A STUDY ON FACTORS INFLUENCE BUYING BEHAVIOUR OF FOUR WHEELER ELECTRIC VEHICLE IN MADHYA PRADESH

Aman Mahajan Student Balaji Institute of International Business, Sri Balaji University, Pune
Neetu Kumari Assistant Professor, Balaji Institute of International Business, Sri Balaji University, Pune
Dr. Rashmi Mahajan Professor, Balaji Institute of International Business, Sri Balaji University, Pune

Abstract
The proposed research focuses on four wheelers electric vehicle in Madhya Pradesh region and for research purpose I have considered only potential customer who are going to buy their electric car in near future. So this research does not focus on customers who already own four wheelers electric vehicle and not have plan to buy electric car. The reasoning for this research is to find the perception of potential buyers who are will be in the position to buy their four wheeler electric car. Objective of this paper is to identify the relationship between the customer preference and factors. The factors considered in this paper are like price, mileage, purpose, colour, seating capacity, charging location, brand name etc.
This research paper consist of 201 responses from Madhya Pradesh region and primary data is collected structured questionnaire through social media platforms like WhatsApp, Instagram, LinkedIn, and facebook. We have used SPSS tool and applied frequency table analysis and one sample t-test for interpretation of data and identify related facts and findings. The result indicated that availability of charging points, cost of maintenance, mileage are the factors that have a significant relationship with the consumer preference. This research can be used by government agency for planning a road map for developing electric vehicle infrastructure and by electric car manufacturer in the new product development of their electric vehicle.

Introduction
Electric vehicles actually have their origin in the 1800s. The first American electric car was developed by William Morrison in 1891. His six-passenger wagon reached a top speed of 14 mph (though it is worth noting that in 1899 the land speed record was set by an electric vehicle at 66 mph). Electric vehicles are a growing market for new car purchases with more and more people making the switch from the gas station to an electrical outlet to fuel their vehicles. Electric vehicles use electricity as their primary fuel or use electricity along with a conventional engine to improve efficiency (plug-in hybrid vehicles). Drivers are purchasing the vehicles for all kinds of reasons. Many decide to buy when they hear about the savings. Drivers see around $700 in savings a year in gasoline expenses when they drive an average of 12,000 miles. They also can realize substantial tax credits that encourage low-emission and emissions-free driving. Additional benefits include environmental improvements because of reduced vehicle emissions, energy independence by way of using locally-generated electricity and high quality driving performance. Electric vehicle is a vehicle that consume electricity as a fuel. In India, government emphasis more on shifting from fuel based vehicle to electric vehicle as they have raise the prices of fuel, limit the import of fuel and fuel production to encourage people to shift from fuel based vehicle to electric vehicle. On other hand, government also provide subsidies on purchasing of an electric vehicle and along with this government take more initiative like No road tax, No toll tax for electric vehicle and government also plan to setup 69000 charging points in all over India to make 30% of vehicle as electric by 2030 as government collaborate with power supplies company like adani power, Tata power etc. On other hand, various automobile manufacturers also working hard on effective and efficient electric vehicle. In India, Some of the manufacturer include TATA, Mahindra, MG motors, Hyundai, tesla, etc. This research is all about the perception of potential buyer of four wheeler electric vehicle in Madhya Pradesh region. Perception refers to encompass a customer's impression, awareness or consciousness about a company or its offerings.
So, it is important to know the perception of potential buyers what they actually want in electric vehicle as they are the king of the market. Research study will help manufacturers and government to take

necessary initiative to develop electric vehicle and related infrastructure to encourage people to shift from fuel based vehicle to electric vehicle.

Literature review

As demand for the nonrenewable is increasing day by day so the research stated that EV are cost effective than fuel based vehicle as it have very low maintenance cost. On other hand, they discussed about some characteristics of EV like limited range, rechargeable battery and zero emission, which make EV more ecofriendly and pocket friendly. (**Jabeen, F., Olaru, D., Smith, B., Braunl, T., & Speidel, S, 2012**)

Role of government

Still India needs a lot of improvement relevant to government policies and developing infrastructure for Electric Vehicle. Government policies like FAME needs to be updated on regular basis. The study also stated that the barriers currently the consumers facing and range anxiety is one of the biggest challenge for consumer. (**Mr. A Rakesh Kumar, 2019**)

EV require heavy investment and private investors are less willing to invest until demand for the EV increases. On the other hand people also less willing to buy unless they know about effective charging points. Study also stated that despite of various government policies consumer have main disadvantage of EV is infrastructure. Study identified the strategy of demand and supply for EV. According to the author, by reducing cost of ownership we can increase the demand and it also improve production cost of EV. Advances in battery technology can be useful if consumer are disconnected due to limitation of EV range. (**Pandey, D., Manocha, D., & Saini, D, 2020**).

This research study stated that the time has finally come to introduce pollution free E.V's. But the main challenge is customer satisfaction & it will only be obtained when issues like high cost, limited range, etc. will be solved through research. India needs to heavily invest in the electricity generation like Hydro-Power Plants, Renewable Energy, Nuclear Energy, etc. to meet the growing demands of the electricity in our country and also to feed the electric vehicles with this electricity generated. At the end, it becomes necessary to modify the present Indian Industry and Power Generation Sector for the development and commercialization of the electric and hybrid vehicles for the public transportation. (**LUTHRA, G., 2017**).

Infrastructure and challenges

Being a nascent player in EV transportation, the most important barriers identified include state Government Incentives and Consumer Characteristics. All Consumers are enthusiastic to reduce pollution reduction but the various costs is high (purchasing cost, minimum operating cost, vehicle cost, payback period, operating cost, maintenance cost and electricity cost, resale) .hence, a cost-effective vehicle is required for the Indian markets. Participants in industry meets arranged by the Centre for Future Mobility in Delhi and Chennai mentioned high acquisition cost as the top restraint to EV penetration. The charging infrastructure, the electric vehicle performance safety concerns and new user anxiety affect EV adoption strongly Thus, in the perception of researcher, penetration pricing strategy is more suitable for Indian automobile sector which has a lot of middle class consumers . This indicates that Indian automobile policymakers must act on it to take advantage of growth in this sector as a lot of national fuel can be conserved by using these electric vehicles along with reduced emissions. (**Dr.Beena John Jiby &Dr .Rakesh Shirase, 2019**).

The study found that mobility and recharging characteristics were found to be most significant factors while RTO norms was considered to be the least significant characteristic affecting the buying decision of electric cars. The model developed from our study was 88% accurate and hence can be used for predicting the buying behaviour of customer. This study is of prime importance to the companies who wanted to launch electric cars in India. Based on the results of the study, the companies should increase its efforts to do promotion based on the significant factors of electric cars. (**Motwani, D. B., & Patil, A., 2019**)

The findings from the study are the critical roles of sharing economy and public utilities in the promotion of EV adoption, given the high cost of EV, lack of infrastructure and poor purchasing power

of Indian customers. The sharing economy perspective provides various opportunities for the government to manage the resources (electric-powered transport system) optimally. Further, the study compares the global perspective in assigning the target figures. **(Kumar, R., Jha, A., Damodaran, A., Bangwal, D., & Dwivedi, A., 2020).**

We established that vehicular emission is one of the major contributors to air pollution in New Delhi and that the number of vehicles, along with vehicular pollution will continue to increase if no measures were taken. Multiple aspects including policy and behavioural changes that will be required are discussed in the paper. Reduce petrol and diesel based two-wheeler on the road. Offer subsidized shared mobility electric fleet service to this target segment: Sell two-wheeler electric vehicles to this target segment. (**Vidhi, R., & Shrivastava, P., 2018).**

The authors identified 11 key factors influencing the adoption of EVs in this study. The vital considerations regarding the availability of charging technologies, its associated selection dilemma, emerging business models and public policy support were presented and discussed. Market penetration of EVs was found to be influenced mostly by the choice of charging technology. Further, the switching intention of consumers was deliberated upon to highlight the specific technological and psychological preferences of consumers. The accessibility of charging stations emerged as the most influential factor. The research findings indicated that harmony among stakeholders was missing in the Indian EVs ecosystem. Instead, there were discrete efforts by organizations. The EVs ecosystem required collaboration for improved adoption of the EVs. Further, the necessity to rectify the chaotic charging infrastructure in the country was highlighted as a major pain point for customers to adopt EV. **Bhattacharyya, S. S., & Thakre, S. (2020).**

The efficiency of an electric vehicle when driving 60-100 miles per a single charge raises the question: who will use this car? From a practical purpose, it is still difficult to go by electric vehicle at such long distance. It is unlikely that there are many of those who would buy an electric car for fun and status. In the end, unfortunately, most people almost on the entire territory of the former Soviet Union perceive the electric cars as a beautiful tale and are willing to "vote" for it. In light of the current achievements and challenges, it is necessary to find a real niche for such new 'product' as the electric car. The car is primarily used for comfort. When there are alternative, faster ways of moving around the city, people are stubbornly stuck in traffic. Expansion of roads leads to the fact that in the streets there are more and more cars and all repeats. **Gelmanova, Z. S., Zhabalova, G. G., Sivyakova, G. A., Lelikova, O. N., Onishchenko, O. N., Smailova, A. A., & Kamarova, S. N. (2018, May)**.

Research Question and /or Research Gap

Healthy environment leads to healthy life. We all are living in environment It provide us fresh air, water, food etc. to survive happily and healthy so it is our responsibility to protect environment. Today, business world become more complex as India moves towards industrialization, service production, agriculture production as which leads to increase in emissions and poisonous gases where transportation contributes a major role in increasing pollution in India which is nearly more than 50%. Currently, Transportation sector run on the non- renewal resources like petrol which is almost about to end as resources left to serve 20 years more only. Shifting from fuel based vehicle to electric vehicle is considered to be best solution to utilize renewal resources and to reduce the pollution and harmful gases from the fuel based vehicle.

Objectives

- To study the factors influencing the consumers behaviour towards four wheelers electric vehicle on Madhya Pradesh on the basis of price, mileage, colour, seating capacity, car brand, car type, purpose, breakdown assistance, maintenance cost, zero emission, availability of charging points and charging location preferred by the customer.
- Second key objective is to measure the market potential for four wheelers electric vehicle in Madhya Pradesh by identifying interest of consumer in buying four wheelers electric vehicle in near future.

Hypothesis: There is a significant relationship between the selected factors and consumer preference towards four wheelers electric vehicle.

Research Design

Understanding the factors influencing the customer preferences towards four wheelers electric vehicle has been carried out in Madhya Pradesh. This studied is carried out on the basis of both primary and secondary data. Primary data is collected by the structured questionnaire. Designed questionnaire has two parts, part one focus on the data related to the demographic characteristics of respondents and the second part measures the model variables. Secondary data has been collected from the variours articles, journals, research paper and websites. This study is descriptive and analytical. Analytical as it involves the analysis of the collected data and information. Respondents are collected by the convenience sampling method. Sample size is 201. Research study emphasized on consumer preference for 4 wheeler electric vehicles in state of Madhya Pradesh. In this study we tried to figure out the potential market for electric vehicles in Madhya Pradesh. This research is not restricted to any particular age group and target the all potential buyers of Madhya Pradesh region who looking forward to buy a four wheeler electric vehicle in near future.

Data Analysis: Reliability test

According to reliability test, we can conclude that research data is reliable as "good". We got alpha value as .869 which is more than p value 0.7. **In** survey, we asked responded like how much they considered price as factor while go for electric car? According to the data **78.6%** of the total respondent are considered the price as an important factor while go for electric car but on other hand remaining respondent (**21.4%**) are the neutral or not consider price as an important factor. Company should take care of price as well while pricing their products.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Based on below mention factors, rate your preferences for electric car- [PRICE]	201	4.10	1.034	.073

One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	T	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Based on below mention factors, rate your preferences for electric car- [PRICE]	56.186	200	.000	4.100	3.96	4.24

According to above analysis, as we can see $p<0.001$, **hence we reject null hypothesis**. There we conclude, price has very important role to play in buying CONSUMER PREFERENCE of people if they plan to buy electric car.

Rate your preferences for electric car on the basis of Mileage

If we talk about the consumer preference towards mileage so according to the responses **81.1%** of the respondent considered mileage as an important factor while shifting towards electric car. On other hand, very less people considered mileage as an important factor. According to this research, mileage is among top three factors that people are consider as while buying electric car, mileage is the first question that arises by the customer.

What minimum mileage would you expect from an electric car in a single charge?

Mileage is an important factor, which shows that how many km car can run in a single charge? According to the data, **45%** of respondents are considered minimum mileage as **301 km – 400 km**

per charge followed by **26.9%** respondent considered minimum mileage as 401 km – 500 km per charge. So company should more focus on production of electric car with minimum mileage of 300 km per charge.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Based on below mention factors, rate your preferences for electric car- [MILEAGE]	201	4.20	.971	.069

One-Sample Test

	Test Value = 0					
			(2-		95% Confidence Interval of the Difference	
	t	Df	Sig. tailed)	Mean Difference	Lower	Upper
Based on below mention factors, rate your preferences for electric car- [MILEAGE]	61.371	200	.000	4.204	4.07	4.34

According to above analysis, as we can see p<0.001, **hence we reject null hypothesis**. There we conclude, mileage has very important role to play in buying behaviour of people if they plan to buy electric car.

Rate your preferences for electric car on the basis of charging points?

No car can run for unlimited distance it need to refuel which is a one of the factor should be consider. According to the responses **78.6%** of the respondent considered availability of charging point is an important factor while go electric car whereas **21.5%** respondent not consider too much giving important to charging points. Company can collaborate with electricity provider for building hyper charging network before launch of the car. Like TATA motors have collaboration with TATA power.

One-Sample Statistics				
				Std. Error Mean
	N	Mean	Std. Deviation	
Based on below mention factors, rate your preferences for electric car- [AVAILABILITY OF CHARGING POINTS]	201	4.17	1.214	.086

One-Sample Test

	Test Value = 0				95% Confidence Interval of the Difference	
	t	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Based on below mention factors, rate your preferences for electric car[AVAILABILITY OF CHARGING POINTS]	48.735	200	.000	4.174	4.01	4.34

According to above analysis, as we can see p<0.001, **hence we reject null hypothesis**. There we conclude, AVAILABILITY OF CHARGING POINTS has very important role to play in buying behaviour of people if they plan to buy electric car.

Rate your preferences for electric car on the basis of breakdown assistant?

If we talk about factor as breakdown assistance so according to the data **75.1%** of the respondent considered breakdown assistance as an important factor on the other hand, **24.9%** respondent not considered it as an important factor.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Based on below mention factors, rate your preferences for electric car- [BREAKDOWN ASSISTANCE]	201	3.98	1.104	.078

One-Sample Test

	Test Value = 0				95% Confidence Interval of the Difference	
	t	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Based on below mention factors,	51.096	200	.000	3.980	3.83	4.13

rate your preferences for electric car- [BREAKDOWN ASSISTANCE]						

According to above analysis, as we can see p<0.001, **hence we reject null hypothesis**. There we conclude, price has very important role to play in buying behaviour of people if they plan to buy electric car.

Rate your preferences for electric car on the basis of seating capacity?

Perception towards seating capacity may vary consumer to consumer as it depends on the number of family members and design of the car they want. According to the responses 72.6% respondents' rate either 4 or 5 as they considered seating capacity as a important factor. On other hand 18.9% of respondents are neutral and 8.5% respondents not considered seating capacity as an important factor.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Based on below mention factors, rate your preferences for electric car- [SEATING CAPACITY]	201	3.96	1.011	.071

One-Sample Test

	Test Value = 0					
			(2-tailed)		95% Confidence Interval of the Difference	
	t	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Based on below mention factors, rate your preferences for electric car- [SEATING CAPACITY]	55.441	200	.000	3.955	3.81	4.10

According to above analysis, as we can see p<0.001, **hence we reject null hypothesis**. There we conclude, SEATING CAPACITY has very important role to play in buying behaviour of people if they plan to buy electric car.

Rate your preferences for electric car on the basis of zero emission?

Zero emission is the only factor based on which government try to promote electric vehicle industry. Data shows how much people are actually cares about pollution. According to the responses 70.3% of

total respondents are highly concern about pollution as they considered zero emission as an important factor. On other hand, 17.9% respondent are not sure they are neutral. **One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
Based on below mention factors, rate your preferences for electric car- [ZERO EMISSION]	201	3.94	1.147	.081

One-Sample Test

	Test Value = 0					
				(2-	95% Confidence Interval of the Difference	
	t	Df	Sig. tailed)	Mean Difference	Lower	Upper
Based on below mention factors, rate your preferences for electric car[ZERO EMISSION]	48.689	200	.000	3.940	3.78	4.10

According to above analysis, as we can see p<0.001, **hence we reject null hypothesis**. There we conclude, ZERO EMISSION has very important role to play in buying behaviour of people if they plan to buy electric car.

Rate your preferences for electric car on the basis of cost of maintenance?

Electric cars required low maintenance cost comparatively because electric vehicle does not consist of engine, but it based on battery. According to the responses 76.2% respondents are considered cost of maintenance as an important factor while purchasing electric cars.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Based on below mention factors, rate your preferences for electric car- [COST OF MAINTENANCE]	201	4.10	1.102	.078

One-Sample Test

	Test Value = 0				95% Confidence Interval of the Difference	
	t	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Based on below mention factors, rate your preferences for electric car- [COST OF MAINTENANCE]	52.813	200	.000	4.104	3.95	4.26

According to above analysis, as we can see p<0.001, **hence we reject null hypothesis**. There we conclude, COST OF MAINTENANCE has very important role to play in buying behaviour of people if they plan to buy electric car.

Rate your preferences for electric car on the basis of car brand   ?

BRAND NAME is an also an important factor. Although it may vary consumer to consumer based on their loyalty, past experience with product and service , brand reputation, social status etc. according to the responses 66.6% of total respondents are consider brand name is an important factor while go for electric car. On other hand, 22.4% respondents also consider brand name as neutral.19.9% respondents prefer the Tata brand car followed by Tesla, Hundai,Mahindra and MG.

One-Sample Statistics	N	Mean	Std. Deviation	Std. Error Mean
Based on below mention factors, rate your preferences for electric car- [BRAND NAME]	201	3.88	1.044	.074

One-Sample Test

	Test Value = 0				95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Based on below mention factors, rate your preferences for electric car- [BRAND NAME]	52.642	200	.000	3.876	3.73	4.02

According to above analysis, as we can see p<0.001, **hence we reject null hypothesis**. There we conclude, BRAND NAME has very important role to play in buying behaviour of people if they plan to buy electric car.

Do you have any charging station near you?

When we talk about electric four wheeler so charging points become the first thing that consumer looks for. According to the responses 79.1% respondents does not have charging station near them and that is the only reason why people are not shifting towards electric four wheeler. On other hand only 20.9% people have charging station near them. Basically data shows the scope for the charging station businesses in the state. But here, question arise where we need to plot the charging point so that consumer will not face any charging issue in any kind of travelling may be long or short

What would be the preferred location for charging points?

When we asked the respondents for location for charging points so according to the responses 45.8% of the respondents prefer charging point at home / apartment's parking. On other hand 38.8% respondents prefer charging point at petrol pumps and very less number of respondents prefer highway restaurant and commercial complex. Data shows companies should plot their charging points at petrol pumps and provide home/parking lot fast charging facility. **One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
What would be the preferred location for charging points?	201	1.08	1.097	.077

One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
What would be the preferred location for charging points?	13.951	200	.000	1.080	.93	1.23

According to above analysis, as we can see p<0.001, **hence we reject null hypothesis**. There we conclude, location for charging points has very important role to play in buying behaviour of people if they plan to buy electric car.

Rate your preferences for electric car based on the colour?

Colour is one of the factor that is vary consumer to consumer. Depend on consumer's taste and preferences. According to the responses 46.8% people consider this factors as impotent. on other hand, 30.3 % respondents are neutral in terms of colour. So basically data shows, consumer are more inclined towards features and other mentioned factor rather than colour.

Colour may vary consumer to consumer. We know less people are considered colour as important factor but we asked respondents to at least opt the colour. According to the responses 47.3% of people are more inclined towards dark edition electric four wheeler followed by 21.4% respondent inclined towards white colour followed by silver and grey as 14.4% and 12.4% respectively.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Based on below mention factors, rate your preferences for electric car- [COLOUR]	201	3.35	1.196	.084

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower	Upper
Based on below mention factors, rate your preferences for electric car- [COLOUR]	39.761	200	.000	3.353	3.19	3.52

According to above analysis, as we can see p<0.001, **hence we reject null hypothesis**. There we conclude, COLOUR has very important role to play in buying behaviour of people if they plan to buy electric car.

Based on below mention factors, rate your preferences for electric car on the basis of purpose?
Purpose create the need for the electric four wheeler as location of charging station and mileage of electric vehicle is completely depends on purpose. According to the responses 68.6% of respondents consider purpose as an important factor which defines the mileage consumer should buy.

For what purpose your car utilize mostly?
If we talk about particularly purpose, according to the response 27.9% respondents utilize car for occasional drive followed by 26.9% respondents utilize cars for commuting to office and
26.9% respondent utilize car for weekend drive followed by 17.4% intercity.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Based on below mention factors, rate your preferences for electric car- [PURPOSE]	201	3.93	1.056	.074

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower	Upper
Based on below mention factors, rate your preferences for electric car- [PURPOSE]	52.768	200	.000	3.930	3.78	4.08

According to above analysis, as we can see p<0.001, hence we reject null hypothesis. There we conclude, PURPOSE has very important role to play in buying behaviour of people if they plan to buy electric car.

FINDINGS

According to data compiled, 68.5% respondents say that they are currently using petrol/diesel car, whereas 21.7% say that they don't have 4 wheelers. Only 2% are using HYBRID (petrol + electric vehicles)**.** This shows that most of the people are not using electric vehicle and there is huge scope for the four wheeler electric vehicle in Madhya Pradesh region.

When we see top 3 factors affecting buying behavior, most people are more inclined towards Availability of charging points, Cost of maintenance, Mileage**.**

Also almost 79.3% say that they don't have charging station near them which is one of the most preferred factor while buying electric vehicle.45.8% prefer charging points at home/apartment parking and 38.9% prefer at petrol pumps. Social media is most preferred place from where people get to know about electric vehicle. Most favored brand for electric four wheeler vehicle are the Tata followed by the Tesla, Hyundai and Mahindra. Out of 221 respondents, from non-users **73.4%** people say that they look forward to buy electric vehicle in future.

SUGGESTION/ RECOMMENDATION

Hence according to data above, we can say that

- There is huge potential market for electric vehicles in MADHYA PRADESH as most people look forward to buy electric vehicle in future and today most of them are not using electric vehicles.
- Companies can use social media as an advertisement strategy to promote their electric vehicle.
- Companies should work on remote charging points at home/parking and hyper charging networks at fuel stations.
- Companies should more focus on mileage and cost of maintenance.
- Initially companies can work with Sedan electric variant.
- Government should provide initiative to private charging network businesses.

Conclusion

From the above observation, we can say that consumer believe that electric vehicles have a positive impact on environmental protection and objective information. It is recommended that electric vehicle manufacturing company should highlights the environmental protection and green life like themes to increase consumer's cognition and preferences for electric vehicle. Consumer believe that the number of charging piles for electric vehicle will affect their purchase intension. Therefore, it is suggested that the electric vehicle manufacturers should adopt better battery service strategies and also on the charging points in order to release the difficulty of charging electric vehicle. They have to focus on the development of batteries with higher capacities will favor the use of fastest and most powerful charging points alone with the wireless charging technologies. One of the observation, we can say that customers give most important to the Cost of maintenance and mileage factor before making the purchase decision. Therefore, Manufacturer's should work on the strategies that can reduce the maintenance cost and the help in increasing the mileage for the electric vehicle.

Future Research scope:

It is recommended that future researchers connect industry and consumers from industrial and technologies prospective of electric vehicle.

Due to time and resources limitation, this research only collected questionnaire from the Madhya Pradesh. Future, researchers can explore their research in different regions to provide references for manufacturing units and government for electric vehicle promotion.

This study doesn't focus on the electric vehicle related technologies. So,it is recommended that researchers can investigate about the technologies related approaches for future research.

References / Bibliography

1.LUTHRA, GAGANDEEP.(2017,june). STRUGGLES FACED IN THE RESEARCH AND DEVELOPMENT OF ELECTRIC VEHICLES IN INDIA: PRESENT SCENARIO. International

Journal of Mechanical And Production Engineering. Retrieved from http://www.iraj.in/journal/journal_file/journal_pdf/2-382-150408869934-37.pdf.

2. Khurana, Anil.et al.(2019,Dec 5). A Study on the Adoption of Electric Vehicles in India: The Mediating Role of Attitude. Vision: The journal of Business Perspective. Retrieved from https://journals.sagepub.com/doi/full/10.1177/0972262919875548.

3.Jabeen,fakhra.Olaru,Doina.Smith,Brett.Braunl,Thomas.Speidel,Stuart.(2014,January). Acceptability of Electric Vehicles: Findings from a driver survey. The University of Western Australia, School of Electrical and Computer Engineering, Perth, Australia.Retrieved from https://www.researchgate.net/publication/265883429_Acceptability_of_Electric_Vehicles_Findings_from_a_driver_survey

4.Patil ,Abhishek.Motwani,Dr Bharti(2019,May). CUSTOMER BUYING INTENTION TOWARDS ELECTRIC VEHICLE IN INDIA. International Journal of Mechanical Engineering and Technology (IJMET).Retieved from https://iaeme.com/MasterAdmin/Journal_uploads/IJMET/VOLUME_10_ISSUE_5/IJMET_10_ 05_041.pdf.

5.Gelmanova,Z S.Zhabaloya,G G.et al(2018). Electric cars. Advantages and disadvantages. : Journal of Physics: Conf. Series 1015 (2018) 052029.Retrieved from https://iopscience.iop.org/article/10.1088/1742-6596/1015/5/052029/pdf

6.Kumar,A. Rakesh. Padmanaban, Dr. Sanjeevikumar(2019.April-Jun). Electric cars. Advantages and disadvantages. IEEE india. Vol .14. Retrieved from the https://www.researchgate.net/profile/P-Sanjeevikumar/publication/331876467_Electric_Vehicles_for_India_Overview_and_Challenges/links/5d03d15ca6fdcc39f11a8e5b/Electric-Vehicles-for-India-Overview-and-Challenges.pdf 7. John Jiby, Dr.Beena. Shirase, Dr.Rakesh(2019,January). Present and Future Trends for Electric Vehicles in India. UGC Approval No:40934, CASS-ISSN:2581-6403,Retrieved from http://files.hostgator.co.in/hostgator258850/file/presentandfuturetrendsforelectricvehiclesinindi a.pdf

8.Pandey,Dr Anoop.Manocha,Dr Sanjay.Saini,Dr Pankaj(2020,April). A STUDY ON AN AUTOMOBILE REVOLUTION AND FUTURE OF ELECTRIC CARS IN INDIA. International Journal of Management.Retrieved from https://scholar.google.com/citations?view_op=view_citation&hl=th&user=QAm0M7kAAAAJ&citation_for_view=QAm0M7kAAAAJ:UeHWp8X0CEIC

9. Advanced Energy, a nonprofit energy consulting firm.Touchstore energy cooperatives. https://www.touchstoneenergy.com/sites/tse/files/documents/The-Electric-Vehicle-Evolution-Web-view.pdf

10.NITI aayog. INDIA'S ENERGY STORAGE MISSION: A Make-in-India Opportunity for Globally Competitive Battery Manufacturing.Retrieved from https://www.niti.gov.in/writereaddata/files/document_publication/India-Energy-StorageMission.pdf