Impact Of Green Marketing Practices on Consumer Buying Decision of Green Electronics

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ABSTRACT

The purpose of the study is to examine the green marketing practices and their impact on the purchase decision of green electronics in India. The aim of the study is to evaluate the relationship between the green marketing practices and purchasing decision of Green Electronics in India. To achieve the objective, respondents are selected based on a convenience sampling method. The present study comes to the conclusion that energy efficiency, environmental awareness, eco-labels and product lifespan have a significant influence on the purchase decision.The study emphasizes the importance of prioritizing these factors in green marketing strategies to promote sustainable purchasing. Recommendations include improving energy efficiency, promoting eco-labels, and implementing educational initiatives to enhance consumer understanding and adoption of green electronic products.

Keywords: Green marketing, Green electronic products, Consumer behavior, India, Sustainability.

INTRODUCTION

The current society is experiencing a rise in awareness regarding environmental concerns, resulting in a higher need for sustainable and environmentally friendly products in several sectors. The electronics business is one such area going through this change, as "green electronics" has become a popular term. Green electronics are gadgets designed with environmentally sustainable materials and methods, aiming to minimize their environmental impact throughout their life cycle. The environmental consequences associated with conventional electronics, which frequently utilize energy-intensive manufacturing methods and include toxic components that pose recycling challenges, motivate the shift towards eco-friendly electronics.

The success of Green Electronics relies heavily on the execution of efficient green marketing strategies that highlight the environmentally beneficial features of these goods to consumers. Green marketing methods aim to inform consumers about the ecological advantages of green electronics, emphasizing characteristics like energy efficiency, recyclability, and the utilization of non-toxic materials. Green marketing methods aim to leverage consumers' growing environmental awareness to shape their purchasing decisions and promote the adoption of eco-friendly technology devices.

Nevertheless, despite the growing recognition of green marketing as crucial for promoting sustainable consumption, there remains a need for extensive research to investigate its impact on consumer purchasing behavior, particularly in the field of green Electronics. This study aims to address the gap by examining how green marketing practices influence consumer purchasing decisions at Green Electronics. Consequently, it will contribute to our comprehension of sustainable consumption patterns and inform marketing strategies in the electronics industry.

Objectives

The objective of the study is

- To find out the relationship between GM practices and buying decision of Green electronics in India.
- To explore the effect of GM practices and buying decision of Green electronics in India.
- To offer actionable suggestions to enhance the marketing of green electronic products in the Indian market.

Review of literature

Sharma and Trivedi (2016) identify several variables that significantly affect consumers' green buying behavior. The variables such as eco-labels, demographics, environmental advertising, eco-brands, environmental advertising, environmental awareness, green products and its prices, promotions. All these variable plays a crucial role for green marketers, who must prioritize different variables based on their target market segment.

Nekmahmud and Fekete-Farkas (2020) conducted a survey in a rapidly developing country to understand consumer purchasing decisions regarding green products. Their findings revealed that green purchase decision was influenced by the selected variables . The variables includesenvironmental concern, awareness of green pricing, perceived benefits of green products, willingness to purchase green products, and future perspectives on green marketing positively influence green purchase decisions. As observed from the study that there was a negative effect was identified between perceived quality of green products and buying decision. This gave an insights that it was valuable for designing effective green marketing tools such as green advertising, branding, and eco-labels to better inform consumers about eco-friendly products.

Tsai et al. (2020) contributed to the literature by creating a model to assess how green marketing influences brand image and consumer purchase intentions. They utilized the DEMATEL method to analyze the interrelationships among evaluation indicators and constructed an influential network relation map. By integrating the DEMATEL method with the analytic network process and using a modified VIKOR method, they evaluated the comprehensive performance of each indicator. The study provides practical suggestions for companies aiming to enhance their green marketing strategies to boost consumer purchase intentions.

Shabbir et al. (2020) analyzed the factors of green marketing and how it influence the environmental behaviour. The author has emphasised more on the factors such as eco-labeling, green products, green packaging and premium prices. All these prices were significantly influence the environmental behaviour. Additionally, there was a notable positive effect was identified between environmental concerns, belief and environmental behaviour.

Gelderman et al. (2021) explored the green marketing and its effect on satisfaction and loyalty of professional buyers. The exploration was done on the perspective of business to business context. The study was emphasised more on factors such as product quality, corporate image, pricing and sales person expertise. The results of the study indicate that the higher the importance of factors, the higher the satisfaction and loyalty.

Mehraj et al. (2023) examined the demogrpahics and its effect on purchase decision on Indian Consumers. The present study found that the education and income were the important factors because it determine the green behavoiur. However, demographic factors such as age and gender did not have any effect on green behaviour. Thus, this study gives an insights that the mareketers targeting various demographics segment in India.

Iqbal et al. (2023) focused on the growing trend of eco-friendly environments in marketing. Their research highlighted that green product quality and value are key factors driving green purchase intentions and behavior. Environmental concern also plays a significant role in this dynamic, although perceived consumer effectiveness was found to be less significant among Pakistani consumers. The study underscores the importance of environmental education and initiatives to foster green behavior and promote green marketing in Pakistan.

Suciarto et al. (2015) aimed to understand how green marketing impacts the purchasing decisions of young consumers. They selected 240 students from Indonesia and Taiwan using purposive sampling, discovering a strong

positive correlation between exposure to green marketing and the intention to buy eco-friendly products. Their research underscored the necessity of promotional efforts not only to inform consumers about green products but also to highlight their benefits.

Podvorica and Ukaj (2020) found that despite increased environmental awareness, consumers' behaviors do not always align with eco-friendly choices. Their survey in Kosovo examined the relationship between green marketing awareness, environmental behavior, trust in advertising, and attitudes towards organic beverages. They found that family influence and media exposure positively affected eco-friendly behavior, but mistrust in advertising hindered consumers' willingness to make green purchases.

Shao and Unal (2019) focused on the electric vehicle industry, employing an online survey of 582 consumers and using structural equation modeling (SEM). They found that consumers were more willing to pay a premium for electric vehicles with low environmental impact, highlighting the importance of environmental considerations in driving purchasing decisions. However, the study also revealed that consumers were less interested in paying extra for the social impact of a product, despite being aware of it.

Mishra et al. (2017) explored the relationship between environmental concern, knowledge about green packaging, beliefs about its positive outcomes, and consumer attitudes towards paying a premium price in major Indian cities. Their findings indicated that consumers across eastern and western India were willing to pay extra for products with green packaging, highlighting the importance of eco-friendly packaging in consumer purchasing decisions.

Brécard (2017) observed a significant impact of eco-labeling on consumer purchasing decisions, emphasizing its role in providing valuable information about environmental concerns and product characteristics. Eco-labeling aids both business users and diverse consumers in making informed decisions and promotes eco-friendly products. Additionally, Brécard highlighted the influence of eco-labeling on shaping environmental policy and sustainability initiatives.

Research gap
Although there is much interest in green marketing, the specific influence it has on customer purchasing decisions for environmentally-friendly electronics has not been thoroughly investigated. Sharma and Trivedi (2016) have identified important factors, such as eco-labels and green costs, that have an impact on green purchasing. However, further research is needed to understand how these factors interact in the electronics industry, which is characterized by fast technological progress and significant environmental consequences. Nekmahmud and Fekete-Farkas (2020) found that when consumers consider a product to be of good quality, it can discourage them from making green purchases. This emphasizes the importance of studying how quality perceptions especially affect decisions about green technology. Tsai et al. (2020) put out a theoretical framework that establishes a connection between green marketing and purchase intentions. However, there is a lack of empirical evidence to support this model across many cultures and electronic product categories. Shabbir et al. (2020) and Brécard (2017) highlight the importance of eco-labeling, although its impact on consumer loyalty in the green electronics industry over a lengthy period of time remains uncertain. In their study, Gelderman et al. (2021) specifically examine B2B situations, which means that our understanding of B2C dynamics, especially in emerging markets for green electronics, is limited. To address these gaps, it is necessary to conduct cross-cultural and sector-specific studies in order to fully understand the influence of green marketing on consumer decisions in the electronics industry.

Research methodology
This study employed a descriptive research approach to investigate the influence of green marketing practices on customer purchasing behavior in the green electronics sector. The target population consists of customers who buy environmentally friendly electronic devices. This study used convenience sampling to select 116 people, considering their accessibility and desire to engage. This study gathered primary data using a structured questionnaire specifically created to evaluate consumer opinions and behaviors related to green marketing and green electronic devices. The data gathering process will consist of administering online surveys or conducting face-to-face interviews, taking into account the participants' preferences. Percentage analysis is a statistical tool that provides a summary of the data. On the other hand, inferential statistics, including correlation analysis and

regression analysis, are used to investigate correlations between variables. This complete strategy seeks to offer significant insights into the determinants that impact customer decisions in the green electronics market, enlighten marketing strategies, and encourage sustainable purchasing.

Data Analysis

The data below provides a comprehensive insight into the demographics of respondents, including their age, gender, and educational level, in relation to their purchasing behavior. This information is essential for comprehending consumer preferences in the context of green electronic products.

Particulars		No. of respondents	Percentage
Age	24 to 30 years	29	25.0
	30 to 36 years	20	17.2
	36 to 42 years	20	17.2
	43 to 50 years	19	16.4
	Above 50 years	28	24.1
Gender	Male	64	55.2
	Female	52	44.8
Education	Diploma	12	10.3
	Bachelor degree	24	20.7
	Master degree	32	27.6
	Professional degree	21	18.1
	Others	27	23.3
Total		**116**	**100.0**

Table shows that most customers were between 24 and 30 years old, followed by 24.1% of customers over 50 years old. Young respondents showed greater interest in environmentally friendly green electronic products than older respondents.In terms of gender, males have a tiny numerical advantage over females, accounting for 55.2% compared to 44.8%. However, both genders have a significant interest in sustainable products. The education levels of individuals differ, with 27.6% holding master's degrees, 20.7% having bachelor's degrees, and 18.1% possessing professional degrees. These emphasize the significance of higher education in promoting awareness and perhaps shaping purchasing decisions in favor of environmentally friendly options. Furthermore, among the respondents, 10.3% with diplomas and 23.3% labeled as "others" demonstrate a varied educational background in relation to their interest in green electronics.

Factor affects the purchasing decision regarding green electronic product

Particulars	No. of respondents	Percentage
Energy Efficiency	30	25.9
Environmental Impact	24	20.7
Product Lifespan	18	15.5
Labels	25	21.6
Others	19	16.4
Total	**116**	**100.0**

The table reveals that energy efficiency stands out as the most significant factor, accounting for 25.9%. This indicates the growing importance placed on reducing energy consumption and minimizing environmental impact in product selection. Environmental impact follows closely behind, with 20.7% of respondents prioritizing products with lower environmental footprints. Additionally, product lifespan and labels, representing 15.5% and 21.6%, respectively, also play significant roles in decision-making, indicating a preference for durable products and certifications validating environmental claims.

Correlation

The study uses bivariate correlation to find out the relationship between the variables. It considersenvironmental concern, eco-label, energy-efficient operations, and sustainable packagingareindependent variables. Consequently, buying decision of green electronic product is the dependent variable of the study.

Particulars	R-value (p-value)
Environmental concern	.947**(.000)
Eco-label	.787**(.000)
Energy-efficient Operations	.616(.000)
Sustainable Packaging	.543**(.000)

Environmental concern has the highest correlation, with a remarkable R-value of.947 (p<5%), indicating a strong and positive association between environmental consciousness and purchasing decisions. This suggests that customers who prioritize environmental considerations are highly inclined to choose green electronic products. Similarly, eco-labels demonstrate a significant positive relationship with purchasing decisions, supported by a substantial R-value of.787 (p<5%). This underscores the importance of eco-certifications in influencing consumer behavior towards environmentally friendly electronics. Energy-efficient Operationsalso exhibit a statistically significant correlation with purchasing decisions, albeit with a slightly lower R-value of.616 (p<5%), indicating a moderately strong association. Furthermore, Sustainable Packaginghas a significant positive relationship with purchasing decisions, as indicated by an R-value of.543 (p<5%). Environmental concern, eco-labels, energy-efficient operations, and sustainable packagingsignificantly influence purchasing decisions regarding green electronic products.

Regression

Particulars	Value
R	.944
R^2	.948
F	972.929
p-value	.000

Table shows that there was a correlation between GM practices and consumer purchase decision of Green Electronics. The model exhibits a strong relationship between these variables, with a correlation coefficient (R) of 0.944. Moreover, the R square coefficient of determination, which is 0.948, signifies that green marketing practices account for around 94.8% of the variation in customer purchasing decision, highlighting their significant influence. The F-statistic of 972.929, along with a highly significant p-value of .000, provides strong evidence for the accuracy of the model and the importance of its results. These results indicate the effectiveness of green marketing techniques have a significant impact on customer purchasing decisionand promoting the use of greenelectronic productin the market.

Coefficients					
Model	USC		SC	t	Sig.
	B	SE	B		
1 C	.112	.032		2.126	.000
Environmental concern	.932	.010	.967	5.754	.000
Eco-label	.102	.004	.402	4.126	.000
Energy-efficient Operations	.127	.008	.324	2.498	.005
Sustainable Packaging	.204	.006	.278	.941	.000

The coefficients analysis indicates that all the GM practices influence the buying decision for Green Electronics. Environmental concern is the most influential factor, with a standardized coefficient (B) of .967(t=5.754, p<0.05). This indicates that consumers with high environmental concerns are significantly more likely to purchase green electronic products. Eco-labels also have a substantial effect, evidenced by a coefficient of .402(t= 4.126, p<0.05) underscoring the importance of eco-certifications in guiding consumer choices. Energy-efficient operations contribute significantly as well, with a coefficient of .324(t=2.498, p<0.05), indicating that consumers value the energy efficiency of a company's operations when making purchasing decisions. Sustainable packaging, with a coefficient of .278(t=0.941, p<0.05) also plays a significant role, though slightly less influential compared to the other factors.

Results

The result shows that the majority of customers fall within the 24- to 30-year age range, closely followed by those above 50 years. The gender distribution is relatively balanced, with a slight majority of males over females. Higher education appears to play a crucial role, with a significant number of respondents holding master's, bachelor's, and professional degrees. Energy efficiency emerges as the most influential factor in purchasing decisions, followed by environmental impact, eco-labels, and product lifespan. Correlation analysis shows a strong association between environmental concern and purchasing decisions, with eco-labels, energy-efficient operations, and sustainable packaging also significantly influencing consumer behavior. The regression model indicates a strong relationship between green marketing practices and purchasing decisions, with these practices explaining a substantial portion of the variance in consumer choices. Coefficients analysis further confirms the impact, with environmental concern being the most influential factor, followed by eco-labels, energy-efficient operations, and sustainable packaging.

Conclusion

This study highlights the significant impact of green marketing practices on consumer buying decisions for green electronic products in India. The findings reveal that younger and older consumers, particularly those with higher education levels, are more inclined towards purchasing green electronics. Energy efficiency, environmental impact, eco-labels, and product lifespan are key factors influencing these decisions. Strong correlations between environmental concern, eco-labels, and sustainable practices with purchasing behavior underscore the effectiveness of green marketing strategies. The regression model confirms that green marketing practices substantially influence consumer choices, emphasizing the need for companies to prioritize these strategies. The study recommended to successfully market green electrical devices in India, companies need prioritize improving energy efficiency and pushing eco-labels. In addition, incorporating educational initiatives to enhance understanding regarding environmentally-friendly devices and embracing sustainable packaging methods can better match with consumer principles and diminish ecological consequences
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