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Green Marketing and Consumer Behaviour: A Study of Electric Vehicle Adoption

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Abstract

The growing concerns regarding climate change, environmental degradation, air pollution, and dependence on fossil fuels have increased the importance of sustainable transportation. Electric Vehicles (EVs) have emerged as an important alternative to conventional fuel-based vehicles, offering the potential to reduce emissions and support environmentally sustainable mobility. However, the adoption of electric vehicles depends not only on technological developments and government initiatives but also on consumer awareness, attitudes, perceptions, and purchase behaviour. In this context, green marketing plays an important role in communicating the environmental and economic benefits of electric vehicles and influencing consumer decision-making.

The present study examines the relationship between green marketing and consumer behaviour in relation to electric vehicle adoption. The study focuses on how green marketing practices, including environmental advertising, green product attributes, eco-friendly branding, green pricing, promotional activities, and environmental information, influence consumers' perceptions, attitudes, purchase intentions, and adoption behaviour towards electric vehicles. The study also considers factors such as environmental awareness, perceived economic benefits, perceived usefulness, social influence, charging infrastructure, and concerns regarding vehicle cost and performance. Primary data may be collected from consumers through a structured questionnaire, and appropriate statistical techniques such as descriptive statistics, reliability analysis, correlation, factor analysis, and regression or structural equation modelling may be applied to analyse the relationships among the identified variables.

The study is expected to provide insights into the role of green marketing in encouraging sustainable consumer choices and increasing acceptance of electric vehicles. The findings may be useful for automobile manufacturers, marketers, policymakers, and other stakeholders in designing effective green marketing strategies and consumer-oriented initiatives that support the transition towards sustainable electric mobility.

Keywords: Green Marketing, Consumer Behaviour, Electric Vehicles, Sustainable Mobility, Environmental Awareness, Purchase Intention, Green Advertising, EV Adoption.

Introduction

The increasing concerns related to climate change, environmental degradation, air pollution, depletion of natural resources, and rising energy consumption have created a strong need for sustainable patterns of production and consumption. The transportation sector is an important contributor to environmental pollution because conventional vehicles largely depend on petrol and diesel, which generate greenhouse gas emissions and other pollutants. In response to these environmental challenges, Electric Vehicles (EVs) have emerged as an important component of sustainable transportation. Electric vehicles use electric power for propulsion and, depending on the electricity source, can substantially reduce tailpipe emissions compared with conventional internal-combustion vehicles. The transition towards electric mobility therefore represents not only a technological change but also a shift in consumer preferences and behaviour.

The growth of the electric vehicle market has increased the importance of understanding the factors that influence consumers' willingness to adopt EVs. Unlike conventional automobile purchases, the decision to purchase an electric vehicle may involve considerations such as environmental benefits, purchase price, running cost, battery performance, charging infrastructure, driving range, maintenance requirements, technological

awareness, government incentives, and social influence. Consumers may also differ in their level of environmental consciousness and willingness to adopt sustainable products. Consequently, understanding consumer behaviour is essential for automobile manufacturers and marketers seeking to expand the adoption of electric vehicles.

In this context, green marketing has become increasingly relevant. Green marketing refers to marketing activities that emphasize the environmental attributes and sustainability benefits of products and services. In the automobile industry, green marketing can involve communicating lower emissions, energy efficiency, recyclable materials, sustainable production practices, lower operating costs, and other environmental benefits associated with electric vehicles. Through green advertising, eco-friendly branding, digital promotion, environmental information, green product positioning, and sustainability-oriented communication, companies can create awareness and influence consumers' perceptions of environmentally responsible products.

Consumer behaviour represents the processes through which individuals recognize their needs, search for information, evaluate alternatives, make purchasing decisions, and assess their experiences after purchase. In the case of electric vehicles, consumer behaviour is influenced by both environmental and functional considerations. A consumer may have a positive attitude towards environmental protection but may hesitate to purchase an EV because of its relatively high initial price, limited charging facilities, concerns about driving range, battery life, or resale value. Similarly, effective green marketing communication may increase awareness and perceived environmental value, but awareness alone may not necessarily result in actual adoption. Therefore, examining the relationship between green marketing and different dimensions of consumer behaviour is important for understanding the EV adoption process.

The Indian automobile market is also experiencing a gradual transition towards electric mobility. Government initiatives, technological developments, increasing consumer awareness, and the entry of automobile manufacturers into the EV segment have contributed to growing interest in electric vehicles. At the same time, consumers continue to evaluate EVs on the basis of affordability, performance, convenience, infrastructure, reliability, and environmental benefits. This creates an important research area for examining whether and how green marketing strategies contribute to consumers' awareness, attitudes, purchase intentions, and adoption decisions concerning electric vehicles.

The effectiveness of green marketing also depends on the credibility and relevance of environmental claims made by companies. Consumers increasingly receive information about EVs through social media, online reviews, digital advertisements, automobile websites, influencers, and interpersonal communication. As a result, marketers need to provide clear, reliable, and understandable information about the environmental and economic benefits of electric vehicles. Transparent communication may help consumers evaluate EVs more effectively, whereas exaggerated or unclear environmental claims may create confusion and reduce trust.

The present study, therefore, focuses on “Green Marketing and Consumer Behaviour: A Study of Electric Vehicle Adoption.” The study seeks to examine the role of green marketing in shaping consumer perceptions and behaviour towards electric vehicles. It particularly considers the relationship between green marketing practices and consumer awareness, attitudes, purchase intentions, and adoption behaviour. The study may also examine the influence of environmental awareness and other practical considerations that affect consumers' decisions regarding EVs.

The significance of the study extends to multiple stakeholders. For automobile manufacturers and marketers, understanding consumer responses can assist in developing appropriate green marketing strategies and communication programmes. For policymakers, insights into consumer perceptions can support the formulation of measures aimed at encouraging sustainable transportation. For consumers, greater availability of accurate information can facilitate informed decisions regarding electric mobility. From an academic perspective, the study contributes to the growing literature connecting green marketing, consumer behaviour, sustainability, and electric vehicle adoption.

Overall, the shift towards electric mobility requires more than technological innovation and infrastructure development. It also requires consumers to recognize the value of sustainable transportation and translate

positive perceptions into purchasing and adoption decisions. Examining the relationship between green marketing and consumer behaviour can therefore provide valuable insights into the factors that may encourage wider acceptance of electric vehicles and contribute to the broader transition towards sustainable mobility.

Literature Review

The literature on green marketing and consumer behaviour towards electric vehicles (EVs) has expanded considerably as environmental sustainability has become an important consideration in automobile purchasing decisions. Existing research indicates that EV adoption is influenced by a combination of environmental values, perceived benefits, marketing communication, product attributes, social influences, economic considerations, and perceived risks. The following review presents selected studies relevant to the present research.

Green Marketing and Consumer Behaviour

Green marketing has increasingly become an important approach through which firms communicate the environmental benefits of their products. It includes green advertising, sustainable product positioning, environmental information, eco-friendly branding, and other marketing practices intended to encourage environmentally responsible consumption. Recent research suggests that the effectiveness of green marketing depends not only on the environmental information communicated but also on consumers' environmental knowledge, attitudes, trust, and perceptions of the product.

Li (2025) examined the impact of green advertising and environmental knowledge on consumers' intention to purchase green products. The study emphasized that green advertising can communicate environmental benefits and influence consumers' sustainable consumption intentions. It also highlighted the importance of environmental knowledge in shaping consumers' responses to green marketing communication.

Kumar et al. (2025) examined the digital transformation of green marketing and highlighted the growing importance of digital technologies in communicating sustainability-related information. Their work indicates that digital platforms can expand the reach of green marketing and facilitate consumer engagement with sustainability-oriented products and brands.

Green Marketing and Electric Vehicle Purchase Intention

The relationship between green marketing and EV adoption has received specific attention in recent research. Green marketing can communicate the environmental advantages of EVs and potentially strengthen consumers' perceptions of their environmental value.

Bi et al. (2023) investigated whether green advertising could increase consumers' purchase intention towards electric vehicles through experimental research in China. The study found that advertisements containing green information significantly increased EV purchase intention compared with non-green advertising. Green advertising also enhanced green perceived value and green product attitudes, which acted as important mechanisms linking advertising to purchase intention. The researchers further found that consumers with stronger environmental attitudes responded more positively to green advertising.

Zhang et al. (2024) examined environmental corporate social responsibility in the context of new energy vehicles. Using data from 306 NEV owners in China, the study found that environmental CSR positively influenced green purchase intentions, both directly and indirectly through green trust and green brand image. The findings demonstrate that sustainability-oriented corporate activities can contribute to consumers' favourable perceptions of environmentally friendly vehicles.

Environmental Benefits and Consumer Purchase Behaviour

Environmental performance is another important factor associated with consumer attitudes towards EVs. Consumers may perceive EVs as a means of reducing environmental impacts associated with conventional vehicles.

Hahnel et al. (2014) examined consumer purchase intentions for electric vehicles by comparing environmental performance with price value and range confidence. Their findings indicated that environmental performance

was a stronger predictor of attitude and purchase intention than price value and range confidence in their empirical setting. This study established the relevance of environmental considerations in understanding EV purchasing decisions.

More recent research has continued to demonstrate the importance of environmental awareness and green behaviour. Investigating the role of green behavior and perceived benefits in shaping green car buying behavior (2024), based on 406 respondents from Pakistan, China and Saudi Arabia, found that green behaviour and perceived green benefits positively influenced green automobile buying behaviour. Environmental awareness also moderated the relationship between green behaviour and green buying behaviour.

Consumer Behaviour Towards Electric Vehicle Adoption in India

The Indian context is particularly important because EV adoption involves both environmental motivations and practical considerations such as price, infrastructure, performance and government support.

An empirical study on electric vehicle adoption in India (2024) applied an extended Theory of Planned Behaviour (TPB) framework incorporating attitudes, green nudges, perceived behavioural control and environmental concerns. The study analysed 342 respondents using PLS-SEM and artificial neural network techniques. The findings indicated that attitudes, green nudges and perceived behavioural control were significant factors associated with behavioural intention and actual buying behaviour, while environmental concern was incorporated into the explanation of EV adoption.

Transition to green mobility: A twin investigation behind the purchase reasons of electric vehicles in the Indian market (2024) used a mixed-method approach involving 266 existing EV owners across five Indian cities. The study identified long-term operational benefits, prior driving experience, positive attitudes, environmental concern, social norms and personal values as important motivations. Participants also identified government policies, brand consciousness, compatibility and functional benefits such as comfortable and noiseless driving as factors influencing EV purchase decisions.

Kumar et al. (2024) investigated EV adoption in India and Australia using data from 605 respondents. The study examined environmental propensity, subjective norms, range anxiety, perceived behavioural control and attitude. Its findings indicated that environmental propensity and subjective norms were associated with EV adoption intention, while perceived behavioural control and attitude played mediating roles.

Perceived Benefits, Risks and Consumer Adoption

Consumer adoption of EVs cannot be explained exclusively through environmental considerations. Consumers also evaluate the functional and economic consequences of purchasing an electric vehicle.

Recent research has increasingly moved beyond simple measures of purchase intention towards broader examinations of consumer perceptions, social influence, environmental values and actual adoption behaviour.

Bazzi (2025/2026) investigated green brand image, green brand trust, green brand attitude, green brand love and green purchase intention in the context of electric vehicles. The study reflects the growing emphasis on the psychological and branding dimensions of sustainable consumption and demonstrates the relevance of green brand-related constructs in explaining consumers' intentions.

Kumar et al. (2026) examined consumer perceptions and behaviour associated with EV adoption in India. The study considered PESTEL factors and the mediating role of informational and value-expressive social influences in shaping EV purchase intention. This indicates that consumer EV decisions can be influenced by both external environmental conditions and social mechanisms.

Research Gap

The reviewed literature establishes that green marketing, environmental awareness, green perceived value, green brand image, consumer attitudes, perceived benefits, social influence and perceived risks are relevant to EV adoption. However, several gaps remain.

First, many studies focus primarily on purchase intention, while comparatively fewer examine the broader relationship between green marketing and actual consumer behaviour. Second, existing research often examines individual marketing elements such as green advertising or green branding rather than considering green marketing as a multidimensional construct. Third, although several studies have investigated EV adoption in India, the interaction between green marketing practices and consumer behavioural responses remains an area requiring further empirical examination. The recent literature also suggests that environmental motivations must be examined alongside practical concerns such as price, range, charging infrastructure, perceived risk and vehicle performance.

Therefore, the present study, "Green Marketing and Consumer Behaviour: A Study of Electric Vehicle Adoption," seeks to contribute to the existing literature by examining how green marketing influences consumer awareness, attitudes, perceptions, purchase intention and adoption behaviour towards electric vehicles. It provides an integrated framework for understanding the role of marketing communication and sustainability-oriented marketing practices in the emerging electric mobility market.

Research Methodology

Objectives of the Study

The study may be conducted with the following objectives:

1. To examine the level of consumer awareness regarding electric vehicles and green marketing practices.

2. To identify the major factors influencing consumer behaviour towards electric vehicle adoption.

3. To examine the relationship between green marketing strategies and consumer purchase intention towards electric vehicles.

4. To analyse the impact of green marketing on consumer behaviour towards electric vehicle adoption.

5. To identify the major barriers perceived by consumers in adopting electric vehicles.

Research Design

The present study, titled "Green Marketing and Consumer Behaviour: A Study of Electric Vehicle Adoption," adopts a descriptive and analytical research design**.** The descriptive component is used to understand consumers' awareness, perceptions, attitudes, and behavioural intentions towards electric vehicles, while the analytical component examines the relationship between green marketing practices and consumer behaviour. The study focuses on understanding whether green marketing dimensions influence consumers' willingness and intention to adopt electric vehicles.

Research Approach

A **quantitative research approach** is adopted for the study. Primary data are collected from consumers through a structured questionnaire. The quantitative approach facilitates the measurement of consumer perceptions, attitudes, awareness, purchase intentions, and responses to different green marketing practices using numerical scales.

Population of the Study

The population comprises consumers and potential automobile buyers who are aware of or have some exposure to electric vehicles. The study may include respondents who currently own an electric vehicle as well as consumers who are considering purchasing an electric vehicle in the future.

Sample Size and Sampling Technique

For an empirical study, a sample of 200 respondents may be selected from the study area. A convenience sampling technique may be used to collect data from consumers who are accessible and willing to participate in the study. Respondents can be approached through automobile dealerships, educational institutions, workplaces, public places, and online platforms.

If your actual sample size or study area is different, this section should be adjusted accordingly.

Sources of Data

The study is based on both primary and secondary data**.**

Primary Data: Primary data are collected directly from respondents using a structured questionnaire. The questionnaire is designed to obtain information regarding demographic characteristics, awareness of EVs, perceptions of green marketing, environmental awareness, purchase intention, and factors affecting EV adoption.

Secondary Data: Secondary information is collected from research journals, books, government reports, industry reports, research papers, websites of automobile manufacturers, and publications relating to green marketing, consumer behaviour, sustainability, and electric mobility.

Research Instrument

A structured questionnaire is used as the main instrument for primary data collection. The questionnaire can be divided into the following sections:

Pilot Testing

Before the final collection of data, the questionnaire should be subjected to pilot testing on a small group of respondents. The purpose of the pilot study is to identify ambiguous questions, assess the clarity of statements, determine the approximate time required to complete the questionnaire, and examine the preliminary reliability of the measurement scale.

Necessary modifications can be made to the questionnaire based on the responses obtained during the pilot study.

Reliability and Validity

The reliability of the questionnaire can be assessed using Cronbach’s Alpha. A Cronbach's Alpha value of 0.70 or above is generally considered acceptable for establishing internal consistency.

Content validity can be established through an extensive review of existing literature and consultation with experts/research supervisors. Construct validity can subsequently be examined through Exploratory Factor Analysis (EFA) and/or Confirmatory Factor Analysis (CFA)**,** depending on the final research model.

Data Collection Procedure

The questionnaire can be administered to selected respondents through both online and offline modes**.** Respondents should be informed about the academic purpose of the study, and participation should be voluntary. The collected responses are checked for completeness and consistency before being entered into statistical software for analysis.

Ethical Considerations

The study maintains basic research ethics by ensuring that participation is voluntary and respondents are informed about the purpose of the research. Personal information collected from respondents should be kept confidential and used only for academic purposes. The results should be reported objectively without manipulating the responses or findings.

Scope of the Methodology

The methodology provides a systematic framework for examining how green marketing practices influence consumer behaviour towards electric vehicles. By combining descriptive analysis with reliability testing, factor analysis, correlation and regression/SEM, the study can provide empirical evidence regarding the relationship between green marketing and EV adoption**.** The methodology also allows researchers to identify the practical barriers and motivational factors that influence consumers' decisions regarding electric vehicles.

Data Analysis and Interpretation

For the research paper "Green Marketing and Consumer Behaviour: A Study of Electric Vehicle Adoption," the data analysis section should present the demographic profile of respondents, awareness regarding electric vehicles, perceptions of green marketing, factors influencing EV adoption, and the relationship between green marketing and consumer behaviour.

Since you have not yet provided the actual survey data, the following is a ready-to-use academic format with illustrative tables. The numerical values should be replaced with your actual results.

Demographic Profile of Respondents

The demographic profile provides an overview of the respondents included in the study. Variables such as gender, age, educational qualification, occupation, income and monthly expenditure may be considered to understand the characteristics of the sample.

Table 1: Demographic Profile of Respondents

Demographic Variable	Category	Frequency	Percentage
Gender	Male	120	60.0
	Female	80	40.0
Age	Below 25 years	52	26.0
	25–35 years	68	34.0
	36–45 years	46	23.0
	Above 45 years	34	17.0
Education	Undergraduate	42	21.0
	Graduate	78	39.0
	Postgraduate	58	29.0
	Other	22	11.0
Occupation	Student	36	18.0
	Salaried	82	41.0
	Business	48	24.0
	Other	34	17.0

Interpretation:
The table indicates the demographic characteristics of the respondents. The sample consists of respondents from different age groups, educational backgrounds and occupational categories. Such diversity provides a broader basis for examining consumer perceptions and behaviour towards electric vehicles.

Awareness Regarding Electric Vehicles

Respondents may be asked about their awareness of electric vehicles, their sources of information and their knowledge of EV benefits.

Table 2: Awareness Regarding Electric Vehicles

Statement	Yes (%)	No (%)
Aware of electric vehicles	91.0	9.0
Aware of environmental benefits	84.0	16.0
Aware of government incentives	63.0	37.0
Aware of charging infrastructure	70.0	30.0
Aware of EV running-cost benefits	78.0	22.0

Interpretation:
The results suggest that respondents generally possess a considerable level of awareness regarding electric vehicles and their environmental benefits. However, comparatively lower awareness regarding government incentives and charging infrastructure indicates that consumers may require more accessible information about the practical aspects of EV adoption.

Sources of Information Regarding Electric Vehicles

Table 3: Sources of Information

Source	Frequency	Percentage	Rank
Social media	142	71.0	1
Television	116	58.0	2
Friends/Family	108	54.0	3
Online automobile platforms	96	48.0	4
Newspapers/Magazines	62	31.0	5
Automobile dealers	58	29.0	6

Interpretation:
The results indicate that social media is an important source of information regarding electric vehicles, followed by television and interpersonal sources such as friends and family. This highlights the importance of digital communication in promoting awareness about environmentally sustainable mobility.

Consumer Perception Towards Green Marketing

Consumer responses to green marketing can be measured through a five-point Likert scale:

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Table 4: Consumer Perception Towards Green Marketing

Statements	Mean	S.D.	Rank
Green advertisements increase my awareness of EVs	4.21	0.81	1
Green marketing provides useful environmental information	4.15	0.83	2
Eco-friendly branding influences my perception of Evs	4.02	0.89	3
Green promotional activities increase my interest in Evs	3.94	0.91	4

Environmental claims influence my purchase evaluation	3.89	0.94	5
Green pricing makes Evs more attractive	3.71	1.02	6

Interpretation:
The results indicate that respondents generally have favourable perceptions of green marketing practices. Green advertising and environmental information receive relatively high mean scores, suggesting that consumers consider environmental communication relevant when evaluating electric vehicles. The comparatively lower mean score for green pricing indicates that economic considerations may continue to influence consumer responses.

Factors Influencing Electric Vehicle Adoption

Factor analysis may be used to identify the underlying dimensions influencing EV adoption.

Table 5: Major Factors Influencing EV Adoption

Factor	Major Variables	Factor Loading Range	Variance Explained
Environmental Benefits	Pollution reduction, sustainability, environmental protection	0.71–0.88	21.64%
Economic Benefits	Fuel savings, maintenance cost, incentives	0.69–0.86	18.52%
Green Marketing	Green advertising, branding, promotion	0.67–0.84	15.76%
Infrastructure	Charging stations, accessibility, service facilities	0.65–0.82	12.83%
Performance & Technology	Battery, range, performance, reliability	0.63–0.81	10.47%

Interpretation:
The factor analysis suggests that EV adoption is multidimensional. Environmental and economic benefits represent important dimensions, while green marketing, infrastructure and technological performance also contribute to consumers' evaluation of electric vehicles

Reliability Analysis

Cronbach's Alpha can be applied to determine the internal consistency of the questionnaire.

Table 6: Reliability Statistics

Construct	No. of Items	Cronbach's Alpha
Green Marketing	8	0.912
Environmental Awareness	6	0.884
Consumer Attitude	6	0.901
Purchase Intention	5	0.893
EV Adoption Behaviour	5	0.876
Overall Scale	30	0.941

Interpretation:
The illustrative Cronbach's Alpha values are above the commonly used threshold of 0.70, indicating satisfactory internal consistency among the measurement items. Therefore, the scale can be considered sufficiently reliable for further statistical analysis.

Correlation Analysis

Pearson's correlation coefficient can be used to determine the direction and strength of the association between green marketing and consumer behaviour.

Table 7: Correlation Between Major Variables

Variables	Green Marketing	Environmental Awareness	Consumer Attitude	Purchase Intention
Green Marketing	1	.624**	.681**	.704**
Environmental Awareness	.624**	1	.653**	.672**
Consumer Attitude	.681**	.653**	1	.741**
Purchase Intention	.704**	.672**	.741**	1

Note: Correlation is significant at the 0.01 level (2-tailed).

Interpretation:
The illustrative results indicate positive associations among green marketing, environmental awareness, consumer attitude and purchase intention. In particular, the relationship between green marketing and purchase intention is positive, suggesting that consumers who perceive green marketing more favourably may also demonstrate stronger intentions to purchase electric vehicles. However, correlation indicates association and does not by itself establish causation.

Regression Analysis

Multiple regression can be applied to determine whether green marketing dimensions significantly explain consumer purchase intention towards EVs.

Table 8: Regression Model Summary

R	R^2	Adjusted R^2	F-value	Sig.
0.756	0.572	0.563	51.284	0.000

Interpretation:
The illustrative R^2 value of 0.572 indicates that approximately 57.2% of the variation in consumer purchase intention is explained by the predictors included in the model. The remaining variation may be attributable to other factors not included in the model. The significant F-value indicates that the regression model as a whole is statistically significant.

Regression Coefficients

Predictor	Beta	t-value	Sig.
Green Advertising	0.284	4.721	0.000
Green Product Attributes	0.219	3.684	0.000
Green Promotion	0.176	2.961	0.003

Green Branding	0.198	3.247	0.001
Green Pricing	0.121	2.086	0.038

Interpretation:
The illustrative regression results show positive coefficients for all the green marketing dimensions. This suggests that improvements in green advertising, green product attributes, green promotion, green branding and green pricing are associated with higher purchase intention towards electric vehicles. The significance values indicate whether each individual predictor makes a statistically significant contribution to the model.

Hypothesis Testing

The following hypotheses can be formulated:

H_{01}: Green marketing has no significant relationship with consumer purchase intention towards electric vehicles.

H_{11}: Green marketing has a significant relationship with consumer purchase intention towards electric vehicles.

H_{02}: Environmental awareness has no significant relationship with consumer intention to adopt electric vehicles.

H_{12}: Environmental awareness has a significant relationship with consumer intention to adopt electric vehicles.

H_{03}: Consumer attitude has no significant impact on electric vehicle adoption intention.

H_{13}: Consumer attitude has a significant impact on electric vehicle adoption intention.

If the p-value is less than 0.05, the corresponding null hypothesis is rejected; if the p-value is greater than 0.05, the null hypothesis is not rejected.

Findings of the Study

Based on the proposed analytical framework, the study can report the following types of findings after inserting the actual statistical results:

1. Respondents demonstrate varying levels of awareness regarding electric vehicles and their environmental benefits.

2. Digital and social media platforms represent important channels for communicating information about EVs.

3. Consumers perceive green advertising and environmental information as relevant to their evaluation of electric vehicles.

4. Environmental benefits, economic benefits, infrastructure and technological characteristics are important dimensions of EV adoption behaviour.

5. Green marketing is positively associated with consumer attitudes and purchase intentions.

6. Environmental awareness contributes to consumers' perceptions of electric vehicles as sustainable transportation alternatives.

7. Practical considerations such as purchase price, charging infrastructure, driving range and battery performance may influence the conversion of purchase intention into actual adoption.

8. Regression analysis can be used to establish which green marketing dimensions significantly explain consumer purchase intention.

Suggestions

Based on the study “Green Marketing and Consumer Behaviour: A Study of Electric Vehicle Adoption,” the following suggestions may be considered for strengthening consumer acceptance and adoption of electric vehicles:

- **Strengthen Green Marketing Communication**: Automobile companies should communicate the environmental, economic, and operational benefits of electric vehicles through clear and credible green marketing campaigns. Information should be presented in simple language so that consumers can easily understand the advantages of EVs.
- **Increase Consumer Environmental Awareness**: Awareness programmes should highlight the role of electric vehicles in reducing tailpipe emissions, dependence on fossil fuels, and environmental pollution. Educational campaigns can be conducted through social media, colleges, workplaces, automobile exhibitions, and community programmes.
- **Promote Digital and Social Media Marketing**: Since consumers increasingly obtain automobile information through digital platforms, EV manufacturers should use social media, websites, videos, online reviews, and interactive content to provide information about EV technology, battery performance, charging requirements, running costs, and environmental benefits.
- **Ensure Credibility of Green Claims**: Companies should avoid exaggerated environmental claims and provide transparent information regarding the sustainability benefits of their vehicles. Credible and verifiable environmental communication can help strengthen consumer confidence and reduce concerns about misleading green marketing.
- **Improve Charging Infrastructure**: Greater availability and accessibility of charging stations can address one of the major practical concerns associated with EV adoption. Charging facilities should be expanded in residential areas, highways, workplaces, shopping centres, and other frequently visited locations.
- **Address Range and Battery Concerns**: Manufacturers should clearly communicate the expected driving range, battery warranty, charging time, battery life, and replacement arrangements. Providing demonstrations and test-drive opportunities can help consumers develop a better understanding of EV performance.
- **Emphasise Total Cost of Ownership**: Green marketing campaigns should communicate not only the initial purchase price but also long-term economic benefits such as fuel savings, maintenance costs, and operating expenses. This can help consumers evaluate EVs on a broader cost basis.
- **Develop Consumer-Oriented Promotional Strategies**: Automobile companies can provide test drives, product demonstrations, comparison tools, ownership-cost calculators, and experiential marketing programmes. Such activities can enable consumers to evaluate EVs based on actual usage rather than advertisements alone.
- **Improve Green Branding**: EV brands should develop a consistent sustainability-oriented identity supported by genuine environmental practices. Green branding should be linked with product quality, reliability, technological innovation, and responsible business practices rather than environmental messaging alone.
- **Increase Information About Government Support**: Consumers should be provided with accessible information about applicable government incentives, tax provisions, registration benefits, and other EV-related support measures. Automobile dealers and digital platforms can provide updated information to prospective buyers.
- **Encourage Dealer-Level Consumer Education**: Automobile dealers should be trained to explain EV technology, charging procedures, battery maintenance, warranty provisions, operating costs, and environmental benefits. Well-informed sales personnel can help consumers make more informed purchasing decisions.

- **Use Consumer Reviews and Testimonials Responsibly**: Genuine customer experiences, verified reviews, and real-world ownership information can help reduce uncertainty among potential buyers. Companies should ensure that testimonials and reviews are authentic and representative.
- **Focus on Different Consumer Segments**: Green marketing strategies should be adapted according to consumer characteristics such as age, income, occupation, environmental awareness, and previous automobile experience. A single promotional message may not be equally relevant to all consumer groups.
- **Promote Sustainable Value Rather Than Only Environmental Benefits**: Marketing communication should present EVs as products offering a combination of environmental, technological, economic, and functional value. This broader approach can address consumers who are environmentally concerned as well as those primarily interested in performance and cost savings.
- **Integrate Green Marketing with Actual Sustainability Practices**: Manufacturers should ensure that their sustainability claims are supported by responsible production, energy-efficient manufacturing, battery management, recycling initiatives, and transparent environmental practices. Consistency between marketing claims and business practices can contribute to consumer trust.
- **Conduct Continuous Consumer Research**: EV manufacturers and policymakers should regularly assess changing consumer perceptions, adoption barriers, satisfaction levels, and information requirements. Consumer research can help organisations modify marketing and awareness programmes according to emerging market needs.

Conclusion

The present study, "Green Marketing and Consumer Behaviour: A Study of Electric Vehicle Adoption," highlights the growing significance of green marketing in shaping consumer perceptions and behavioural intentions towards electric vehicles. The increasing environmental concerns, rising fuel costs, technological developments, and the need for sustainable transportation have created favourable conditions for the growth of electric mobility. However, the adoption of electric vehicles depends not only on environmental considerations but also on consumers' perceptions of affordability, performance, convenience, reliability, and supporting infrastructure.

The study indicates that green marketing can play an important role in creating awareness and communicating the environmental and economic benefits of electric vehicles. Green advertising, eco-friendly product attributes, green branding, promotional activities, and environmental information can influence how consumers perceive electric vehicles. When consumers receive relevant and credible information about the sustainability benefits of EVs, they may develop more favourable attitudes towards electric mobility and show greater interest in considering EVs as an alternative to conventional vehicles.

At the same time, the study recognises that environmental awareness alone may not be sufficient to translate positive attitudes into actual EV adoption. Consumers may also consider the initial purchase price, charging infrastructure, driving range, battery life, maintenance, resale value, and technological reliability when making their purchase decisions. Therefore, effective green marketing needs to address both the environmental motivations and practical concerns of consumers.

The relationship between green marketing and consumer behaviour is consequently multidimensional. Green marketing may contribute to consumer awareness, perceived environmental value, brand perceptions, attitudes, and purchase intentions, while factors such as perceived benefits, perceived risks, social influence and infrastructure can further shape the final adoption decision. This suggests that EV manufacturers should adopt marketing strategies that provide transparent, credible, and comprehensive information rather than focusing exclusively on environmental claims.

The study also highlights the importance of collaboration among automobile manufacturers, marketers, policymakers, charging-infrastructure providers, and consumers. Manufacturers can strengthen consumer

confidence through better product information and after-sales support, while policymakers can support awareness programmes and infrastructure development. Improved charging facilities and greater availability of reliable information can help reduce some of the uncertainties associated with electric vehicle ownership.

In conclusion, green marketing represents an important component of the transition towards sustainable mobility, but it should operate alongside technological development, infrastructure expansion, consumer education, and supportive policies. A successful EV marketing strategy should therefore communicate environmental sustainability together with economic and functional value. By understanding consumer behaviour and responding to their expectations and concerns, stakeholders can contribute to greater acceptance of electric vehicles and the gradual development of a more sustainable transportation system.

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