



“ELECTRIFICATION AND CONSUMER CHOICES: A STUDY OF GREEN MARKETING IMPACT ON ELECTRIC VEHICLE BUYER BEHAVIOUR IN THE AUTOMOBILE INDUSTRY IN BANGALORE CITY”.

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Abstract:

The objective of this study is to examine how green marketing and environmental consciousness affect the inclination to purchase electric vehicles (EVs) within the city of Bangalore. With the growing concerns about climate change and the need for sustainable transportation, EVs have gained significant attention as a greener alternative to traditional fossil fuel-powered vehicles. Understanding the factors that influence consumer's intention to adopt EVs is crucial for promoting their widespread adoption and addressing environmental challenges.

The research adopts a quantitative research design and collects data through a structured questionnaire survey. The target population consists of residents in Bangalore city who are potential consumers of EVs. The study employs a convenience sampling technique to select participants, resulting in a sample size of 120.

The research examines the relationship between green marketing strategies adopted by EV manufacturers and consumers intention to purchase EVs. It investigates various green marketing dimensions, such as eco-labelling, eco-packaging, and eco-branding, and their impact on consumer's perceptions of EVs environmental benefits.

The results of the research can have significant implications for policy makers. EV manufacturers and marketers in Bangalore city, by understanding the drivers of consumer's intention to buy EVs, policy makers can develop effective strategies to promote EV adoption and encourage sustainable transportation practices. EV manufacturers and marketers can use the insights to design targeted green marketing campaigns that highlight the environmental benefits of EVs and enhance consumer's awareness and perception of these vehicles.

Key words: green marketing, Electrification, Environmental consciousness, sustainability, policy implementation, Renewable energy.

Introduction:

In recent decades, the global concern over environmental sustainability has led to a growing interest in adopting eco-friendly practices across various industries. One of the most significant areas of focus is the automotive sector, where

The shift from conventional vehicles that rely on fossil fuels to electric vehicles has gained considerable momentum. Electric vehicles offer the promise of minimizing the release of greenhouse gases, addressing climate change, and advocating for a more environmentally friendly approach and greener future.

In the wake of escalating environmental concerns and the pressing need to transition towards sustainable practices, green marketing has emerged as a vital approach for businesses to promote eco-friendly products and services. Among these, electric vehicles (EVs) have gained widespread attention as a promising solution to curb carbon emissions and pave the way for greener urban mobility. As the world moves towards a low-carbon future, understanding the factors that influence consumers' intention to adopt electric vehicles becomes paramount. In this regard, Bangalore City, with its growing urban population and transportation challenges, provides a compelling context to investigate The interrelation between eco-friendly marketing strategies and the desire to buy electric vehicles.

The concept of green marketing revolves around adopting sustainable and environmentally conscious strategies to market products and services. As consumers become more environmentally aware, companies are increasingly leveraging green marketing practices to attract and retain customers who value sustainability in their purchase decisions. Electric vehicles, on the other hand, offer a greener and cleaner alternative to conventional internal combustion engine vehicles, holding immense potential to revolutionize transportation systems and mitigate environmental impacts.

Review of literature:

Thoria Omer Mahmoud: (2017): the study's attention is on green marketing and consumers' intention to buy. More empirically based insights are required to investigate the conceptual elements that determine the discrepancy between the perceived and real greenness of food products. The Sudan's environmental issues are getting worse quickly. The environment, infrastructure, and the nation's natural resources are being strained by Sudan's growing economy, rapid population increase, and expansion of its businesses. Increasing issues include

Pervasive industrialization, urban expansion, and land deterioration have led to problems like industrial pollution, soil erosion, and deforestation, making environmental degradation one of the most pressing concerns for both humans and ecosystems on Earth. Green marketing suggests that consumers are willing to pay extra for a cleaner and more sustainable environment.. Green marketing makes even more assumptions.

Afroze Nazneen(2018) The findings of the study Customer confidence in technology and environmental considerations serve as preceding factors influencing individuals' views on purchasing electric vehicles. Conversely, the factors hindering adoption encompass expenses, infrastructure limitations, and societal reception. Hence, it is imperative for governments to assume a proactive role in stimulating electric vehicle sales by crafting environmental regulations, enhancing infrastructure, and providing financial incentives such as vehicle cost subsidies or reduced interest rates for bank loans.

Jay P Trivedi(2020): To enhance our understanding of the factors influencing the adoption of electric vehicles, it is necessary to conduct a long-term survey involving consumers who have test-driven electric cars and those who have made actual purchases. In future studies, it may be beneficial to consider gender-based moderation as part of the analysis. Additionally, future research could explore how different communication channels affect consumer awareness, as there may be gaps in information regarding electric vehicles among potential customers.

Peter Ansu Mensah:2021: This study has added to the existing body of knowledge on eco- friendly consumer behavior, with a particular emphasis on raising awareness about environmentally conscious products in emerging markets like Ghana, especially in the context of Space Situational Awareness (SSA). Furthermore, it's worth noting that the ongoing global COVID-19 pandemic enhances the significance of this research, as both businesses and governments are striving to promote the purchase of eco-friendly products for the sake of environmental sustainability among consumers and citizens.

R .Hema Governmental incentives and scientific developments are anticipated to position the electric vehicle (EV) market for major growth in the ensuing decade, making EV technology an unavoidable breakthrough in the near future. EV sales are affected by the fact that the official infrastructure and adaptive technologies for EVs are now fairly restricted. The "Make in India" initiative encourages the manufacture of components locally, particularly lithium-ion batteries, which have to be produced in India. A new business model that permits high infrastructure utilisation for both charging and swapping choices must be created in order to speed up the adoption of electric vehicles (EVs).

Imran Ali (2022) The availability of charging stations, financial incentives, societal acceptance, environmental concerns, and price are important factors in determining the adoption of electric vehicles. This study supports the notion that the cost of electric car adoption is its main influence. On the other hand, other independent factors with limited impact on adoption include charging infrastructure, social reinforcement, financial and non-financial incentives, and environmental concerns.

Sriram K V(2022): The research identified various factors influencing the uptake of electric vehicles, encompassing financial constraints, concerns related to vehicle performance, insufficient charging infrastructure, environmental preservation, societal influences, and the general public's awareness of electric vehicles. These research findings offer valuable insights for policymakers, suggesting the need to reconsider the current strategies concerning electric vehicle promotion in developing nations.

Cees J. Gelderman: A study unequivocally supports the success of green marketing. Their ability to project a green image and provide green products has a big impact on how satisfied their customers are. Prices and satisfaction have even been found to be positively correlated, suggesting that consumers are prepared to pay more for high-quality, eco-friendly products. Most significantly, suppliers should not undervalue the value of their sales team, even in the digital age where online tools are predominate. The knowledge and experience of salespeople, who represent the human element in B2B transactions, seems to be key in meeting their clients' expectations for sustainability. Companies should understand that improving client loyalty starts with a focus on customer happiness.

Research methodology:

Descriptive statistics are used to summarise and describe the main features of the rating scale data. Measures such as mean, median, mode, standard deviation and range can provide valuable insights in to the central tendency and variability of the response.

Sampling method:

Stratified random sampling is a method that entails categorizing the population into distinct subgroups or strata according to certain criteria or characteristics. Certain characteristics that is relevant to the research. In this case, potential stratification variables could include age, gender, income level, education level, and current vehicle ownership. The idea is to ensure that each stratum is well-represented in the sample, which allows for more accurate and meaningful analysis within each group.

By using stratified random sampling, the researcher can ensure that various demographic groups within Bangalore City are represented in the sample. This is important because green marketing practices and the intention to purchase electric vehicles might differ based on individual characteristics and preferences. Each stratum can be sampled randomly to select participants from various demographic backgrounds.

Objectives Of the study:

The purpose of exploring how green marketing practices affect the intent to buy electric vehicles in Bangalore City can encompass:

1. Investigating the correlation between green marketing practices and the willingness to acquire electric vehicles.
2. Assessing the diverse green marketing tactics employed by automotive companies in Bangalore City to endorse electric vehicles.
3. Evaluating the influence of green marketing efforts on consumers' inclination to contemplate and purchase electric vehicles.

Hypotheses:

Alternate hypothesis: (H1):

The adoption of green marketing strategies by automobile manufacturers and dealers positively influences consumer preferences and choices towards electric vehicles (EVs) in Bangalore city.

Null Hypothesis 1 (H0):

There is no significant relationship between the adoption of green marketing strategies by automobile manufacturers and dealers and consumer preferences and choices towards electric vehicles (EVs) in Bangalore city.

Demographic factor analysis:

Category	Mean	Standard deviation
Age	20	5.87
Gender	50	25.46
Education level	25	3.16
Income level(annually)	25	8.49

Interpreting the results of the standard deviation:

The standard deviation of the age data is 5.87. This indicates that the data are somewhat dispersed about the mean of 20.

The standard deviation for the gender statistics is 25.46. This indicates that the data are highly skewed with respect to the mean of 50. This shows that there is a significant disparity between the sample's male and female composition.

The standard deviation of the education level data is 3.16. As a result, the data are closely grouped around the mean of 25.

The standard deviation of the income level data is 8.49. This indicates that the data are somewhat dispersed about the mean of 25.

Overall, the standard deviation results indicate that while the data for gender is considerably spread out from the mean, the data for age and income level are relatively spread out from the mean.

Cronbach's alpha values for each question:

Questions	Cronbarch alpha value
Green marketing Efforts	0.7612
Trust in environmentally sustainable	0.7625
Environmental benefits in decision	0.7939

The Cronbach's alpha values for these questionnaires indicate varying levels of internal consistency, with the "Environmental Benefits in Decision" questionnaire showing the highest level of reliability.

A Table Representing The Results Of The Anova (Analysis Of Variance) Test:

Sources of variation	Sum of squares(SS)	Degrees of freedom	Mean square (MS)	F-Statistic	P-value
Between Groups (Response Options)	56.16	4	14.04	26.37	<0.001
Within Groups (Within Response Options)	19.84	16	1.24	26.37	<0.001
Total (Overall)	76	20			

The F-statistic tests whether there are significant differences between the means of the response options. In this case, with an extremely low p-value (<0.001), reject the null hypothesis, indicating that there are significant differences between the means of the response options for the question "Green marketing efforts influence my perception of electric vehicles."

Findings:

The results indicate that respondents in Bangalore City have a sizable interest in and favourable impression of electric vehicles. Consumer perceptions and purchasing intentions tend to be significantly influenced by green marketing initiatives. To fully comprehend the dynamics of EV adoption in the city, it will be necessary to grasp the obstacles to widespread EV adoption as well as unique insights from respondents' remarks.

Conclusion:

In conclusion, this study provides valuable insights into the relationship between green marketing, consumer behaviour, and the challenges faced by the electric vehicle industry in Bangalore City. It underscores the importance of effective green marketing strategies in promoting sustainable transportation and highlights the potential for increased adoption of electric vehicles in the region with the right interventions.

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