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Assessment of the impact of Government policy on citizens' perceptions on vehicle buying behaviour, the government's infrastructure development in public transportation, and policy shifts towards e-vehicles with a specific reference to Mumbai Metro and Maha Mumbai region.

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ABSTRACT:
The increase in Urbanization and migration in Mumbai has created significant problem of congestion, pollution growing consumption of Cars. The research paper evaluates the impact of government policies on purchase of cars and environmental awareness and shift towards the purchase of Electronic vehicle given tax exemptions by the government. By using mixed method for research it's been concluded that government exemptions are not only enough to increase the consumption of the electronic vehicles , considering other bottlenecks in infrastructure, high prices and scepticism of consumer about the purchase of the vehicles run on electricity. Policies related to reduction in taxes are having less impact due to constraints like more affordability of fossil fuel vehicles, non-availability of charging station, resale values of vehicles. The paper offers the insight for crafting vehicular policy to the government to encourage the sustainable use of vehicles in Mumbai.

Keywords: Sustainability, Electronic vehicles, taxation, environment, consumer behaviour congestion , urbanization

INTRODUCTION:

Globally initiative is taken to reduce global warming by 2025 up to 2 degrees Celsius. One of the most promising effects to reduce global warming is switching to electric passenger vehicles. The expected outcome will not be achieved if these vehicles are powered by using fossil fuels. A four wheeler EV and normal vehicles' carbon dioxide emissions are compared noting that only difference would be as to how they run. We will also consider its impact on two wheelers. We shall also understand the problems and potential solutions that EVs face while attending sustainability.

India is a country which is 2nd largest in population of 130 million people find it problematic to breathe due to air pollution as it is the greatest threats globally. For a very long-time vehicles in India have been running on petrol and diesel. In the lasts decade CNG and electric vehicles have started in metropolitan cities. The government is encouraging electric vehicles throughout the world. The cost of such electric vehicles are high still it is promoted as they are environmentally friendly. EV vehicle cost per kilometre is cheaper compared to ICE vehicle. EVs are charged mostly in garages thus if they install solar panel at home, it will save more money. The maintenance cost of EVs is cheaper as they do not use internal combustion engines. Thus, to beat the crisis EVs are the best alternative solutions available. Many automobile companies are expanding the market by introducing EVs. Promoting EVs is benefiting for both customers and nations as it helps in reducing pollution and fuel dependency. EVs can help in reducing pollutant gas and greenhouse emissions in transportation sector. Most of the developed and developing countries have signed declaration that by 2040 they would sale cars with zero emissions, but India did not sign this agreement. India has taken many other actions such as FAME (Faster Adoption of Electric (Hybrid) Vehicles in India) and E-AMRIT, National Electric Mobility Mission Plan (2020), VEHICLE SCRAPPAGE POLICY, etc. EVs are not affordable to a larger section of the society and since India is at a developing stage there is inadequate infrastructure for this. The travelling rage of EVs is less compared to ICEVs. We have considered KIA SELTOS for combustion vehicle, and TATA NEXON for EVs.

Electronic vehicles are very much beneficial for the environment considering it low-cost management. There are three major types of the electronic vehicles one which is operated by battery, another is in hybrid form, and the third one is in form of plug-in hybrid EV. Out of three Battery operated vehicles have achieved high level of popularity due to its efficiency, less cost and minimum harmful to the Environment. As there is not much research done on this topic specifically on Mumbai region so we are conducting survey and trying to highlight the role of electronic vehicles in the reduction of pollution and support received by the government to encourage the Production and purchase of electronic vehicles in India and perception of consumer towards the purchase of vehicles while they being aware about the environmental impact of use of vehicle using fossil fuel.

The major sources of the electricity production have contributed largely for the carbon emission and impact of greenhouse gases. It is need of an hour to have more and wide use of clean energy specially country like India where day by day demands are increasing for the Electricity considering increase in population as one of the major reasons for increase in demand. India has plans for development of nation which is resulting in high and increasing demand for energy, which in turn has resulted in major demand of cleaner energy considering the less harm to the environment.

Mumbai is a hub of finance in India has witnessed the exorbitant use of cars in recent year due to expansion of economy, insufficient public transportation and rise in income. There are many other factors which is contributing to growth of vehicle usage like low cost, change in the attitude of the consumers lifestyle, high aspiration, easy availability of loan, concession on purchase of EV etc. Two wheelers dominate the Mumbai's market of vehicles followed by the passenger vehicles. Hatchbacks were amongst the popularly demanded but demand has changed towards the SUVs dominating the market due to perceived presence and safety. Electronic vehicles gained popularity after introduction of incentive offered by Maharashtra government under Maharashtra Electronic Vehicles policy 2021 which gives exemption in taxes on purchase and subsidy to the producers of the EV.

Choices of consumers regarding purchase of vehicles has kept on changing due to shift in the policy, prices of fuel and changing technology. Key trend in last 20 years was of shifting from petrol vehicle to CNG vehicles due to its low cost less environmental effect. At the same time it is witnessed that demand for EV in Mumbai are increasing showing the environmental awareness of people but increase is not at the pace which is expected, higher rate. Considering charging infrastructure and very high cost of purchase as major hurdles for the mass purchase of EVs. Government should do tie up with the EV producing companies to provide the charging stations and encourage to use maximum available schemes for the production to reduce the cost of production.

REVIEW OF LITERATURE:

Eden Samual Parthiban and others (2007) in their paper have conducted study on the consumer purchase behaviour of electric vehicle by using TPB model for understanding the behaviour of consumer while buying the electrical vehicle and have concluded that considering attitude, social norm and perceived control behaviour there is a positive correlation between the buying behaviour and environmental concern which will result in the sustainable buying of vehicles in future having positive impact on environment.

Sanjib Purohit and Dripto Mukhopadhyay (2007) in the paper has focused on analysis of energy used in India and its impact on people and ways to stop this carbon emission by imposing various taxes on industries for unregulated emission of carbon for causing harm to environment as well as defining the limits for the emission of carbon to have sustainable use of it. Authors have concluded that only fiscal measures regarding the carbon emission may not help to improvise the GDP or to reduce the use of excess carbon producing machinery, it should by coupled with other Government policy then only it may be helpful to have effective implication of taxes related to carbon emission.

Kathrine Monika, Josep Rialp Alex rialp in (2024) has explored on various methods the government initiate for the adoption more purchase of electric vehicles by doing analysis of various different groups of consumers having different intentions of purchase of EV. Further they have suggested that government should focus on providing incentives to industries to produce more EVs, raising awareness of use of more EVs and moving towards sustainable use of vehicles, emphasizing the importance of use of electronic vehicles resulting into protection of environment may change the behaviour of consumer in purchase of vehicles.

In the research article by Shantanu Gupta and others, (2024) , they have published a detailed survey of impact of awareness and knowledge of consumer by using TAM and TPB research models. It has analysed how the social impact affects the intention of buying EVs subjectively. Findings of the study even throws light on important aspect like environmental consequences changes the buying behaviour of the consumer in Favor of purchase of EVs. Study even helped in finding out that Indian consumers are ready to transit in favour of buying EVs to avoid the serious issues like global warming, climate change and air pollution arising due to use of traditional combustion engines. Study indicates Indian consumers expect government to introduce lucrative financial and non-financial incentives to promote the purchase of EV in form of tax exemption, subsidies on buying of EVs, concession on servicing of vehicles, free parking of EVs etc.

Ashish Chaturvedi and Others in the article on (2014) have concluded that there is ample scope for imposing taxation and different fiscal instruments in imposing on different uses of environmental services in India. Fiscal instruments can help in reducing poverty in India provided attached to different goals undertaken by the government in context of environmental protection. While considering issue of equity and environmental consideration the government should even consider administrative feasibility, and political stability is also to be considered while making policy related to environment and fiscal imposition of various taxes and other fiscal measures. While considering the imposition of taxation and other fiscal measures, the future impact of these taxes on economy and its responsiveness to the new tax introduced like green tax.

In the paper on by Kuashik Dhar (2024) has undertaken the survey of consumer behaviour on purchasing behaviour of EV in Indian emerging market. The research illuminates the role of social issues related to environment and creation of positive social image by adoption of use of EV. The result of the study emphasizes that focus is to be given on the availability and ease of use of EV and promotion of its use linking to protect the environment. With the growing young population in India and income of middle class the research offers the findings on all possibilities of growth of and expansion of market for the EV as well as evolution by 2030.

Deepak Rajagopal, has published paper (2023) highlighting the possibilities of impact on government revenue and employment in the sector of government associated with the production of vehicles having more carbon emission as compared to EVs. Study further in investigates that providing subsidies and employment opportunities in the EV sector run by government may offset the negative impact of transition. Paper gives clear ideas regarding the cost and benefit of imposition of government policies will result in the increase in government revenue and reduction the emission of greenhouse gases.

Abhishek Shrivastava and others in the paper (2022) has highlighted the impact of global production of electric vehicles and role of government policy in promotion of it. The paper tries to emphasis on the taxation imposed on gasoline vehicles may have positive impact on the purchase of electronic vehicle provided manufactures of the GV should not get affected while designing any government policy for the promotion purchase of EV. Researchers have made various models to show the different policy impact on the social welfare, production, selling of electric vehicles.

Naresh Anguralia and Shamsher Singh in their paper (2024) on have given holistic view on strategy of introducing green tax policies in automobile sector must consider the interest of various stakeholders, considering the economic cost and benefits and goals related to environment. Emphasis is on the reduction and promotion of fuel efficiency in the sector by introducing green tax policies which promotes the use of electric and hybrid vehicles. As per analysis done for environmentally friendly vehicles higher incentive or tax reduction should be implemented and more taxes should be imposed on for more polluting vehicles and less fuel-efficient vehicles.

Mnaav Baju Notaria in his paper (2021) on has concluded his analysis with the outcome that , with the partnership of public and private sector manufacturing of electronic vehicles can be boosted. People with high understanding of depletion of environment are willing to purchase the vehicle which will be operated on battery by any kind of vehicles be it two wheeler or four wheeler. As well as author even asserts that with the growing population in Mumbai it is required to reduce the use of fossil fuel vehicle and analysis shows that even user of vehicles are also highly aware of it. At the same time there is requirement of more charging stations and servicing station of Electronic vehicles which is not sufficient as compared to population growth of Mumbai and suggested to take necessary measures.

SIGNIFICANCE:

The study will be able to identify the barriers faced by the consumer while buying the EV, which will help government to frame policies related to the EVs accordingly. Study clearly points out the readiness of the government to support the more production and purchase of EVs. Study will help to identify the satisfaction level of early purchaser of EV and will highlight the gaps. At national level more use of EV result in less dependency on the import and purchase of oil during global tensions. There will be scope of tie ups for the EV manufacturing companies due to its increase in demand which may result in low cost production. It will highlight the market scope for the expanding production of the EVs. Environment protection considering the major factor for the use of EV will be considered in depth.

SCOPE OF THE STUDY:

In future study can be undertaken for the entire Maharashtra and policy implication and taxes implemented can by analysed. Study can be extended at national level considering the factors affecting long term effect of government incentives, policies related to sustainable use of transportation and impact of taxation on fuel prices.

Future research can also compare Indian policies with global policies to achieve successful adoption of use of EVs by masses. In addition to this role of role of AI in traffic management and reducing the carbon emission to protect the environment can be studied

RESEARCH METHODOLOGY:

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Change in vehicular preferences considering changes in the worldwide technologies and to meet with the global environmental changeless related to pollution norms it is vital to know how Mumbai is transforming on the private and public sector transportation system in relations with customers preferences and governmental policies. This study considers secondary data on existing policies and practices whereas primary data was collected to know customers and consumers thinking towards fuel preferences, approaches towards electronic vehicles and related infrastructure. Primary data was collected through survey technique by Probability - Simple Random and Non probability – Convenience methods whereas secondary data is equally matters and collected through web resources mainly.

To justify research approach following objectives and hypotheses were framed and tested. Data were collected from total 225 samples and for testing hypotheses – Non probability method – Chi square and parametric "t"- test were used along with cross tabulation were done in order to check variables linearity and relations between them

Objectives:

1. To assess government's policies impact buying and using behaviour of Consumers
2. To know citizens understanding on Public Transportations
3. To research shift of consumers towards e-vehicles and their approach towards sustainability
4. To understand barriers to adoption of e-vehicles in MMR and Maha Mumbai region.

Hypotheses:

1. # H01 – There is no relationship between Government's policy and vehicles buying
2. behaviour of the consumers
3. # H11 – Government's policy is impacting vehicle buying behaviour of the consumers.
4. # H02 – Consumer's buying behaviour has no relations to sustainable approach
5. # H12 - Consumer's buying choices are always future oriented
6. # H03 - Taxation policies will have no effect on vehicle purchases due to factors
7. unrelated to economic incentives and conditions
8. # H13 - Taxation policies will have substantial effect on vehicle purchases due to factors unrelated to economic incentives and conditions

DATA ANALYSIS & INTERPRETATION:

Hypothesis Testing:

Hypothesis 1:

H01 – There is no relationship between Government's policy and vehicles buying behaviour of the consumers

H11 – Government's policy is impacting vehicle buying behaviour of the consumers.

Govt policies towards vehicles selection and buying * Policies towards sustainability Crosstabulation

		How aware are you of government policies related to sustainability							Total
			No idea	Not aware at all	Somewhat	Somewhat aware	Very aware	Very Aware	
		11	0	0	0	0	0	0	11
	Yes, significantly	0	2	4	9	18	11	5	49
	Somewhat	0	1	6	20	27	19	8	81
	Not at all	0	3	3	10	12	17	3	48
	No impact	0	3	5	6	15	13	5	47
Total		11	9	18	45	72	60	21	225

Non = Parametric Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)

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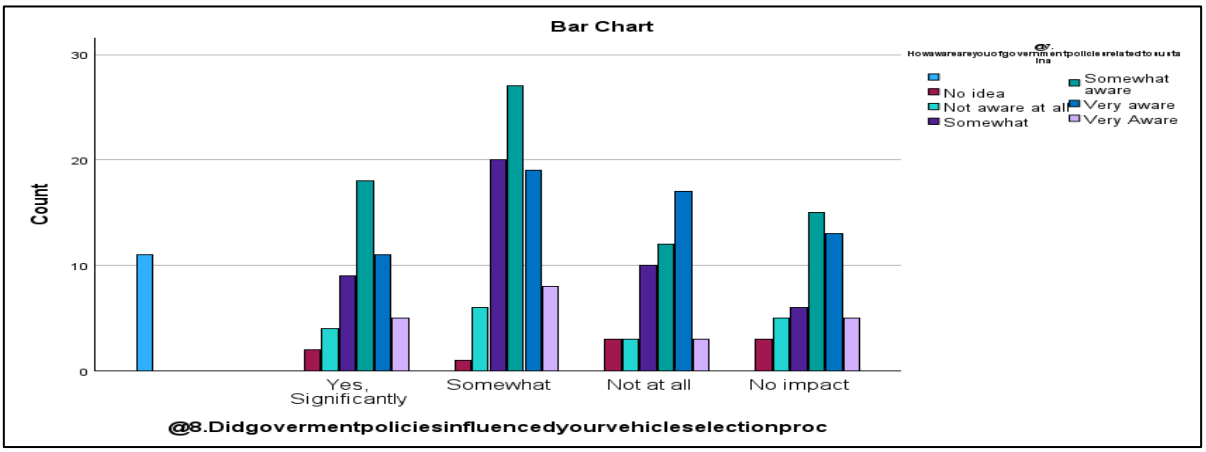
Pearson Chi-Square	245.918[a]	24	<.001
Likelihood Ratio	98.878	24	<.001
N of Valid Cases	225		
a. 21 cells (60.0%) have expected count less than 5. The minimum expected count is .42.			

Source: Primary



Interpretation:
Government's policies towards sustainability and awareness amongst customers and buyers were tested in relationship to said hypothesis with the help of non-parametric Chi square test and value what we have got is 245.19 at 24 degree; s of freedom which indicates very high relationship between variables we have tested indicates significant relationship between observes and expected frequencies leads to rejection of null hypothesis i.e. customers are not aware of government's policies and accepts alternative hypothesis that policy of government's are actually playing major role in vehicle selection and buyer always has this knowledge of current policies. Even cross-tabulation indicates that customers are quite aware of policies at the time of buying or in fact they see it is an opportunity to take advantage of it.

Hypothesis 2:
H02 – Consumer's buying behaviour has no relations to sustainable approach
H12 - Consumer's buying choices are always future oriented

Most important factor influencing your purchase decisions? *
Government policies (such as taxes, subsidies, import duties, and regulations) influence my decision when purchasing a vehicle."

		Government policies (such as taxes, subsidies, import duties, and regulations) influence my decision when purchasing a vehicle."					
			1	2	3	4	Total
17. Most important factor influencing your purchase decisions?		2	0	0	0	0	2
	1	0	0	27	36	9	72
	2	0	0	18	0	0	18
	3	0	9	45	63	9	126
	4	0	0	9	0	0	9
Total		2	9	99	99	18	227

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	273.985[a]	16	<.001
Likelihood Ratio	81.574	16	<.001
N of Valid Cases	227		

a. 17 cells (68.0%) have expected count less than 5. The minimum expected count is .02.
Independent sample T Test for Customer Choices and Government's Policies considering sustainability

	Statistic	

				Bias	Std. Error	95% Confidence Interval	
						Lower	Upper
Pair 1	Government policies (such as taxes, subsidies, import duties, and regulations) influence my decision when purchasing a vehicle."	Mean	2.64	.00	.06	2.53	2.75
		N	225				
		Std. Deviation	.891	-.002	.056	.775	1.001
		Std. Error Mean	.059				
	Select appropriate option on a 1 - 5 , whereas 1 is Strongly disagree and 5 is strongly agree [There are enough public transportation options available to meet my daily commuting needs.]	Mean	2.88	.00	.09	2.70	3.06
		N	225				
		Std. Deviation	1.369	-.004	.040	1.285	1.438
		Std. Error Mean	.091				
Pair 2	Government policies (such as taxes, subsidies, import duties, and regulations) influence my decision when purchasing a vehicle."	Mean	2.64	.00	.06	2.53	2.75
		N	225				
		Std. Deviation	.891	-.002	.056	.775	1.001
		Std. Error Mean	.059				
	Select appropriate option on a 1 - 5 , whereas 1 is Strongly disagree and 5 is strongly agree [I find it easy to transfer between different modes of public transport (e.g., bus to metro, train to tram).]	Mean	2.72	.00	.08	2.56	2.88
		N	225				
		Std. Deviation	1.252	-.003	.036	1.183	1.318
		Std. Error Mean	.083				
Pair 3	Government policies (such as taxes, subsidies, import duties, and regulations) influence my decision when purchasing a vehicle."	Mean	2.64	.00	.06	2.53	2.75
		N	225				
		Std. Deviation	.891	-.002	.056	.775	1.001
		Std. Error Mean	.059				
	20. Select appropriate option on a 1 - 5, whereas 1 is Strongly disagree and 5 is strongly agree [Public transportation in my city operates at convenient hours for my travel needs.]	Mean	2.96	.00	.09	2.79	3.13
		N	225				
		Std. Deviation	1.374	-.004	.040	1.283	1.446
		Std. Error Mean	.092				

a. Unless otherwise noted, bootstrap results are based on 225 bootstrap samples

Source: Primary data

Interpretations:

To test the second hypothesis i.e. buying behaviour has always been future oriented and has sustainable approach we used nonparametric chi square and Parametric – Independent sample t- test at 95% level of confidence. The chi square value of observed and expected frequencies is 273.985 indicates strong relationship amongst the variables tested, leading to rejection of null hypothesis – no relationship between sustainability and buying behaviour whereas accept alternate hypothesis that consumers are always sustainable oriented at the time of buying vehicles.

The Independent sample t- test results i.e. p value is 0.15 calculated on the basis of sample mean, population mean, and standard deviation indicates 15% chances of rejecting null hypothesis indicates acceptance of null hypothesis i.e. no relationship between sustainability and buying vehicle behaviour and rejecting consideration between sustainability approaches while buying vehicle.

Hypothesis – 03

H03 - Taxation policies will have no effect on vehicle purchases due to factors

unrelated to economic incentives and conditions
H13 - Taxation policies will have substantial effect on vehicle purchases due to factors unrelated to economic incentives and conditions

Paired Samples Statistics

						95% Confidence Interval	
			Statistic	Bias	Std. Error	Lower	Upper
Pair 1	In your opinion, what should the government prioritize to increase sustainable vehicle adoption?	Mean	2.48	.00	.04	2.40	2.56
		N	225				
		Std. Deviation	.701	-.002	.030	.644	.772
		Std. Error Mean	.047				
	Government policies (such as taxes, subsidies, import duties, and regulations) influence my decision when purchasing a vehicle."	Mean	2.64	.00	.06	2.53	2.75
		N	225				
		Std. Deviation	.891	-.007	.055	.779	.999
		Std. Error Mean	.059				

a. Unless otherwise noted, bootstrap results are based on 225 bootstrap samples

Source: Primary

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	53.182[a]	9	<.001
Likelihood Ratio	65.303	9	<.001
Linear-by-Linear Association	20.285	1	<.001
N of Valid Cases	225		

a. 8 cells (50.0%) have expected count less than 5. The minimum expected count is .36.

Interpretations:
The 3rd hypothesis is all about taxation policies, its benefits and vehicle purchase decisions. To understand its impact again chi square non parametric test were used and score is 53.182 indicates slightly lower value indicated lesser difference between observed and expected frequencies tested leads to the strong rejection of null hypothesis and accepting alternative hypothesis i.e. taxation policies have very strong associations with the buying decisions as it leads to monetary benefits which buyers always keep it in the mind.

Descriptive Statistics

	N	Min	Max	Mean	SD	
Public transportation is easily accessible from my home or workplace.	225	1	5	3.08	1.524	
There are enough public transportation options available to meet my daily commuting needs.	225	1	5	2.88	1.369	
Public transportation in my city operates at convenient hours for my travel needs.	225	1	5	2.96	1.374	
Public transport stations/stops are well-marked and easy to find.	225	1	5	3.48	1.102	
Public transportation is available in both urban and suburban areas of my city.	225	1	5	3.24	1.178	
I find it easy to transfer between different modes of public transport (e.g., bus to metro, train to tram).	225	1	5	2.72	1.252	
Total	225					

Source: Primary
Total Samples: 225, Min 1– Strongly disagree whereas Max-5= strongly agree

Interpretations:

Data were collected on likert scale 5.0 on various public transportation facilities available in the Mumbai Metropolitan and Maha Mumbai region to understand the current scenario and on the basis of that a cleat scenario could be revealed about vehicle buying intentions and frequencies and at that time how government's policies can be taken into consideration. The average mean is around 3.0 indicates still further scope in the infrastructural development even though the daily commuters and local residents are not that much dissatisfied on the various aspects of public transportations. The average standard deviation is around 1.3 to 1.4 reflects data is scattered around mean and it indicates neutral approach towards facilities available in the Urban and the Rural areas of the Mumbai Metro region.

Correlations

		19. Government policies (such as taxes, subsidies, import duties, and regulations) influence my decision when purchasing a vehicle."	18. How often do you upgrade or replace your vehicle?
19. Government policies (such as taxes, subsidies, import duties, and regulations) influence my decision when purchasing a vehicle."	Pearson Correlation	1	-.076
	Sig. (2-tailed)		.259
	Sum of Squares and Cross-products	177.840	-8.640
	Covariance	.794	-.039
	N	225	225
18. How often do you upgrade or replace your vehicle?	Pearson Correlation	-.076	1
	Sig. (2-tailed)	.259	
	Sum of Squares and Cross-products	-8.640	73.440
	Covariance	-.039	.328
	N	225	225

Source: Primary

Interpretations: As per the correlation test results it shows r = - 0.76, which indicates there is strong negative correlation between replacements of old vehicles to new vehicles and Government's policies, it means even in the change of policies users don't change their vehicles so often and it is not the main factor behind their vehicle replacement and buying.

FINDINGS:

- Total 3 hypotheses were tested to understand the study in detail, In 1st null hypothesis was rejected and highlighted customers are quite aware about the government's policies at the time of buying vehicle. 2nd null hypothesis was also rejected, and it underlines, customers approach towards environment, and they are quite pro – sustainable. Whereas in the 3rd testing, interpretation was taxation policies, as an important factor, plays important role in purchase of vehicle.
- Correlation between frequency of buying and government policies is negative
- As per the study, maximum 50% respondents use petrol as a fuel type whereas diesel users' percentage is 24 and CNG is 10%, and few goes for hybrid mode too.
- Total 52% respondents said product review is somewhat important, but they do not consider it as very important at the time of buying, 36% respondents always considered before it is buying, whereas 8% do not considered it much.
- Total 50% respondents said fuel price changes affects ownership trends, whereas somewhat similar i.e. 49% respondents said it somewhat affects buying trends.

SUGGESTIONS & RECOMMENDATIONS:

There has to be sufficient policy integration and implementation to encourage the use of electronic vehicles by improvising the infrastructure of Mumbai.

There should be implementation of economic facilities like zero cost EMI for the purchase of EVs, Subsidies should be given on purchase of EV, cars to be sold at lesser or at equal price of Fossil fuel vehicle.

Consumers should be made aware about the options available in EV and benefits provided by the government on purchase of it to change their perception.

There is need to increase the facility of Public transportation in Mumbai to increase its use and to reduce the dependency on private transportation which may help to reduce pollution and congestion in Mumbai region.

FUTURE SCOPE

Future scope of research is EV Ecosystem , Infrastructure development for the promotion of use of EV, Charging infrastructure, environmental impact , Ill effects of fossil fuel.

CONCLUSION:

Mumbai being an economic capital, almost every company and work wants to be here and show their presence leads to expansion of original Mumbai's boundaries to MMR first and now Maha-Mumbai opening new business avenues and pushing residents to travel heavily everyday is a burden on infrastructure leads to find out ways and means to have own transportation system results into pressure on existing infrastructure and environment. This study decisively examines the government's policies, initiatives, consumer's mindset and issues. As per the analysis even though of government's policies initiatives their usefulness is deprived due to poor infrastructure, budgetary implementations, consumers different way of thinking leads to gap between required and current sustainable transference answers in Mumbai.

REFERENCES:

- Role of Economic Instruments in Mitigating Carbon Emissions: An Indian Perspective Gupta, Shreekant. "Role of Economic Instruments in Mitigating Carbon Emissions: An Indian Perspective." *Economic and Political Weekly*, vol. 37, no. 31, 2002, pp. 3293–3301. JSTOR, https://www.jstor.org/stable/4419710.
- India's Energy Security: Emerging Challenges and Opportunities Mohan, C. Raja. "India's Energy Security: Emerging Challenges and Opportunities." *India Review*, vol. 8, no. 3, 2009, pp. 221–252. Project MUSE, https://muse.jhu.edu/article/264755.
- Myers, Norman, and Jennifer Kent. *The New Consumers: The Influence of Affluence on the Environment*. Island Press, 2004.
- Borkhade, Revati, et al. "Implementation of Sustainable Reforms in the Indian Automotive Industry: From Vehicle Emissions Perspective." *Cogent Engineering*, vol. 9, no. 1, Jan. 2022, https://doi.org/10.1080/23311916.2021.2014024.
- Chattopadhyay, Basudha. "SUSTAINABLE URBAN DEVELOPMENT IN INDIA: SOME ISSUES." *Elsevier*, sa.indiaenvironmentportal.org.in/files/basudha_paper.pdf.
- Chaturvedi, Ashish, et al. "Environmental Fiscal Reforms." *IIMB Management Review*, vol. 26, journal-article, 9 July 2014, pp. 193–205. dx.doi.org/10.1016/j.iimb.2014.06.004.
- Dhar, Koushik and Viksit Bharat Conference 2024. "Analysing Factors Influencing Consumer Perception and Purchase Intentions for Electric Vehicles in the Indian Emerging Market." *Proceedings of the 2nd ICSSR Conference on "India Towards Viksit Bharat @2047,"* by Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), New Delhi (INDIA), 2024.
- Gupta, Shantanu, et al. "Factors Affecting Consumer's Intention to Use Electric Vehicles: Mediating Role of Awareness and Knowledge." *Journal of Advanced Transportation*, vol. 2024, no. 1, Jan. 2024, https://doi.org/10.1155/2024/5922430.
- Husain, Rozita, et al. "Comparative Analysis of National Automotive Policies With a Focus on Sustainable Development: Malaysia, Japan, Korea, China, India, the European Union (EU), and the USA." *International Journal of Academic Research in Business and Social Sciences*, vol. 13, no. 9, Sept. 2023, https://doi.org/10.6007/ijarbss/v13-i9/18370.
- Kumar, Charles Rajesh, and M. A. Majid. "Renewable Energy for Sustainable Development in India: Current Status, Future Prospects, Challenges, Employment, and Investment Opportunities." *Energy, Sustainability and Society*, vol. 10, 2020, p. 2. doi.org/10.1186/s13705-019-0232-1
- Mahapatra, S. N., et al. "CONSUMER SATISFACTION, DISSATISFACTION AND POST-PURCHASE EVALUATION: AN EMPIRICAL STUDY ON SMALL SIZE PASSENGER
- CARS IN INDIA." *International Journal of Business and Society*, vol. 11–2, 2010, pp. 97–108.
- Rafiq, Farrukh, et al. "From Thinking Green to Riding Green: A Study on Influencing Factors in Electric Vehicle Adoption." *Sustainability vol. 16, no. 1, Dec. 2023, p. 194. https://doi.org/10.3390/su16010194*.
- Rajagopal, Deepak. "Implications of the Energy Transition for Government Revenues, Energy Imports and Employment: The Case of Electric Vehicles in India." *Energy Policy*, vol. 175, Feb. 2023, p. 113466. https://doi.org/10.1016/j.enpol.2023.113466.
- Saraf, Nandita, et al. "Impact of consumer preferences on decarbonization of transport sector in India." *Preprint Submitted to Elsevier*, Nov. 2024.
- Singh, Uma Shankar, et al. "Renewable Energy Decision Criteria on Green Consumer Values Comparing Poland and India Aligned With Environment Policy for Sustainable Development." *Energies*, vol. 15, no. 14, July 2022, p. 5046. https://doi.org/10.3390/en15145046.
- Sobha, Parvathy, et al. "Green Transport and Renewable Power: An Integrated Analysis for India's Future." *International Journal of Sustainable Energy*, vol. 42, no. 1, Nov. 2023, pp. 1517–37.

https://doi.org/10.1080/14786451.2023.2285170.

- Soundarrajan, Parvadavardini, and Nagarajan Vivek. "Green Finance for Sustainable Green Economic Growth in India." *Agricultural Economics (Zemědělská Ekonomika)*, vol. 62, no. 1, Jan. 2016, pp. 35–44. https://doi.org/10.17221/174/2014-agricecon.
- Timilsina, Govinda R., et al. "Fiscal Policy Instruments for Reducing Congestion and Atmospheric Emissions in the Transport Sector: A Review." *Policy Research Working Paper*, by The World Bank, June 2008.
- Verma, Ashish, et al. "Evolution of Urban Transportation Policies in India: A Review and Analysis." *Transportation in Developing Economies*, Sept. 2021, doi.org/10.1007/s40890-021-00136-1.