents will get information from Friends and relatives,10% of respondents get information from Television and 6% of respondents will get information from newspaper.

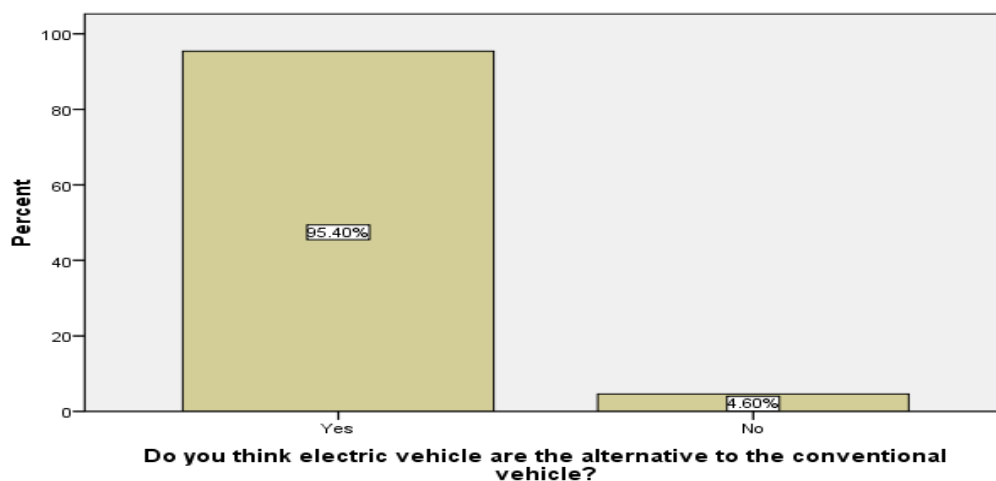
Interpretation

The greater number of respondents get information from internet sources and social media as it may be respondents are more attached to these sources now a days to connect more people, which is an accessible tool for the companies to promote the vehicles through these types of media which enhances company network by connecting large number of people around the world. These media sources which bound the people under one roof i.e Internet where it grabs the attention of people to react to the ads by taking purchase decision of vehicles.

7. Do you think electric vehicle are the alternative to the conventional vehicle?

Do you think electric vehicle are the alternative to the conventional vehicle?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	83	83.0	95.4	95.4
	No	4	4.0	4.6	100.0
	Total	87	87.0	100.0	
Missing	System	13	13.0		
Total		100	100.0		

Do you think electric vehicle are the alternative to the conventional vehicle?



Analysis

The above graph replicates among 87% of respondents, 95.4% i.e. (83) of respondents think that EV are alternative for conventional vehicles and 4.6% i.e. (4) of respondents replies to EVs are not Alternative solution for Conventional vehicle.

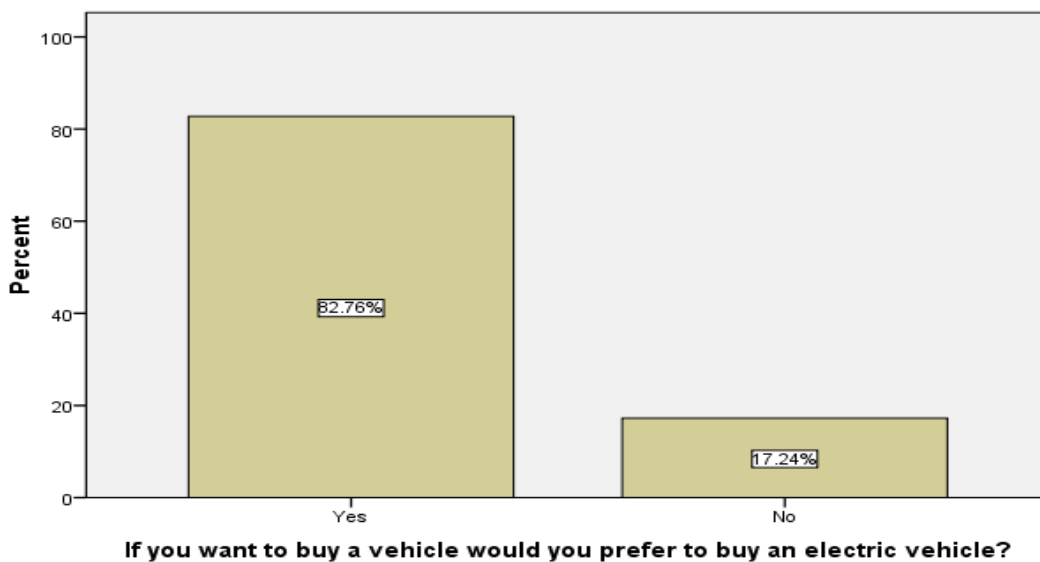
Interpretation

More than half of respondents think that EVs are alternative to conventional vehicles (Combustion vehicles) as it may be respondents are much aware about the oil crisis going around and they think that by reducing the fuel vehicles the environmental glitches can be resolved for some percentage. Choosing alternative which enhances opportunities for Ev industry.

8. If you want to buy a vehicle, would you prefer to buy an electric vehicle?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	72	72.0	82.8	82.8
	No	15	15.0	17.2	100.0
	Total	87	87.0	100.0	
Missing	System	13	13.0		
Total		100	100.0		

If you want to buy a vehicle would you prefer to buy an electric vehicle?



Analysis

The above graphical representation shows information regarding preference towards electric vehicle among 87% of respondents ,83% i.e. (72) of respondents replied Yes ,17% i.e. (15) of respondents replied to No.

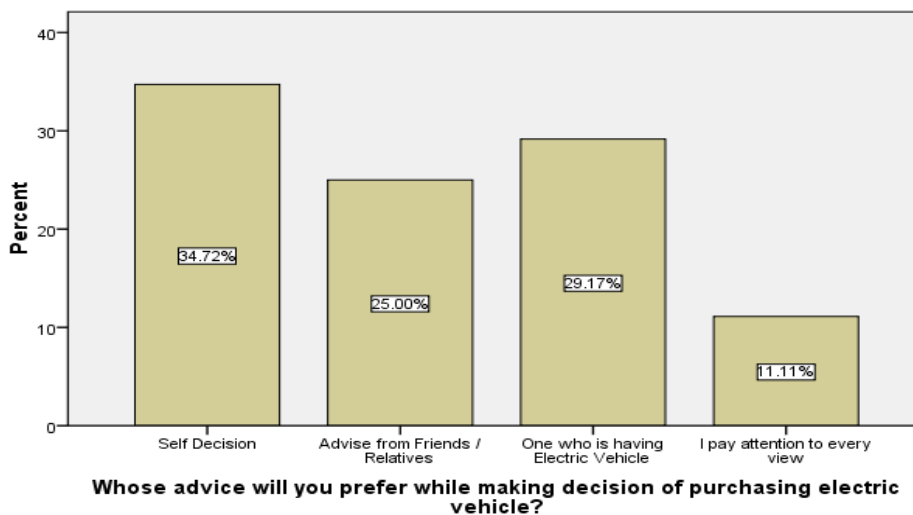
Interpretation

Preference towards purchase of Ev where the respondents may be depend on the convenience and flexibility towards Electric vehicle when compared with fuel vehicles. As Ev’s preference mainly depends on knowledge of respondents if the respondents have a Keen information and pre evaluated information about vehicle will definitely prefer and purchase the EVs. Very few of the respondents replied no as it may be adoption or mobility towards Ev is very less in these people.

9. Whose advice will you prefer while making decision of purchasing electric vehicle?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Self-Decision	25	25.0	34.7	34.7
	Advise from Friends / Relatives	18	18.0	25.0	59.7
	One who is having Electric Vehicle	21	21.0	29.2	88.9
	I pay attention to every view	8	8.0	11.1	100.0
	Total	72	72.0	100.0	
Missing	System	28	28.0		
Total		100	100.0		

Whose advice will you prefer while making decision of purchasing electric vehicle?



Analysis

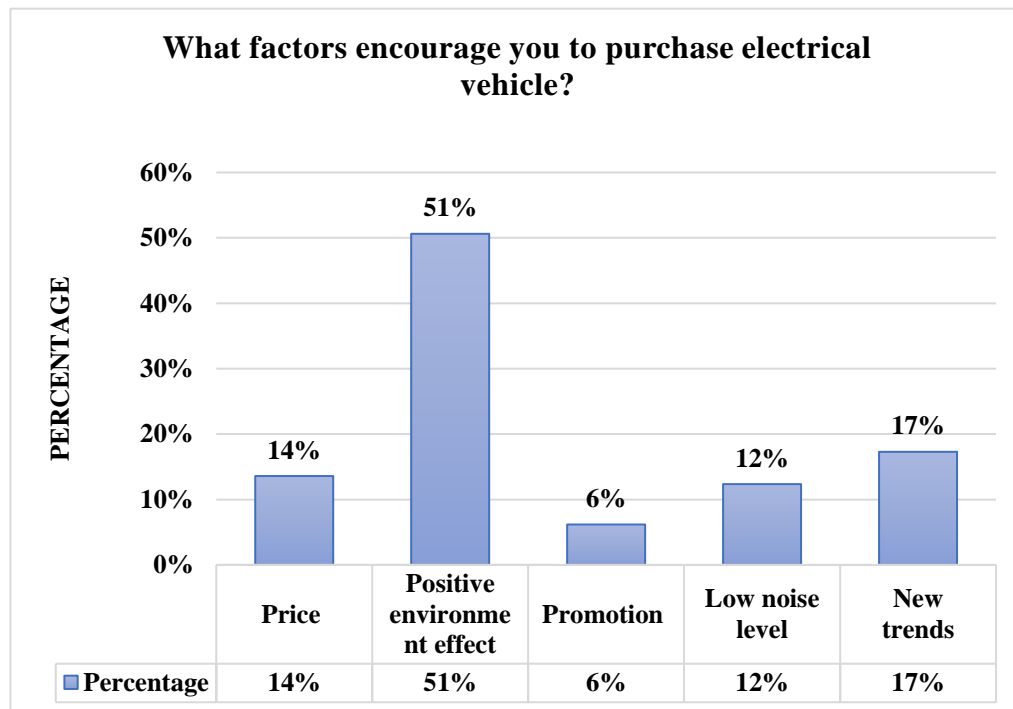
From above graph its is analysed that among 72 respondents,35% i.e. (25) respondents have chosen self-decision,29% i.e. (21) respondents opted for one who already have EV,25% i.e. (18) respondents get advise from friends / Relatives,11% i.e. (8) respondents.

Interpretation

The above analysed data shows that preference wise buying decision towards Ev’s where relatively high percent it may be because of revolution that the automotive sector has been made in these days to reach out the people widely which enables the people to take self-decision over the self-knowledge towards the

vehicles. Some respondents will enquire about Ev’s where one who already purchased and using the vehicles as these people tend to believe that over a period of time a vehicle may get any issues where they will be on big regret why they have purchased. The most common influence to people now a days is from friends and relatives where they have believe that they may prefer a best choice of vehicles. Where very few of respondents review every aspects they get before purchase decision.

10. What factors encourage you to purchase electrical vehicle?



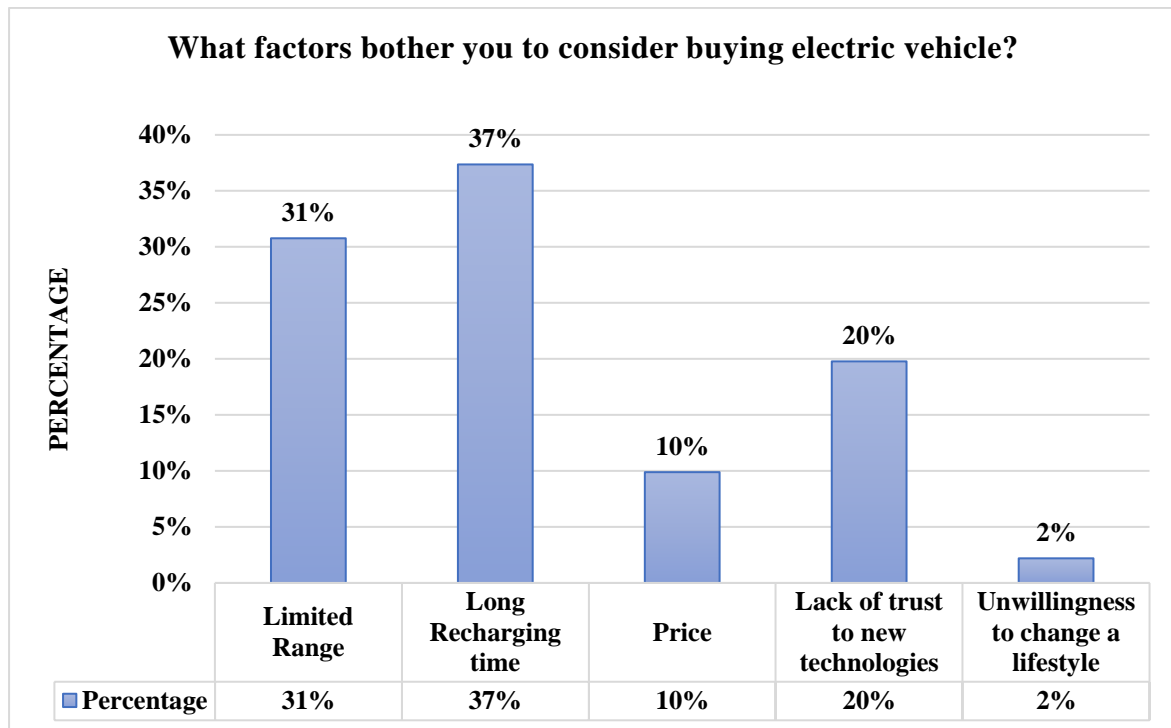
Analysis

From above graph it is analysed that among 72 respondents,51% of respondents have chosen Positive environment effect,17% of respondents opted new trends,14% of respondents selected price, 12% of respondents stated low noise level,6% of respondents opt for promotion.

Interpretation

The factors which plays a vital role in buying a Electric vehicle where the respondents take into consideration priorly. Factors such as positive environment effects has highest percentage which influence the respondents to purchase the vehicle. As more number of people are very much aware and they are concerned towards environmental aspects to protect the environment from the harmful causes by choosing alternative to fuel vehicle which has no side effects to environment and some percent of people influenced by new trends which will be arriving in the market according to the taste and preference of people. Price is again another major factor which influence more on the people to purchase the vehicle. Whereas least number of respondents quote that they are being influenced by the promotions made by the company through different mode of communication to reach large number of audience around the location.

11. What factors bother you to consider buying electric vehicle?



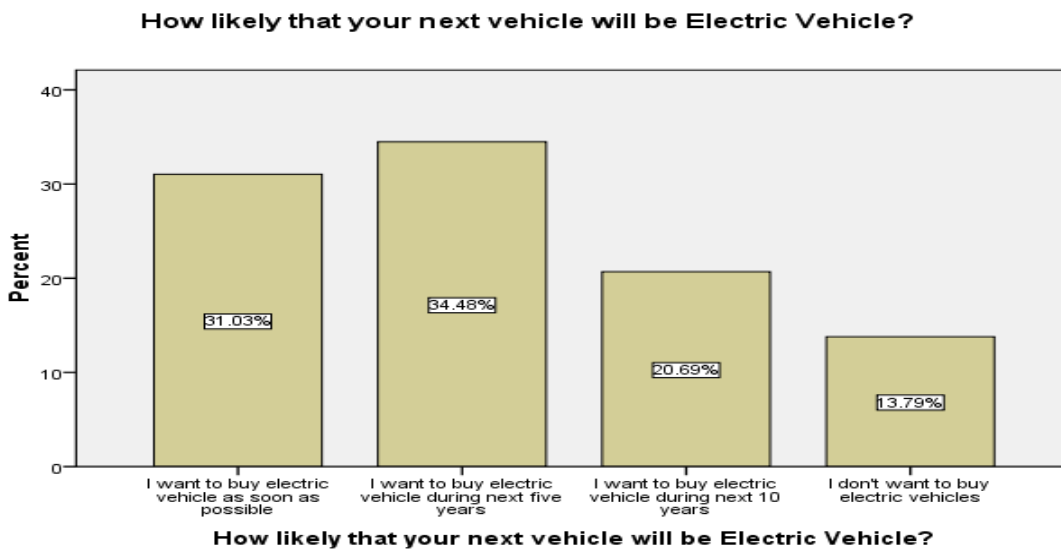
Analysis

From above graph it is analysed that among 87 respondents, 37% of respondents have chosen long recharging time, 31% of respondents opted limited range, 20% of respondents selected lack of trust to new technologies, 10% of respondents stated price, 2% of respondents opt for unwillingness to change a lifestyle.

Interpretation

The data regarding factors that bother before buying EV where greater number of respondents are worried about longer recharging time that had a greater reflection on respondents. As the early adopters has so many glitches over the vehicle which has emerged as alternative to combustion vehicle. Ev’s are basically a charging vehicle which has duration where its being recharged again which takes maximum amount of time to recharge. Whereas half of respondents think that once it’s being recharged the vehicle may be not having longer duration of range that can reach minimal distance. Some percentage of respondents are worried about the trust towards new technologies and the price of the vehicle which again these two has greater impact on buying decision on the respondents technology like adaptable charging which is new type of adopter which is used as power supply to battery for the vehicle and the price where the respondents may think that the EV price is same as that of conventional vehicle. Whereas very few respondents don’t want to change or adopt to Ev’s in day-to-day life.

12. How likely that your next vehicle will be Electric Vehicle?



		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I want to buy electric vehicle as soon as possible	27	27.0	31.0	31.0
	I want to buy electric vehicle during next five years	30	30.0	34.5	65.5
	I want to buy electric vehicle during next 10 years	18	18.0	20.7	86.2
	I don't want to buy electric vehicles	12	12.0	13.8	100.0
	Total	87	87.0	100.0	
Missing	System	13	13.0		
Total		100	100.0		

Analysis

From above graph it is observed that among 87 respondents,34% of respondents have buying forecast in next five years,31% of respondents have a plan of buying EV as soon as possible,21% of respondents will

buy a Ev in next 10 years, 14% of respondents are not at all interested in buying electric vehicle for the above recitation.

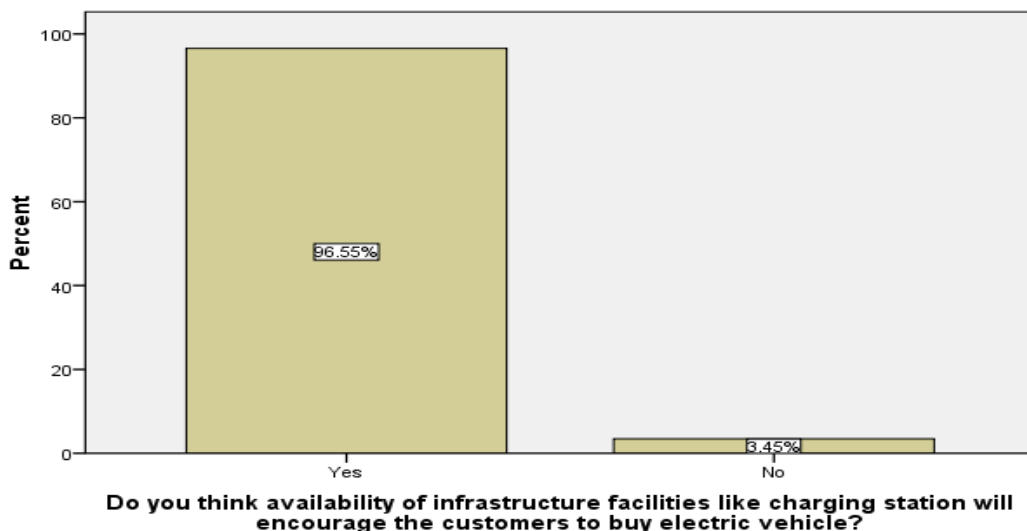
Interpretation

From the above mentioned data it is interpreted that most number of respondents will purchase electric vehicle in next five years as it may be due to the influences the respondents get from different sources where they'll evaluate wheather the purchase of Ev is really worthy or not based on the feedback of people one who has already purchased the vehicle which is being launched in the market. Some percent of respondents will purchase as soon as possible as it may be due to oil crisis all over the world which results in hike of fuel rates which made the respondents to choose alternative option. Further the respondents will purchase in next ten years as it may be due to trust in new technology that these charging vehicles is being rechargeable while running, which increases the efficiency and durability of the vehicle. These improvements in the vehicle may be adopted by the company. Whereas very few percent of respondents don't want to buy electric vehicle as it may be they don't want to adopt trend in automotive industry.

13. Do you think availability of infrastructure facilities like charging station will encourage the customers to buy electric vehicle?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	84	84.0	96.6	96.6
	No	3	3.0	3.4	100.0
	Total	87	87.0	100.0	
Missing	System	13	13.0		
Total		100	100.0		

Do you think availability of infrastructure facilities like charging station will encourage the customers to buy electric vehicle?



Analysis

From the above analysed graph among 87 respondents, 97% of respondents think that charging station will enhance the respondents buying decisions and 3% of respondents think that infrastructure facilities have no impact on purchase of EV.

Interpretation

The above interpreted data shows greater number of respondents have an opinion that infrastructure facility is the major aspect for purchasing the electric vehicle which is a resource provider for the vehicle. As it creates more opportunities by increasing the sales level. Whereas least number of respondents state that as recharging stations are not required to make a purchase decision.

Findings and Summary

1. The age interval between 18-25 years of respondents has purchase intention towards electric vehicles where majority of the respondents are male.
2. The level of significance towards awareness of electric vehicle has high when it comes to two-wheeler
3. Majority of respondents are aware of Hero electric in the region
4. As the half of respondents are influenced by electric vehicle due its positive impact on environment.
5. The adoption of electric vehicle is high as many respondents want to purchase the vehicle in next five years including adoption from present.
6. Large group of respondents have their purchase decisions based on infrastructure facilities.
7. Majority of the respondent have their own decisions while purchasing electric vehicle.
8. As many respondents has opinion that electric vehicles take long recharging time which bothers the purchase decision of the respondents.
9. Preference level of electric vehicle as compared to conventional is relatively high.
10. Many of the respondents feel that the Electric vehicles are alternative solution for transportation.
11. Large group of people tend to get more information regarding electric vehicle in social media and internet sources.

Suggestions

- More awareness should be done about electric vehicles by more of advertising in local Media, dealer website, placing electric vehicles in prominent locations by the Manufacturers.
- The vehicle model which is one of the main reasons where people look after to buy the vehicle, most of the companies need to do promotional activities and campaign to generate sales as compared to hero electric.
- Price which a major factor for buying behaviour of people towards electric vehicle where companies need to look after the price slags of the vehicles which is possible when people purchase more number EV's where cumulative production of battery of vehicles which helps in reducing the batteries price.
- Expectation of electric vehicles must be met in terms of battery performance, long life, safety, seating capacity, efficiency.
- Electric Vehicle is the new technology. The government and the related sectors should encourage the public to have a better understanding.
- The government should be sufficiently encourage and support the policy and infrastructure for Electric vehicles.
- Perceived monetary benefits influence purchase intention for electric vehicles, the government should take steps to improve consumers' perceptions of monetary benefits. The government may provide financial incentives in the form of subsidies and tax breaks, and the industry could offer refunds and discounts for electric vehicles.
- Another factor that may promote the adoption of electric vehicles is celebrity endorsement Advertising may elicit an emotional response that portrays the electric vehicles in a positive manner.
- Company needs to establish more outlets and showrooms so that potential customer visit the place and take feel the product by visuals and touch sense.

Conclusion

The above-mentioned mobility towards evolution of technology or Archetype in any automotive industry is a greater function of the simultaneous actions of all automobile sectors. Taking into the account of development, government policies, views regarding modulation of technologies and aspects like efficiency, charging time, infrastructure facilities which plays a major role in EV Industry. When it is compared to EV the people are much concerned about the combustion vehicle when it comes to buying decisions where the demand for the fuel vehicles remains the same. As some of the Ev's are dominant over the other as it is because of the promotional activities that the companies are conducting to reach the audience. More number of people tend to adopt Ev's for regular period of time but when it comes to the price of the vehicles the purchase decision is being more weigh on conventional vehicle as compared to Ev's. Prior

purchase and after purchase of Ev's the greater number of people think that implementation of Ev's are best, but when it comes to some of the factors that influence the purchase decisions of the Ev's now a days.

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