JETIR.ORG

ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)



An International Scholarly Open Access, Peer-reviewed, Refereed Journal

"DETERMINANTS OF ELECTRIC CARS PURCHASE INTENTION IN INDIA FOR GENY."

Prof. Dhruvin Chauhan., Assistant Professor, MBA Department

Anil Shah Final year MBA Department.

Viveka R. Aher, Final year MBA Department.

A study on the Automobile sector in India.

ABSTRACT

The purpose of the research is to determine the factors that influence the intention of Generation Y in India to purchase electric cars. The study will likely consider various factors such as environmental concerns, government support, cost, range anxiety, charging infrastructure, and perceived benefits. The results of the study will provide insights into what motivates the young population in India to adopt electric vehicles and help in the development of strategies to increase their uptake. Today's automobile industry is growing rapidly in the EV Segment. Number of EV Vehicles have raised by 2023 this paper examines the factors influencing consumer purchase intentions towards Electrical vehicles for Gen Y, Consumer is the king in any market so its really necessary to study purchase intention on them cars manufacturing companies continuously seek attraction of consumers by continuously adding various innovation in Cars and Electronic Vehicles is amongst them, It is very difficult to convince customer to purchase EV cars over fossil fuel cars,due to availability of Charging stations as well as such high pricing of Electric Cars. As per data, there are over 13,34385 Electric cars running in India, and in total 295 million cars running on road. So there are different parameters we study why Gen Y purchase in Electric cars over Fossil fuel cars.

KEYWORDS: Electric Car, Fossil Fuel Car, Car Purchase intentions

I. INTRODUCTION

The introduction of electric cars in India has gained traction in recent years, with the government offering incentives and subsidies to encourage the adoption of clean energy vehicles. However, the uptake of electric cars among the young population, particularly Generation Y, is still slow. Understanding the factors that influence their purchase intention is crucial in promoting the widespread adoption of electric cars in India. Generation Y, born between 1980 and 2000, is the largest demographic group in India and holds a significant purchasing power. Thus, studying their behavior towards electric car adoption is crucial in shaping the future of mobility in the country. This research aims to identify the determinants of electric car purchase intention among Generation Y in India.

As per the article published on statistics website in march 2022 the number of registered vehicles in India FY 1051-2019 was around 295 million. Vehicle registration growth is observed from 2007. Majority of these vehicles are powered by fossil fuel petrol/diesel. There are many drawbacks of using fossil fuels. Firstly they are nonrenewable energy sources, secondly they pollute the environment by increasing Air pollution ,Thirdly the process of extracting the fossil fuel is an extremely dangerous process. Fossil fuels are the most common and pervasive fuels in the world. and in a very short time Since then, in just over 200 years, humans have consumed an incredible amount of energy, leaving fossil fuels behind. Almost gone, the climate has been severely affected. The supply of fuel is finite and the speed at which the world is moving Fossil fuel consumption continues. Fossil fuels are therefore quickly depleted.

Global consumption of Oil suggests the equivalent of more than 11 billion tons per year. Crude oil reserves decrease by a factor of 4.1 billion tons per year. If this continues at this rate, the growing population and Aspiration, our known oil reserves stretch to 2052[1]. People must switch to green energy and boycott energy companies that do not provide. Switching to green energy is the biggest thing we can do to fight climate change. Green energy can come from all renewable energy sources such as wind, solar, tidal power and the earth. Power generation and efficient use determine the future growth reliability of the industrial sector, transport and survival. Due to the high level of pollution and environmental damage, new And harmless forms of energy become consciously active. The era of fossil fuel engines is coming to an end Gradually, and the development of innovative technologies are beginning to revolutionize the world. Fossil fuel operated cars Cars emit Carbon monoxide when fuel is burned. Which can cause serious health conditions as per the statistics provided by Environment Protection agency 95 percent of carbon monoxide comes from vehicles Emissions from automobiles, trucks, buses, power plants, and off-road vehicles result in the formation of nitrogen dioxide (NO2). A high NO2 concentration in the air might have negative effects on the respiratory system.

A zero-emission, eco-friendly electric vehicle. An electric vehicle is a purely electric vehicle. Such vehicles do not have an internal combustion engine like other conventional vehicles. Instead, it uses electric motors to power the wheels. These vehicles are very popular these days. They are viewed as a promising solution for future transportation. The most famous example is Tesla. Electric trucks, buses, motorcycles, and cars all fall under the category of electric vehicles. Although they've been around for a while, electric cars have only recently become popular. Both fully electric vehicles and plug-in hybrid electric vehicles are available on the market. Unlike plug-in hybrids, which run on both petrol and electricity, fully electric vehicles run entirely on electricity. The EV market is growing for several reasons. By 2030, electric vehicles are expected to cost less than gasoline vehicles. Governments around the world are offering incentives such as tax breaks and subsidies to encourage the use of electric vehicles.

In today's world Electrical Vehicles this word is spreading like a storm. All the manufacturers of Cars have been launching the Electrical Vehicle in India.E-Mobility is not a new concept but scarcity of fossil fuel has increased and demand of E vehicles is also increasing worldwide. As per the report of Economics times India is expected to install 48000 Electric Charging stations within next 3-4 years, presently India has less that 2000 charging stations installed and majority of them are in the Metro cities.

Major Cars manufacturers in India like TATA, Mahindra and Mahindra, Renault have also launched various EV Cars in the past few months. But Cost of EV is high compared to Gasoline Cars. In India, customers focus on spending less money today than saving more money in future which is again a huge aspect for the Automobile industry. delayed returns aspect must be conveyed to customers. Availability of review of Electric Cars is also less compared to Gasoline Cars. India has ranked 2nd in population hence has the largest market for Electrical vehicles. The main drivers for the high-volume vehicle segment are: Availability of disposable income and easy financing in both rural and urban areas. The Indian government is also taking initiative for promoting EV as air pollution due to gasoline cars is about 50-90 percent of total air pollution." As per a study at least 140 million people in India breathe air that is 10 times or more over the WHO safe limit The most important figure in India's energy balance is its total electrical energy consumption of 1,137 billion kWh per year. This is an average of 816 kWh per person. It seems better to switch to EV.

India has the potential to become completely self-sufficient in energy. The total production of all power plants is 1,386 billion kWh, equivalent to 122% of the country's self-consumption. Nevertheless, India trades energy with other countries. Besides pure consumption, production, imports and exports play an important role. Other energy sources such as natural gas and oil are also used. As per the economics times report sep 2022 India consuming high fossil fuel as India has ranked 2nd in population and number of cars has increased in the past few years. India is Exporting 80 percent of its fossil fuel requirements. whereas other countries have adopted Electrical Vehicle technologies rapidly. Countries like Germany, Japan and China are leading in usage of EV. India has also started Electrical Vehicles.

India has signed the Paris agreement which establishes a framework for preventing severe climate change on a global scale by keeping global warming temperature far below 2°C and pursuing efforts to keep it below 1.5°C The Indian automobile industry is the fifth largest in the world as per the statistics in 2020 and is expected to become the third largest by 2030. India has the second-highest population, and as that population grows, so does the demand for automobiles. However, relying solely on conventional energy sources is not a viable choice because India imports 80% of its crude oil needs.

According to the Ministry of Heavy Industries, India has registered 520,000 electric vehicles in the last three years. Electric vehicle sales in 2021 have increased significantly as the government passed beneficial laws and initiatives. With 66,704 units sold across all sectors in 2021, UP accounted for his largest share of EV sales in India, followed by Karnataka with his 33,302 units and Tamil Nadu with 30,036 units. Karnataka and Maharashtra lead the twowheeler and four-wheeler segments respectively, while Uttar Pradesh leads the three-wheeler segment.

1.1 GROWTH OF EV MARKET IN INDIA

The market for electric vehicles in India was estimated to be worth USD 220.1 million in 2020, and from 2021 to 2030, it is anticipated to increase at a CAGR of 94.4%. Over the course of the forecast period, market expansion is predicted to be fueled by the alluring incentives being granted by the Indian government on the manufacturing and purchase of electric vehicles to promote the adoption of electric vehicles. Sales of both passenger and commercial automobiles fell significantly overall in 2020 as a result of the COVID-19 pandemic outbreak. In India, however, there was no change in the sales of electric vehicles.

An important aspect boosting the electric vehicle market in India is the post-lockdown sale of pure and hybrid electric automobiles. The stringent Green House gas (GHG) emission norms drafted by the government, such as the Bharat Stage (BS) VI emission standards introduced by India's Ministry of Road Transport and Highways (MoRTH), are also expected to play a decisive role in driving the growth of the market.

II. REVIEW OF LITERATURE

- 2.1 (Nidal Ismail Abu-Alkeir 2021) Research was based on "Factors Influencing Consumers Buying Intentions Towards Electric Cars" The Researcher found that price, brand image, and fuel economy have a significant impact on Arab consumer intentions to purchase an electric vehicle. On the other hand, manufacturers' reputations and safety ratings have less Influence Arab consumers' intention to buy electric vehicles. Researchers concluded that the Electrical Car manufacturers in Arab countries need to implement an effective feedback system for electrical Cars and other vehicle segments. Be consistent with buyer attitudes and perceptions which will help manufacturers to identify customers' views and demand for the electric vehicle [1]
- 2.2 (Katarzyna Sobiech-Grabka, Anna Stankowska 2022) conducted research on Determinants of Electric Cars Purchase Intention in Poland: Personal Attitudes v. Economic Arguments In Researchers addressed the socioeconomic dynamics of the green revolution in the development of personal transport in Poland. They found that few socioeconomic factors can be used to predict consumer behavior related to EV purchase readiness. These are age, gender, place of residence and educational background. The researchers used the random forest method for their analysis. A random forest approach (a machine learning algorithm) enables prediction of consumer behavior related to propensity to purchase EVs and helps identify customers who are more likely to purchase EVs. The algorithm will also help the automotive industry work effectively with the private electric vehicle segment. It helps to recommend appropriate products and services and predict customer satisfaction.[4]
- 2.3 (Lee V. Whitea* Nicole D. Sintovb 2017)conducted research on "You are what you drive: Environmentalist and social innovator symbolism drives electric vehicle adoption intentions Researcher worked on symbolic attributes of electric vehicles they stated that electric vehicles adoption intention can also be self identity as Environmentalist and as social innovator. As per previous researcher, predators of electric vehicles adoption are instrumental (associated with practical aspects of electric vehicles) and symbolic (associated with imagery aspects of electric vehicles) attributes. Researchers also worked on climate change and its effect on the adoption of electric vehicles. Changes in climate due to air pollution is a major problem these days. Individuals concerned about climate change recognize that electric vehicles strongly reflect their environmentalist and innovator identities, which leads to stronger intentions to use electric vehicles and popularization of Electric vehicles is the need of today's world.[7]
- 2.4 (Jay P. Trivedi Kaushal Kishore 2020) conducted research on Investigating the factors influencing consumers' purchase intention for electric cars: an emerging market perspective Researchers study vehicle attributes, accessibility, external influences, vibrancy, online reviews and prices, and their impact on shaping consumer attitudes towards green car brands. Researchers have found that brand attitudes influence brand love, which in turn influences consumer purchase intentions. Brand attitudes also have a significant impact on purchase intent. Stronger brands love Predictors of purchase intent and brand attitudes toward green brands. Conclusion that can be drawn from this Indian electric vehicle marketers can position electric vehicles as a youthful, attractive, happy and cool product for consumers. The car's design also reflects these features, making the product more appealing to millennial consumers. Marketing communications and promotional storyboards should do the same for electric vehicles. The survey reflects the 'young spirit' that's grabbing the attention of millennial consumers. These lines include showrooms and clothing for younger employees that can reflect their surroundings and surroundings. The youthful side of electric cars.[6]

- 2.5 (Gail Helen Broadbent, Graciela Metternicht and Danielle 2018) conducted research on Analysis of Consumer Incentives in Support of Electric Vehicle Uptake: An Australian Case Study The researcher found that the Australian government has not done much to encourage sales of electric vehicles. National policy makers should consider the need to promote zero fossil fuels. Researchers collected data from urbanized and educated Australian drivers who tended to be environmentally conscious. Survey results show that infrastructure investments are more likely to encourage drivers to buy electric vehicles than they are to lower vehicle prices. The study recommends that governments support essential market conditions for electric vehicles. The EV market is likely to accelerate and appeal to the masses, so it's wise to invest in infrastructure before ICEV-equivalent EV prices are reached. Consumers can benefit from familiarizing themselves with electric vehicles before purchasing their next vehicle. Communicating and assuring information about range capabilities will help the consumer overcome her EV range anxiety. The result of information dissemination and investment is infrastructure development.[2]
- 2.6 (Sukhee Kim, Jungyoon Choi, Yongju Yi and Hyungjun Kim 2021) conducted research on Analysis of Influencing Factors in Purchasing Electric Vehicles Using a Structural Equation Model: Focused on Suwon City This study focused on the effect of each latent variable on EV purchases, Direct and indirect impacts showed that government subsidies for EV purchases, charging service visits had the greatest impact, followed by the EV driving environment. Lack of information and supply policy on charging infrastructure, battery performance and safety, and electric vehicles. However, EV certification and subsidy certification had the least impact on EV purchases. What is clear is that the right technology is needed to significantly increase the range of electric vehicles. Studies show that EVs have shorter mileage due to route and air conditioning. These parameters also influence the purchase of electric vehicles. Due to the electric vehicle battery, the performance of the electric vehicle battery can be considered slightly inferior. Battery performance can also be degraded when heating and air conditioning systems are running. EV batteries need improvement. These improvements are expected to increase the sales rate of electric vehicles.[3]
- 2.7 (N. Selvaraj1, P. Murugesan2 and V. Alagupand 2019) conducted research on the perception of customers intention of buying the small car in madural region Researchers found that Consumer expectations are based on a few parameters: messages delivered to consumers, claims blog, data available on the internet, advertising campaigns and messages conveyed via ads, Media and Other Communications Sources. When the Seller Claims Consumers experience false expectations of products that leads to dissatisfaction. level of dissatisfaction Bigger Than Performance Gap, Low Dissatisfaction Consumers try to reduce disagreements. Performance.[9]
- 2.8 (Qingyou Yan, Guangyu Qin, Meijuan Zhang, and Bowen Xiao 2019) Conducted Research on Real Purchasing Behavior Analysis of Electric Cars in Beijing Based on Structural Equation Modeling and Multinomial Logit Model Researchers used TPB theory to analyze the factors that influence real-world EV buying behavior. The results show that positive attributes have a very positive impact on actual purchasing behavior, while negative attributes have a negative impact. The low emissions, low cost, and government supportive policies of EVs have encouraged consumers to purchase EVs more aggressively, thereby increasing purchase intent and actual EV purchasing behavior. Media propaganda, government subsidy policies, quality provider services, and the building of vehicle Internet platforms have encouraged consumers to create strong, positive subjective norms that lead to the purchase of electric vehicles. I'm here. Purchase intent and actual purchase behavior were positively reinforced. With the support of economic power and charging resources, consumers will have a strong perception of EV purchase intention, and by playing the role of an intermediate variable, it will enhance consumer purchase intention and actual purchase behavior. The bottom line is that fixed charging options, coupled with EV's susceptibility to damage and short battery life, are impacting consumer intentions and behavior.[8]
- 2.9 (sumathy muniamuthu, krishna arjun. s, jalapathy. m. 2018)conducted research on review on electric vehicles concluded a lot The switch from polluting fuel vehicles to pollution-free electric vehicles is finally on the rise. My evaluation is for research purposes. Highlight your preference for electric vehicles in reports, articles, magazines, statistics and blogs, some major limitations We analyzed electric vehicles and their infrastructure to find a solution. Electric Vehicles, Increasing Government Demand Strategies and plans to promote their use were also analyzed. The magazine concludes that the generation of green power and the use of electric vehicles: Help create a green, non-depleting and sustainable environment in the near future. [5]

III.RESEARCH METHODOLOGY

3.1 STATEMENT OF THE PROBLEM

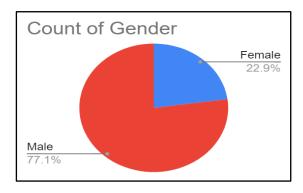
Study the determinants of Electric cars purchase of all the potential customers from Gen Y as they become aware of the review, purchase, and use of Electrical cars. Study focuses on the main determinants like price, Availability of charging station, Online reviews on Cars, Features of Electrical cars, Brand love, Zero Emission for the Electrical cars as they are new in the market To research the factors that influence people's purchases of electric vehicles.

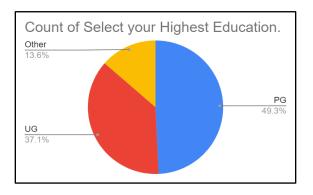
- 3.2 Research design: For this research we have selected descriptive research type as we are going to study the relationship between variable which are Price, Accessibility of Electrical car, Online review of Electrical cars, Features of Electrical Cars, Brand preference and Environment Friendly. And the dependent variable is Purchase intention of consumers.
- 3.3 Study area: The study covered three major automobile companies i.e. Tata Motors India Ltd , Mahindra electric Itd, Hyundai Motors India Ltd of Metro Cities As majority of the Electric charging stations are installed in Metro cities around 2000 Electric charging stations are there and people from metro cities are more likely to purchase electric cars than other cities.
- 3.5 Source/s of data: Secondary data for this study is collected from various websites of car manufacturing companies such as Tata motors, Hyundai Motors, Mahindra and Mahindra as well as popular websites such as Cardekho.com, Cars24.com, Carwale.com. Where all the specifications of EV are available in detail and comparison of various EV and Non EV cars can be done easily.
- 3.6 Data collection method: This study focused on Determinants that motivate millennial consumers to buy an electric car. A structured survey was created and shared using Google Forms. The questionnaire was conducted in English. Respondents. This research was academic in nature and had no commercial interest. Survey is shared on Facebook, Instagram, Personal contacts and via Emails to various respondents.
- 3.7 Population: Generation Y (millennials), born between 1982-2000, is coming of age. By 2022, Gen-Y will number over 450 million in India. We have selected the Gen Y Population because this age group's present age is between 22-40 years so probability of purchasing an Electrical car is high for this age group. As they are young and most probably salaried or self employed persons. Millennials are the most important consumers EV Cohort (Elliott, 2019).
- 3.8 Sampling method: Non-Probability Sampling (Convenience Sampling) for this research we have selected a non probability sampling method as it is less time consuming and as per the population this method best suits our study area.
- **3.9 Statistical tools:** The data will be analyzed through frequency Analysis methods.
- **3.10 Sample frame:** The sample size for this study is 80-150 respondents. To get the accuracy of data we have decided to collect the data from up to 150 respondents which will be beneficial for analysis of the data.

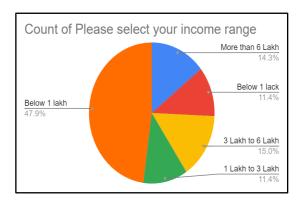
IV.DATA ANALYSIS

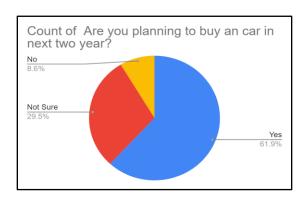
4.1 Profile of respondents

This data shows that out of the 140 respondents, 22.9% are female and 77.1% are male. In terms of education, 37% of the respondents are undergraduates and 49.3% are postgraduates, while the remaining 13.6% are in other categories. The majority of the respondents, approximately 60%, have an income of below 1 lakh, with 14% earning more than 6 lakhs annually and 15% earning between 3 to 6 lakhs. Additionally, 30% of the respondents are employed, while 62% are unemployed.



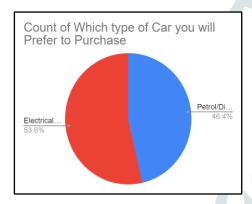




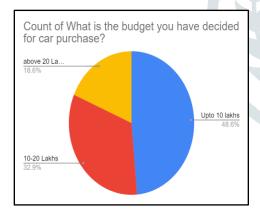


61.9 percentage respondents are planning to purchase the EV in next two years, and 8.6 percentage respondents are not planning to purchase EV car in next two years, 29.5 are not sure about this.

4.2 Data Analysis of Electric Car preference

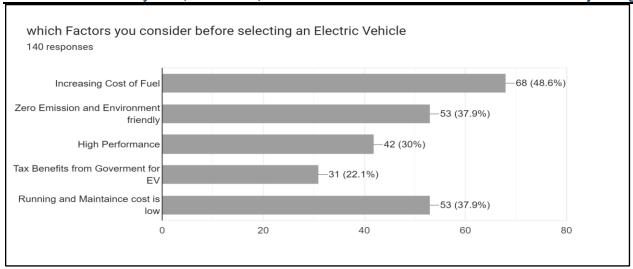


Interpretation: If 46.4% of respondents prefer fossil fuel-operated cars and 53.6% prefer electric cars, then it can be concluded that a slightly larger proportion of respondents prefer electric cars over fossil fuel-operated cars. This shift in preference towards electric cars could be due to a number of factors.

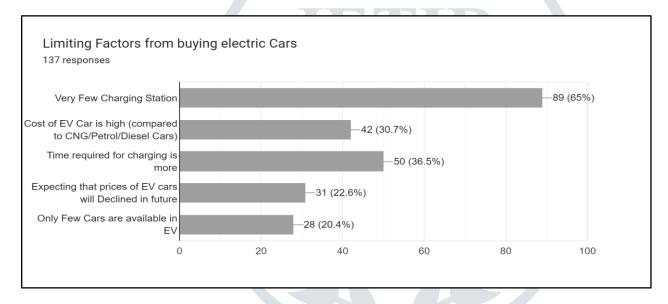


Interpretation: Based on the data it appears that the majority of respondents have a budget for purchasing an electric car of up to 10 lakhs (48.6%). About 32% have a budget of 10-20 lakhs, and only 18.6% have set a budget of more than 20 lakhs.

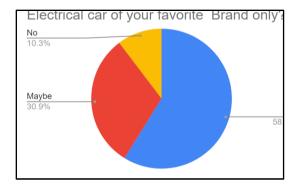
This information can provide valuable insights for car manufacturers and dealerships, as it suggests that there is a significant demand for more affordable electric vehicles.



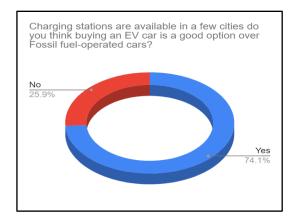
Interpretation: Major Factors that Respondent consider for buying the EV car is Increasing cost of fossil fuel and low maintenance cose with Zero Emission of EV cars, So we can say the increasing cost of fossil fuel is major point Respondant consider before buying the EV cars.



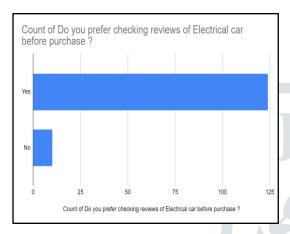
Interpretation: We also studied the limiting factor from buying the EV cars we found that majority of respondents thinks Limited charging station is major limiting factor from buying the EV as well as time required to charge the EV is high also the next important limiting factor to consider. Also respondents thinks Price of EV car is much higher than the Fossil fuel operated car and its 3rd most limiting factor for the EV purchase



Interpretation: This data indicates that a significant portion of the respondents, 58.8%, are focused on purchasing a car from their favorite brand only. On the other hand, 10.3% of the respondents are not focused on purchasing from their favorite brand, while the remaining 30.9% may be considering purchasing from their favorite brand.

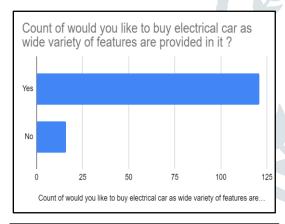


Interpretation: Inspite of fewer number of the Electric charging station 74.1 percentage respondants thinks buying the EV car overr Fossil fuel operated car is better option So people are less worried about the fewer starging stations.

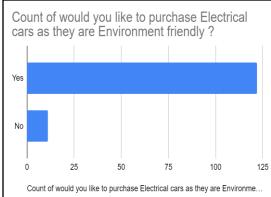


Interpretation: it appears that the majority of respondents prefer to check online reviews before purchasing an electric car, with only 7.5% stating that they do not.

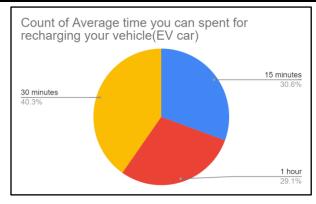
Online reviews can play a significant role in the decision-making process for consumers when buying a car, especially when it comes to electric vehicles, which may be a relatively new technology for some people.



Interpretation: majority of the respondents, 83.8%, like electric vehicles (EVs) due to the wide variety of features provided in them. This indicates that the features and capabilities of EVs are important factors in the decision-making process for these respondents, and that they value the benefits that EVs can offer. On the other hand, 11.7% of respondents do not consider the variety of features as a reason for liking EVs. This could mean that these respondents have different priorities or preferences when it comes to vehicles, or that they have different opinions about the features and capabilities of EVs.

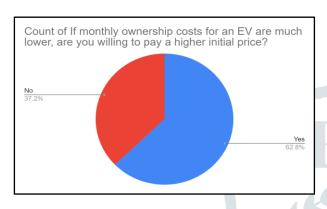


Interpretation: Data shows that 92% of respondents would like to buy an electric vehicle (EV) because it's environmentally friendly. This suggests that a majority of the respondents place a high value on sustainability and are motivated to purchase an EV to reduce their carbon footprint and contribute to a cleaner environment.



Interpretation: 29.9% of respondents are ready to spend 1 hour recharging their EV, which suggests that they value the convenience of longer driving range and are willing to dedicate some time to recharging their vehicle. 30.4% of respondents are ready to spend 15 minutes recharging their EV, which indicates that they prioritize quick and convenient charging over longer driving range.

40.7% of respondents are ready to spend 30 minutes recharging their EV, which suggests that they are looking for a balance between driving range and charging time.



Interpretation: If 62% of respondents in a survey say that they are willing to pay a higher initial price for an electric vehicle (EV) because of lower monthly ownership costs, it can be interpreted that a majority of the respondents are willing to make a trade-off between upfront cost and long-term savings. They believe that the benefits of lower monthly costs, such as lower fuel and maintenance expenses, outweigh the higher initial price of the EV. On the other hand, 32% of the respondents are not willing to pay a higher initial price for an EV, which could indicate that they place a higher priority on upfront cost. They may not believe that the long-term savings from lower monthly costs would offset the higher initial price, or they may have other priorities that make an EV less appealing to them.

V. CONCLUSION

In conclusion, the survey provides valuable insights into the preferences and considerations of potential electric vehicle (EV) buyers. The results show that a majority of the respondents prefer EVs over fossil fuel-operated cars and have a budget of up to 10 lakhs for purchasing an EV. The increasing cost of fossil fuel and low maintenance costs with zero emissions are the major factors considered by the respondents for buying an EV. However, limited charging stations were identified as the major limiting factor for buying an EV. The results also suggest that online reviews play a significant role in the decision-making process for EV buyers, and that the majority of the respondents place a high value on the variety of features and sustainability of EVs. The majority of the respondents are also willing to spend time recharging their EVs, with varying preferences for the duration of recharging. Finally, the results indicate that a majority of the respondents are willing to pay a higher initial price for an EV because of lower monthly ownership costs, while a portion of the respondents prioritize upfront cost over long-term savings.

VI. REFFERENCE

- 1. Abu-Alkeir, N. I. (2020). Factors influencing consumers buying intentions towards electric cars: The Arab customers' perspective. International Journal of Marketing Studies, 12(2), 127. https://doi.org/10.5539/ijms.v12n2p127
- 2. Broadbent, G., Metternicht, G., & Drozdzewski, D. (2019). An analysis of consumer incentives in support of electric vehicle uptake: An Australian case study. World Electric Vehicle Journal, 10(1), 11. https://doi.org/10.3390/wevj10010011
- 3. Kim, S., Choi, J., Yi, Y., & Kim, H. (2022). Analysis of influencing factors in purchasing electric vehicles using a structural equation model: Focused on Suwon City. Sustainability, 14(8), 4744. https://doi.org/10.3390/su14084744
- Sobiech-Grabka, K., Stankowska, A., & Jerzak, K. (2022). Determinants of electric cars purchase intention in Poland: Personal attitudes v. economic arguments. Energies, 15(9), 3078. https://doi.org/10.3390/en15093078
- 5. Sumathy Muniamuthu et al.,, S. M. (2018). Review on Electric Vehicles. International Journal of Mechanical and Production Engineering Research and Development, 8(2), 557–566. https://doi.org/10.24247/ijmperdapr201865

- 6. Trivedi, J., & Kishore, K. (2021). Investigating the factors influencing consumers' purchase intention for electric cars: An emerging market perspective. International Journal of Economics and Business Research, 1(1), 1. https://doi.org/10.1504/ijebr.2021.10028668
- 7. White, L. V., & Sintov, N. D. (2017). You are what you drive: Environmentalist and social innovator symbolism drives electric vehicle adoption intentions. Transportation Research Part A: Policy and Practice, 99, 94–113. https://doi.org/10.1016/j.tra.2017.03.008
- 8. Yan, Q., Qin, G., Zhang, M., & Xiao, B. (2019). Research on real purchasing behavior analysis of electric cars in Beijing based on Structural Equation Modeling and multinomial logit model. Sustainability, 11(20), 5870. https://doi.org/10.3390/su11205870
- 9. Study on the perception of customers intension of buying the small car ... (n.d.). Retrieved February 13, 2023, from https://www.researchgate.net/profile/Selvaraj-Narayanan-2/publication

