
A Study on Impact of Green Marketing on Consumer Purchase Intention for Energy Efficient Appliances

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Abstract

Green marketing has become an essential business strategy in recent years due to increasing environmental concerns, climate change, and growing consumer awareness regarding sustainable consumption. Consumers today are more conscious of the environmental impact of the products they purchase and are increasingly preferring products that are energy-efficient, eco-friendly, recyclable, and manufactured using sustainable practices. In the consumer electronics industry, energy-efficient appliances such as refrigerators, washing machines, air conditioners, televisions, and microwave ovens have gained significant popularity because they reduce electricity consumption, lower carbon emissions, and contribute to environmental conservation. Companies such as LG Electronics have actively adopted green marketing strategies by promoting environmentally friendly manufacturing processes, energy-saving technologies, eco-labels, sustainable packaging, and awareness campaigns to encourage consumers to choose energy-efficient appliances. Green marketing not only focuses on promoting environmentally responsible products but also emphasizes corporate social responsibility, sustainable production, waste reduction, and efficient resource utilization. These initiatives help organizations improve their brand image, enhance customer trust, and gain a competitive advantage in the marketplace. Consumer purchase intention refers to the likelihood that a consumer will purchase a product based on various influencing factors such as environmental awareness, product quality, price, brand reputation, perceived value, and promotional activities. Green marketing campaigns can positively influence purchase intention by educating consumers about the long-term economic and environmental benefits of energy-efficient appliances. The present study aims to examine the impact of green marketing on consumer purchase intention for energy-efficient appliances at LG Electronics Company. It investigates the influence of environmental awareness, green advertising, eco-labels, energy efficiency ratings, corporate sustainability initiatives, and consumer trust on purchasing decisions.

Keywords: Green Marketing, Consumer Purchase Intention, Energy-Efficient Appliances, LG Electronics, Sustainable Marketing, Consumer Behaviour, Environmental Awareness.

I. INTRODUCTION

The increasing concern for environmental sustainability, climate change, and the

responsible use of natural resources has significantly influenced consumer behaviour across the world. Governments, businesses,

and consumers are increasingly recognizing the importance of adopting sustainable practices that minimize environmental degradation while ensuring long-term economic development [1]. As a result, green marketing has emerged as one of the most important marketing strategies adopted by organizations to promote environmentally friendly products, sustainable production processes, and responsible consumption. Green marketing refers to the planning, development, promotion, and distribution of products and services that minimize negative environmental impacts while satisfying consumer needs [2]. It includes the use of recyclable materials, energy-efficient technologies, eco-friendly packaging, sustainable manufacturing, reduced carbon emissions, and environmentally responsible promotional activities. Consumers today are more informed than ever before and actively evaluate the environmental impact of products before making purchasing decisions. Increasing awareness regarding global warming, pollution, depletion of natural resources, and rising energy costs has encouraged consumers to prefer products that contribute to environmental protection and energy conservation. In the consumer electronics industry, energy-efficient appliances such as refrigerators, washing machines, air conditioners, televisions, microwave ovens, and air purifiers have become increasingly popular because they consume less electricity, reduce operating costs, and minimize carbon emissions. Among the leading manufacturers in this sector, LG Electronics has established itself as a pioneer in promoting sustainable technologies by introducing innovative energy-efficient appliances equipped with advanced inverter technology, smart energy management systems, environmentally friendly refrigerants, and high energy-efficiency ratings. The company also actively participates in environmental sustainability initiatives through eco-friendly manufacturing practices, responsible waste

management, reduced plastic usage, recyclable packaging, and corporate social responsibility programs. Green marketing campaigns launched by LG Electronics emphasize the environmental and economic benefits of energy-efficient appliances by educating consumers about electricity savings, reduced greenhouse gas emissions, and long-term financial benefits. These campaigns utilize television advertisements, digital marketing, social media, influencer collaborations, sustainability reports, eco-label certifications, and awareness programs to strengthen consumer confidence and encourage environmentally responsible purchasing behaviour. Consumer purchase intention is influenced by several factors, including environmental awareness, perceived product quality, brand reputation, product reliability, price, promotional activities, social influence, and perceived environmental responsibility. Consumers who possess greater environmental knowledge are generally more willing to purchase green products because they recognize the long-term benefits for both society and themselves. Furthermore, government initiatives promoting energy conservation and mandatory energy-efficiency labeling have increased consumer confidence in purchasing energy-efficient appliances. Digital technologies and Artificial Intelligence have further enhanced green marketing by enabling businesses to deliver personalized sustainability messages, recommend energy-efficient products based on customer preferences, and improve customer engagement through interactive campaigns. Despite these advantages, green marketing also faces several challenges, including consumer skepticism regarding environmental claims, greenwashing practices, higher product prices, limited awareness in rural markets, and resistance to changing purchasing habits. Businesses must therefore ensure transparency, provide credible environmental certifications, and educate consumers regarding the measurable

benefits of sustainable products to maintain customer trust and long-term brand loyalty. In today's competitive marketplace, organizations that successfully integrate sustainability into their business strategies not only contribute to environmental conservation but also strengthen customer relationships, improve corporate reputation, increase competitive advantage, and achieve sustainable growth. Therefore, understanding the impact of green marketing on consumer purchase intention for energy-efficient appliances has become essential for organizations such as LG Electronics to design effective marketing strategies, improve customer satisfaction, and encourage environmentally responsible purchasing behaviour while contributing to global sustainability goals [3], [4], [5].

Research Objectives

The primary objective of this study is to examine the impact of green marketing on consumer purchase intention for energy-efficient appliances at LG Electronics Company. The study aims to analyze how environmental awareness, green advertising, eco-label certifications, energy-efficiency ratings, sustainable packaging, and corporate environmental responsibility influence consumer purchasing decisions. It also seeks to evaluate the role of brand trust, product quality, pricing, and promotional strategies in encouraging consumers to purchase energy-efficient appliances. Furthermore, the research identifies the major factors affecting consumer perception toward green marketing, examines the relationship between environmental consciousness and purchase intention, and provides practical recommendations for strengthening green marketing strategies to improve customer satisfaction, increase market competitiveness, and promote sustainable consumption.

Research Methodology

The present study adopts a descriptive research design to examine the impact of

green marketing on consumer purchase intention for energy-efficient appliances at LG Electronics Company. The research utilizes both primary and secondary sources of information to obtain a comprehensive understanding of consumer perceptions and green marketing practices. Primary information was collected from consumers using a structured questionnaire designed to assess their awareness of green marketing, perception of energy-efficient appliances, environmental concerns, purchase intentions, satisfaction levels, and trust in LG Electronics' sustainability initiatives. Secondary information was collected from books, peer-reviewed journals, conference proceedings, government publications, company reports, sustainability reports, industry reports, and authentic online databases related to green marketing, consumer behaviour, environmental sustainability, and energy-efficient technologies. The collected information was analyzed using percentage analysis and presented through bar graphs and a line graph to facilitate interpretation. The study focused on variables such as environmental awareness, green advertising, eco-label certification, energy efficiency, product quality, brand trust, pricing, customer satisfaction, and purchase intention. Based on the analysis, appropriate interpretations and recommendations were developed to help LG Electronics improve its green marketing strategies, strengthen customer confidence, promote sustainable purchasing behaviour, and enhance long-term business growth through environmentally responsible marketing practices.

II. REVIEW OF LITERATURE

Hua and Wang (2019) examined the antecedents of consumers' intention to purchase energy-efficient appliances by integrating the Technology Acceptance Model (TAM) with the Theory of Planned Behavior (TPB). The study focused on how

consumers' attitudes, perceived usefulness, perceived ease of use, subjective norms, and perceived behavioral control influence their intention to purchase energy-efficient appliances. The findings indicated that consumers' attitudes and perceptions regarding the usefulness of energy-saving appliances play an important role in shaping purchase intention. The study highlighted that understanding consumer perceptions is essential for manufacturers and marketers seeking to promote energy-efficient products. **Jain and Kaur (2019)** investigated the barriers affecting consumers' purchase intentions toward energy-efficient appliances in the Indian context. The study collected responses from 300 consumers in Pune and examined factors such as environmental concern, perceived environmental knowledge, perceived consumer effectiveness, eco-label perception, eco-brand perception, environmental advertising, green purchase intention, and green purchasing behavior. The findings identified different consumer segments, including "keen greens," "moderate greens," and "reluctant greens." The study suggested that effective environmental advertising, credible eco-labels, and stronger consumer awareness can help marketers encourage the adoption of energy-efficient appliances in emerging markets.

Waris and Hameed (2020) studied the purchase intention of energy-efficient home appliances by examining the influence of eco-label knowledge and psychographic variables. The study used questionnaire-based data and evaluated factors including environmental concern, green trust, perceived consumer effectiveness, functional value, and knowledge of eco-labels. The findings revealed that environmental concern, green trust, and functional value were particularly influential in consumers' purchase decisions. The authors emphasized that eco-labels can function as an important green marketing tool by communicating the environmental characteristics of products

and helping consumers distinguish energy-efficient appliances from conventional alternatives.

Hua and Wang (2019) further emphasized the importance of consumer attitudes and behavioral factors in energy-efficient appliance adoption. Their study combined the Technology Acceptance Model and Theory of Planned Behavior to understand why consumers accept or reject energy-efficient appliances. The research explained that consumers are more likely to consider energy-efficient appliances when they perceive them as useful and environmentally beneficial and when social influences support such purchases. The study provides an important foundation for green marketers because it indicates that communicating product usefulness, energy-saving benefits, and environmental advantages can positively influence purchase intention.

Luo, Li, and Sun (2021) investigated the relationship between consumers' perceived value, satisfaction, and intention to purchase energy-saving products. Based on 399 questionnaire responses, the study used structural equation modelling to examine functional, emotional, conditional, and green values. The findings showed that these forms of perceived value positively influence consumer satisfaction, which subsequently encourages purchase intention. The study is particularly relevant to green marketing because it indicates that marketers should not focus only on environmental benefits but should also communicate the functional and overall value of energy-efficient products.

Li, Siddik, Masukujjaman and Wei (2021) Li et al. (2021) examined the buying intention of energy-efficient home appliances and the moderating role of green self-identity. The study investigated consumer factors influencing the adoption of energy-efficient appliances in Bangladesh. It highlighted the importance of consumers' environmental identity and their perception of themselves as environmentally responsible individuals. The research

suggested that consumers with stronger green self-identities are more likely to develop positive intentions toward energy-efficient appliances. For marketers, the findings indicate that campaigns connecting energy-efficient products with consumers' environmental identity can strengthen green purchase intentions.

Yue et al. (2021) Yue, Liu, Long, Chen, Li, Liu, and Gu (2021) examined the effect of perceived value on green consumption intention using energy-efficient appliance purchases as an example. The study explored how consumers evaluate the benefits and costs associated with green consumption. The researchers found that perceived value plays a significant role in shaping consumers' green consumption intentions. The study demonstrates that consumers are more willing to purchase energy-efficient appliances when they perceive sufficient environmental, economic, and functional benefits in relation to the costs involved. This provides support for green marketing strategies that emphasize both environmental sustainability and practical consumer benefits.

Lin and Dong (2023) developed an integrated framework combining the Theory of Planned Behavior, Perceived Value Theory, and Environmental Awareness Theory to investigate consumers' intention to purchase energy-efficient home appliances. The study collected 448 valid responses and applied partial least squares analysis. The findings showed that purchase attitude positively affects purchase intention, while functional value, price value, environmental value, and environmental awareness significantly influence consumers' attitudes. However, emotional and social values did not significantly affect attitudes. The study suggests that marketers should emphasize the economic, functional, and environmental benefits of energy-efficient appliances when designing green marketing campaigns.

10. Prakash and Thakur (2025/2026) Prakash and Thakur examined the

relationship between consumer values, green brand equity, and green purchase intention for energy-efficient appliances. Using data from 399 respondents and Structural Equation Modelling, the study found that several consumer values positively influence green brand equity, which in turn affects green purchase intention. Biospheric values were particularly relevant to green brand-related outcomes, although the effects varied across brand dimensions. The research suggests that companies can strengthen consumer purchase intentions by aligning energy-efficient appliance offerings and green branding strategies with consumers' environmental values. This study is highly relevant to the present research because it directly connects green branding and consumer values with purchase intention for energy-efficient appliances.

III. DATA ANALYSIS & INTERPRETATION

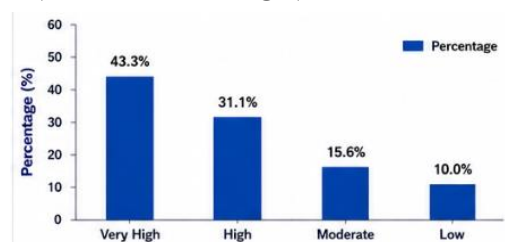


Fig 1: Consumer Awareness of Green Marketing for Energy-Efficient Appliances

Figure 1 The above table presents the level of consumer awareness regarding green marketing for energy-efficient appliances. Among the 180 respondents, 43.3% indicated a very high level of awareness, while 31.1% reported a high level of awareness.

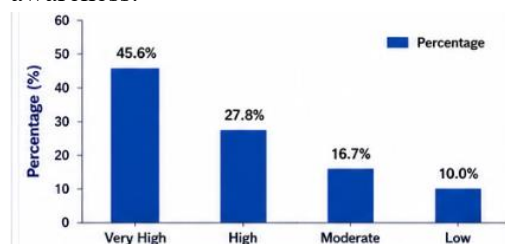


Fig 2: Influence of Green Marketing on Consumer Purchase Intention

Figure 2 The table indicates that 45.6% of respondents believe that green marketing has a very high influence on their purchase intention, while 27.8% reported a high influence.

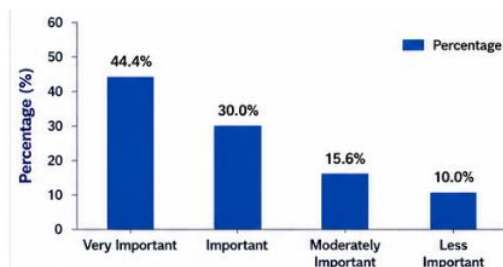


Fig 3: Importance of Energy Efficiency in Appliance Purchasing Decisions

Figure 3 The above table shows that 44.4% of respondents consider energy efficiency to be very important when purchasing household appliances, while 30.0% regard it as important.

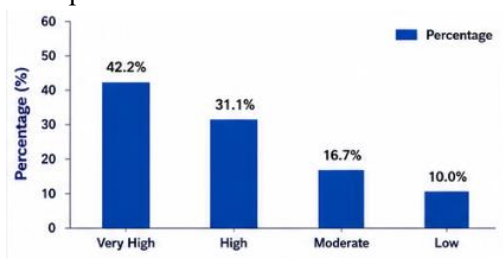


Fig 4: Consumer Trust in LG Electronics Green Marketing Initiatives

Figure 4 The table reveals that 42.2% of respondents have very high trust in LG Electronics' green marketing initiatives, while 31.1% expressed high trust.

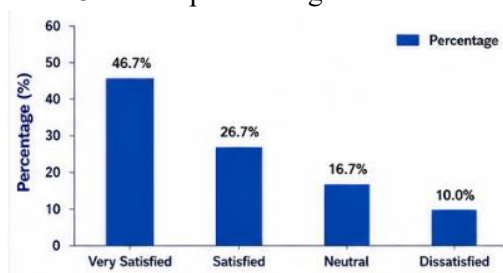


Fig 5: Customer Satisfaction with Energy-Efficient Appliances from LG Electronics

Figure 5 The above table indicates that 46.7% of respondents are very satisfied with LG Electronics' energy-efficient appliances, while 26.7% reported satisfaction.

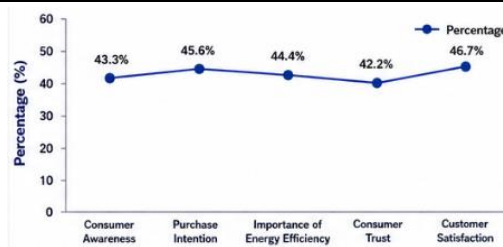


Fig 6: Overall Impact of Green Marketing on Consumer Purchase Intention

Figure 6 The line graph presents the overall relationship between green marketing and consumer purchase intention across five major dimensions.

IV. FINDINGS

The study reveals that green marketing has a significant positive impact on consumer purchase intention for energy-efficient appliances at LG Electronics Company. The analysis indicates that a majority of consumers possess a high level of awareness regarding environmental sustainability and recognize the importance of purchasing energy-efficient household appliances. Green marketing campaigns implemented by LG Electronics, including eco-friendly advertisements, sustainability initiatives, energy-efficiency labeling, and awareness programs, have successfully enhanced consumer understanding of the environmental and economic benefits associated with energy-efficient products. The study further reveals that consumers are more likely to purchase appliances that reduce electricity consumption, lower carbon emissions, and contribute to environmental conservation. Energy-efficiency ratings and recognized environmental certifications positively influence purchasing decisions because they increase product credibility and consumer confidence. The findings also show that consumer trust in LG Electronics' environmental commitment significantly strengthens brand loyalty and encourages repeat purchases. Customers expressed high levels of satisfaction with LG's energy-efficient appliances due to their advanced

technology, reliable performance, reduced electricity bills, durability, and environmentally responsible design. Moreover, environmental awareness combined with long-term financial savings motivates consumers to prefer sustainable products over conventional alternatives.

V. CONCLUSION

The study concludes that green marketing has become an essential strategic approach for influencing consumer purchase intention and promoting sustainable consumption in the consumer electronics industry. LG Electronics has effectively implemented green marketing practices by developing energy-efficient appliances, adopting environmentally responsible manufacturing processes, utilizing eco-friendly packaging, and promoting sustainability through integrated marketing communication. The research confirms that environmental awareness, energy-efficiency ratings, green advertising, corporate environmental responsibility, and product quality positively influence consumer purchasing decisions. Consumers increasingly prefer energy-efficient appliances because they offer long-term economic benefits through reduced electricity consumption while simultaneously contributing to environmental protection. The study also demonstrates that consumer trust and satisfaction play a crucial role in strengthening brand loyalty and increasing repeat purchases. Effective green marketing not only enhances the company's reputation but also creates a competitive advantage by differentiating environmentally responsible products from conventional alternatives. Although challenges such as higher product prices, greenwashing concerns, limited environmental knowledge among certain consumer groups, and changing market expectations continue to exist, these challenges can be minimized through transparent communication, credible

environmental certifications, continuous product innovation, and customer education programs.

VI. FUTURE SCOPE

The future scope of this research is extensive because environmental sustainability and green marketing continue to gain importance across global markets. Future studies may examine the effectiveness of emerging digital technologies such as Artificial Intelligence, Big Data analytics, the Internet of Things (IoT), blockchain, and machine learning in enhancing green marketing strategies and promoting energy-efficient products. Comparative research can also be conducted among leading consumer electronics companies such as LG Electronics, Samsung Electronics, Whirlpool Corporation, Haier, and Godrej Appliances to identify best practices in sustainable marketing. Researchers may further investigate the influence of demographic factors such as age, income, education, occupation, and geographical location on green purchasing behaviour. Additional studies can evaluate the effectiveness of government policies, energy-efficiency labeling programs, carbon-neutral manufacturing, renewable energy adoption, and environmental awareness campaigns in encouraging consumers to purchase sustainable products. Future research may also focus on consumer willingness to pay premium prices for environmentally friendly appliances, the role of social media in promoting green products, and the impact of influencer marketing on sustainable consumption.

VII. REFERENCES

- [1] P. Kotler, K. L. Keller, and A. Chernev, *Marketing Management*, 16th ed., Pearson, 2022.
- [2] P. Kotler and G. Armstrong, *Principles of Marketing*, 19th ed., Pearson, 2023.

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- [3] J. Ottman, *The New Rules of Green Marketing: Strategies, Tools, and Inspiration for Sustainable Branding*, Routledge, 2022.
 - [4] M. R. Solomon, *Consumer Behavior: Buying, Having, and Being*, 14th ed., Pearson, 2023.
 - [5] D. Chaffey and F. Ellis-Chadwick, *Digital Marketing: Strategy, Implementation and Practice*, 9th ed., Pearson, 2024.
 - [6] T. L. Tuten and M. R. Solomon, *Social Media Marketing*, 4th ed., Sage Publications, 2023.
 - [7] P. Kotler, H. Kartajaya, and I. Setiawan, *Marketing 6.0: The Future Is Immersive*, Wiley, 2024.
 - [8] V. Kumar and W. Reinartz, *Customer Relationship Management: Concept, Strategy and Tools*, 4th ed., Springer, 2023.
 - [9] Deloitte, *Global Sustainability and Consumer Trends Report*, 2025.
 - [10] Statista, *Global Green Consumer Market Report*, 2025.
 - [11] International Energy Agency (IEA), *Energy Efficiency 2024 Report*, 2024.
 - [12] United Nations Environment Programme (UNEP), *Global Environment Outlook*, 2024.
 - [13] PwC, *Global Consumer Insights Survey*, 2025.
 - [14] EY, *Future Consumer Index*, 2025.
 - [15] KPMG, *ESG and Sustainable Business Report*, 2025.