



A Study on Future of Electric in India

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ABSTRACT:

The title of the project is "FUTURE OF ELECTRIC VEHICLES IN INDIA". The project is mainly out to an analysis the impact of growth and aware electric vehicles in india. The primary data was collected using questionnaire method. The secondary data is collected using the company general report.

The world is rapidly moving towards electric mobility.

Under the Clean Energy Ministerial, a high-level forum to promote clean energy policies and programmes, eight countries have committed to the 'EV 30@30' campaign. As part of the campaign, the countries, of which India is a member, aim to achieve a 30 percent electric vehicle penetration by 2030.

There are clearly many positives to electric vehicles but several challenges are to be met to accelerate electric mobility.

Deployment of a reliable Charging Infrastructure is the key to drive EV penetration in the country. Effects on the grid due to EV charging needs and other such impacts are to be assessed and addressed suitably.

INTRODUCTION :

Air pollution is the major problem in the global context India has been second largest country in the world All most in india population in 2021 is 1.38 billion (138cr) .A most of the people can affected the Air pollution When continually exposed to air pollution, humans become at higher risk for cardiovascular disease. The some people are finding to getting natural Air but the current situation are most of the metropolitan cities are mostly Using petroleum vehicles. India is affecting some serious air pollution issue since a decade and it increasing an alarming rating is(50%) but normal rate is (15%) for example Spain. The main cause of this exponential increasing pollution levels is poor. The reason is old vehicle, less maintenance, bad road conditions and some of traffic management this all are the major problem increasing the pollution level in India.

NEED OF THE STUDY:

Electric vehicles are more efficient, and that combined with the electricity cost means that charging an electric vehicle is cheaper than filling petrol or diesel for your travel requirements. Using renewable energy sources can make the use of electric vehicles more eco-friendly.

As per a recent study, electric vehicles (EVs) market is expected to be worth around at least ₹475 billion by 2025.

The penetration of electric two-wheelers is projected to reach up to 15% by 2025 from 1% currently.

As electric vehicle manufacturing is becoming popular every day, its market share is also expected to rise greatly. India's GDP is expected to grow by an amazing 25% by 2022. The best part is that, apart from reducing environmental pollution, EVs can lower oil import by about Billion by 2030.

It is important the emissions from the transport sector are minimized. Electric vehicles have been seen as a promising option and several national governments have successfully implemented policies to promote the technology.

OBJECTIVES OF THE STUDY :

- To implementation of Electric vehicle will make india pollution free and green india
- The usage of Electric vehicle may affect the productivity and demand of the petroleum
- To study the perceptions and expectations of potential, for alternative technologies in automobiles, such as Electric Vehicle

- To study the maximum price consumers can afford for buying an Electric/Hybrid Vehicles.

STATEMENT OF PROBLEM

Battery Technology. One of the most significant barriers to EV adoption is the battery manufacturing process and supply chain. To enable EVs, new mining and supply networks are required. The lithium-ion battery is the most common and frequently utilised EV energy source. Poor infrastructure is among the most pressing issue among people thinking to opt for electric vehicles.

RESEARCH DESIGN :

The main purpose behind the study was to meet the wants and needs of the consumers and provide valuable information regarding Electric Vehicle. Sources of primary data are the sampling units chosen. The questionnaire was created with the help of Google Docs which was in a format of Electronic Survey Form. It was easy to send the form via mail to n number of users.

AREA OF THE STUDY :

- The study is about future of electric vehicles in india
- This has been conducted through primary data.

SAMPLING TECHNIQUES :

Convenience sampling technique is used for the study.

METHODS OF DATA COLLECTION :

Questionnaire method is used to collect the data from the respondents.

SOURCES OF DATA :

The study is based on the primary data and secondary data. The primary data has been collected from the respondents through questionnaire and secondary data has been collected from articles, books, magazines, and newspaper.

TOOLS FOR ANALYSIS :

The following tools were employed in tune with the objectives.

- Percentage method
- Ranking method

REVIEW OF LITERATURE:

Kaushik Rajashekarain his paper he has described the current automobile status divided among the electric vehicles and other vehicles. He has discussed and compared the different components of electric vehicles like the electric motor, power train in electric vehicles, power electronics systems and these all based on the lithium air cells and battery

Ramesh C. Bansal from the BITS Pilani has discussed briefly about when was the first electric vehicle introduced to the current trends and progress made. The main area which is consistently been improved and upgraded is the component which is the heart of electric vehicle, which stores all the energy i.e. the battery pack. As he has mentioned that the introduction of electric vehicles has created the impact on the internal combustion engine vehicles as the electric vehicle are also known as the zero emission vehicles. These electric vehicles don't have the tail pipe as there is no combustion taking place in the vehicle so they are also called as the environment friendly vehicles.

Naoki Shinohara has briefly discussed about the wireless power transmission system in the electric vehicles. He has discussed about the different technologies used in wireless transmission like: inductive coupling, resonance coupling and also some wireless power transmissions through the microwaves In his paper he has discussed about the previous done research and development and the current research and development going on the wireless power transmission system.

SWOT Analysis of Electric:

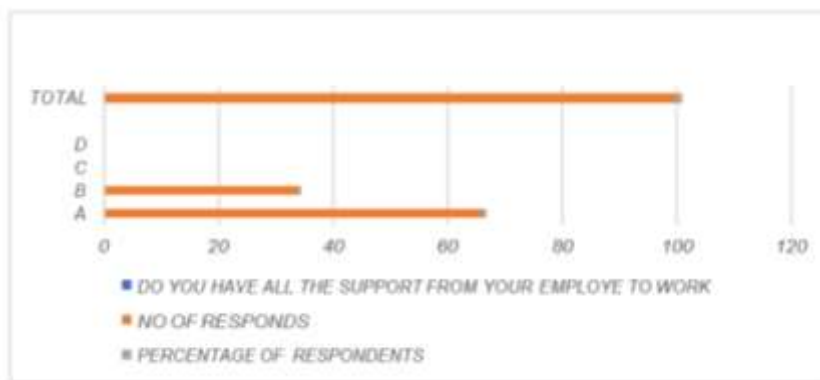
- No fuel required so you save money on gas.

- Environmental friendly as they do not emit pollutants.
- Lower maintenance due to an efficient electric motor.
- Better Performance. Analysis and interpretation :

TABLE NO 1

S.NO	DO YOU HAVE AWARE ELECTRICAL VECHICLE	NO OF RESPONDS	PERCENTAGE OF RESPONDENTS
A	AGREE	52	52%
B	DIS AGREE	30	30%
C	NUTREAL	10	10%
D	STRONGALY DIAGREE	8	8%
TOTAL		100	100%

CHART NO 1

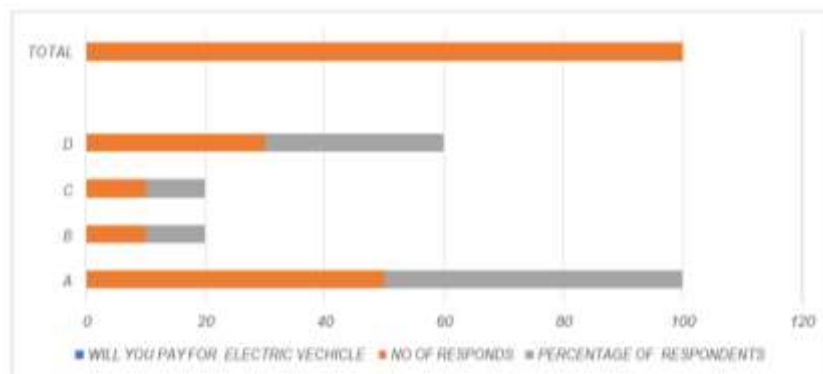


From the above table implicit that out of total respondents taken for the study 52% of the respondents aware through agree, 30 % of the respondents aware through disagree, 10% of the respondents aware through neutral and remaining 27.5% of the respondents aware through strongly disagree. Therefore, it is inferred that the majority 50% of the respondents using agree.

TABLE NO 2

S.NO	WILL YOU PAY FOR ELECTRIC VECHICLE	NO OF RESPONDS	PERCENTAGE OF RESPONDENTS
A	LESS THAN 1 LAKH	50	50
B	1 TO 5 LAKH	10	10
C	1.5 TO 2.5 LAKH	10	10
D	ABOVE 2.5 LAKH	30	30
TOTAL		100	100%

CHART NO 2



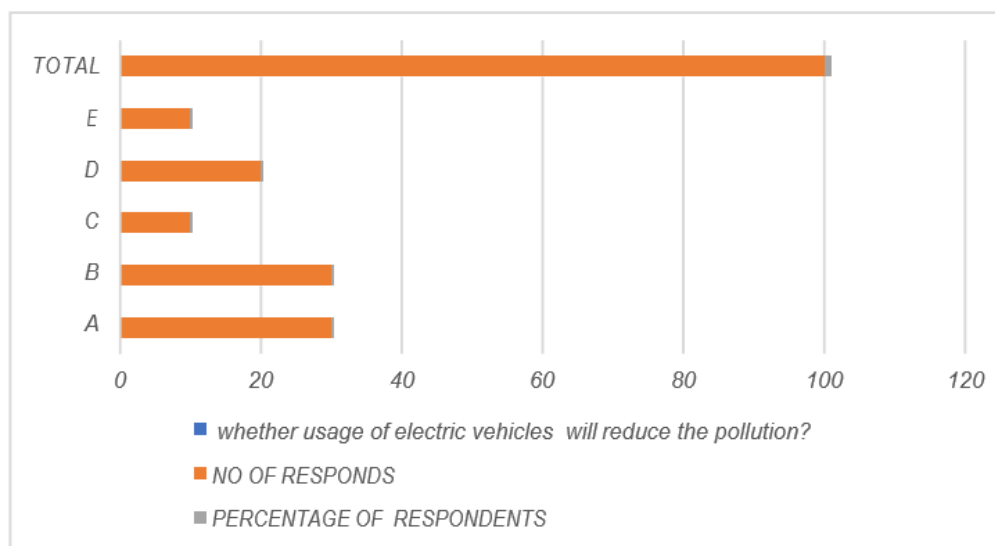
From the above table implicit that out of total respondents taken for the study 50% of the respondents willing to pay less than 1 lakh, 10% of the respondents willing to pay 1 TO 5 lakhs , 10% of the respondents willing to pay 1 lakh-1.5 lakhs, 10% of the respondents willing to pay 1.5 lakhs-2.5 lakhs and 30% of the respondents willing to pay above 2.5 lakhs.

Therefore it is inferred that the majority 50% of the respondents using a less than 1 lakh

TABLE NO 3

S.NO	WHETHER USAGE OF ELECTRIC VEHICLES WILL REDUCE THE POLLUTION?	NO. OF RESPONDS	PERCENTAGE OF RESPONDENTS
A	STRONGLY AGREE	30	30%
B	AGREE	30	30%
C	NEUTRAL	10	10%
D	DISAGREE	20	20%
E	STRONGLY DISAGREE	10	10%
TOTAL		100	100%

CHART NO 3

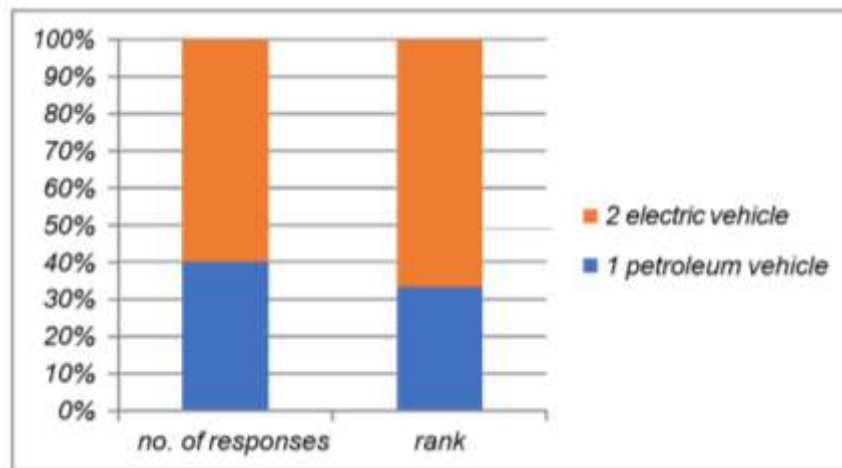


From the above table implicit that out of total respondents taken for the study 30% of the respondents aware through strongly agree, 20 % of the respondents aware through disagree, 10% of the respondents aware through neutral,30 % of the respondents aware through agree and remaining 20% of the respondents aware through strongly disagree.

Therefore it is inferred that using the majority 30% of the respondents strongly agree.

Ranking analysis

S. no	Which vehicle you prefer in future	No. of response	Rank
1	Petroleum vehicle	40	2
2	Electric vehicle	60	1



Interpretation: The majority of the respondents 60% of the people are use electric vehicles in their future

Finding

- The majority 30% of the respondent strongly agree implementation of the e-vehicle will make india pollution free
- The majority 50% of the respondent has been given to our
- The majority 50% of the respondent like to spend less than 1 lakh to own an EV
- 60% of the respondent say yes to change the petrol vehicle to electric vehicle
- 40% of the respondent agree that government will support and motivate the E-vehicle launching

Suggestion:

- Modify and streamline FAME Phase 2
- Spearhead EV charging facility rollouts
- Customer education to clear FUD (Fear, Uncertainty and Doubt)
- Incentives for importing of EV components
- Pilot EV corridors across National Highways
- Lowering EV buying costs.

Conclusion

Both developed and developing countries have become more active in EV introduction and diffusion. In developed countries, the government has led the promotion of next-generation environment-friendly vehicles. In the industrial world, not only conventional auto manufacturers but also large and small enterprises have joined the EV business as new business opportunities.

In accordance with the implementation of many pilot projects and EV related events, public expectation on EVs is high.

However, there is no clear indication for full-fledged diffusion. This is because of high prices of EVs, limited models, lack of charging infrastructure, and lack of trust in the market in terms of life span of EVs and safety

On the other hand, big auto manufacturers have become bolder in EV development, which is seen to address the above- mentioned problems and accelerate EV diffusion.

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