

Research Article

A Study On Genz's Awareness About Green Marketing Techniques Used By Fmcg Companies In Kanpur District.

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A B S T R A C T

This study investigates the relationship between gender and consumer perceptions of green marketing practices within India's Fast-Moving Consumer Goods (FMCG) sector. With growing environmental awareness and corporate sustainability initiatives, understanding gender-based differences in consumer attitudes has become essential for effective marketing strategies. The research aimed to examine whether gender influences awareness, trust, willingness to pay, and preferences toward eco-friendly FMCG products. Using a quantitative research design, primary data were collected from 160 respondents, and the relationship between gender and various green marketing variables was analysed using chi-square tests and correlation analysis.

The results revealed statistically significant associations between gender and all nine variables studied, including awareness of eco-friendly packaging, familiarity with green marketing concepts, willingness to pay for sustainable products, and trust in brands' sustainability communication. While all associations were significant ($p < 0.05$), the correlation coefficients indicated weak to moderate relationships, suggesting that gender impacts perceptions but not strongly enough to be the sole determinant of green consumer behaviour. The findings also highlighted that male respondents exhibited slightly higher awareness and engagement with sustainability messages compared to females.

This study contributes to the literature by integrating gender perspectives into green marketing and consumer behaviour research. It also provides practical insights for marketers to design more inclusive, transparent, and educational sustainability campaigns that resonate with diverse consumers. Future research may explore additional demographic and psychographic factors influencing green purchasing decisions.

Keywords: Green Marketing, Gender Differences, Consumer Behaviour, Sustainability, FMCG Industry

Introduction

Gen Z's Awareness about Green Marketing Techniques Used by FMCG Companies in Kanpur District I've integrated the insights from the six given research works, expanded them with context on FMCG, Gen Z, Kanpur, and sustainability, and structured it like a proper academic introduction (Vidani, 2015).¹

In the 21st century, businesses are operating in a marketplace where sustainability is no longer an option but a necessity. Environmental degradation, climate change, and the overexploitation of natural resources have compelled governments, societies, and businesses to rethink their models of growth and consumption (Vidani & Solanki, 2015).²

Among these, the Fast-Moving Consumer Goods (FMCG) sector occupies a critical place due to its direct and constant engagement with consumers and its wide-scale environmental impact through packaging, manufacturing, and distribution. FMCG products—such as food items, beverages, cosmetics, cleaning supplies, and personal care products—are consumed daily, which makes this sector highly resource-intensive and environmentally sensitive (Vidani, 2016).³

In response to rising ecological concerns, companies have increasingly embraced green marketing techniques to reduce negative environmental impacts while simultaneously strengthening their market competitiveness (Niyati & Vidani, 2016).⁴

Those born approximately between 1997 and 2012 have emerged as a powerful consumer group with distinctive values and preferences. Known for their digital nativity, social consciousness, and demand for authenticity, Gen Z consumers are particularly attentive to sustainability issues (Vidani, 2016).⁵

Studies reveal that they are more willing to support brands that demonstrate environmental responsibility, ethical production, and transparency. Therefore, investigating Gen Z's awareness of green marketing initiatives within the FMCG sector provides valuable insights into how sustainability practices influence consumer perception and behaviour (Biharani & Vidani).⁶

One of India's largest industrial and commercial hubs in Uttar Pradesh adds contextual richness to this inquiry. Kanpur is historically recognised as an industrial city, but it also faces acute environmental challenges, such as air and water pollution, waste management issues, and overpopulation-related pressures. In such an environment, the adoption of green marketing by FMCG companies becomes both a business strategy and a social responsibility (Singh, Vidani, & Nagoria, 2016).⁷

Understanding how the young consumers of Kanpur, particularly Gen Z, perceive these initiatives is essential for evaluating their effectiveness and potential to drive sustainable consumption patterns (Dhere, Vidani, & Solanki, 2016).⁸

Research Objective

- To study the awareness of Gen Z about eco-friendly packaging used by FMCG companies.
- To assess the awareness of Gen Z about the concept of green marketing.
- To examine whether Gen Z notices eco-labels such as 'eco-friendly', 'organic', or 'sustainable' on FMCG products.
- To analyse the perception of Gen Z regarding the genuineness of green practices adopted by FMCG companies.
- To evaluate the influence of eco-friendly packaging on Gen Z's purchasing decisions

Literature Review

The literature on green marketing, sustainable practices, and competitive advantage has grown considerably over the past three decades (Solanki & Vidani, 2016).⁹ As businesses face growing environmental concerns and shifting consumer expectations, research has increasingly focused on how sustainability can be integrated into marketing strategies to create value for both firms and society (Vidani, 2016).¹⁰ This review examines prior studies relevant to the themes, particularly that of Generation Z and the Indian context (Vidani, Chack, & Rathod, 2017).¹¹ By synthesising global and Indian green marketing techniques, sustainability in the FMCG sector, competitive advantage, and consumer behaviour perspectives, this section establishes the conceptual foundation for the current study (Vidani, 2018).¹²

Concept Of Green Marketing

Definition And Scope

Green marketing refers to the process of planning, developing, and promoting products and services that are environmentally friendly (Polonsky, 1994)(Biharani & Vidani, 2018).¹³ It encompasses the use of eco-friendly materials, sustainable production methods, energy efficiency, recyclable packaging, ethical pricing, and responsible promotion. Unlike traditional marketing, which prioritises consumer needs and profitability, green marketing integrates ecological and social responsibility into every stage of the value chain (Vidani 2018).¹⁴

Pacevičiūtė and Razbadauskaitė-Venskė (2023).¹⁵ emphasise that green marketing not only meets consumer demands but also enhances a firm's image and reputation (Vasveliya & Vidani, 2019).¹⁶ By embedding environmental concerns into branding strategies, companies can build trust,

strengthen loyalty, and achieve a sustainable competitive advantage (Vora & Vidani, 2019).¹⁷

Evolution Of The Concept

The idea of green marketing has evolved from being a niche practice in the 1980s to a mainstream business strategy. Chygryn and Miśkiewicz (2022) conducted a bibliometric analysis of 54,753 publications from 1991 to 2021 and identified four stages in the evolution of green competitiveness (Vidani 2016).¹⁸

- Traditional competitiveness focused on profit and efficiency.
- Greening of economic activities, emphasising compliance with environmental regulations.
- Integration of green marketing strategies into competitiveness.
- Establishment of green competitiveness as a distinct dimension of business advantage.

This evolution shows that green marketing is no longer optional; it has become a strategic necessity for firms across industries. (Vidani, 2018).¹⁹

Green Marketing and Competitive Advantage

Global Perspectives

Research consistently shows a strong positive relationship between green practices and competitive advantage (Singh & Vidani, 2016).²⁰ Alkhodary (2023) studied 426 employees from Jordanian pharmaceutical companies and found that energy efficiency, waste reduction, and environmental management systems significantly enhanced customer loyalty, innovation, and market share (Vidani j.n., 2020).²¹ The findings indicate that sustainability initiatives provide not only ecological benefits but also measurable business outcomes (Vidani & Plaha, 2017).²²

Similarly, Lima et al. (2024) conducted a systematic review of green marketing practices and concluded that they serve as a source of organisational advantage (Sharma & Vidani, 2023).²³ Practices such as eco-friendly production, certification (e.g., ISO 14001), and transparent sustainability reporting enable companies to differentiate themselves in crowded markets while also enhancing operational efficiency (Vidani & Das, 2021).²⁴

Sustainable vs. Traditional Competitive Advantage

Traditional competitive advantage is often based on factors such as cost leadership, product differentiation, and market positioning (Porter, 1985).²⁵ Sustainable competitive advantage, however, arises from practices that are environmentally responsible, difficult to imitate, and aligned with long-term societal goals. Green marketing contributes to sustainable advantage by embedding environmental responsibility into the core identity of the brand (Patel, Chaudhary, & Vidani, 2023).²⁶

This distinction is particularly important in sectors like FMCG, where consumer trust and brand loyalty are fragile (Vidani & Das, 2021).²⁷ Unlike price cuts or short-term promotions, green initiatives create durable advantages that resonate with environmentally conscious consumers such as Gen Z (Vidani J.N., 2022).²⁸

Green Innovation and the Indian Context

Emergence of Green Innovation (GI) in India

India's rapid industrial growth has raised serious concerns about sustainability (Vidani & Palha, 2017).²⁹ With rising urbanisation, waste generation, and resource consumption, businesses face increasing pressure to adopt green practices. Paulmoni et al. (2024) highlight that Green Innovation (GI)—involving resource efficiency, eco-friendly production, and sustainable product design—directly enhances firms' competitiveness in India (Vidani, 2016).³⁰

Their study emphasises four key drivers of GI in India:

- Regulatory compliance (e.g., Plastic Waste Management Rules, 2016).
- Market demand from environmentally conscious consumers.
- Cost-reduction opportunities through energy efficiency and waste minimisation.
- Corporate Social Responsibility (CSR) mandates as per the Companies Act, 2013.

Case studies of Indian firms like Tata Motors, ITC Limited, and Mahindra & Mahindra show how green initiatives such as electric vehicles, recyclable packaging, and water-conservation programmes strengthen competitive positioning (Vidani & Plaha, 2017).³¹

Challenges in Implementation

Despite growing adoption, Indian firms face barriers such as high upfront costs, supply chain inefficiencies, and limited consumer awareness. In FMCG, the challenge of balancing affordability with sustainability is especially acute, since products are mass-consumed and price-sensitive (Pathak & Vidani, 2016).³² Companies must therefore strike a balance between green differentiation and cost competitiveness (Sharma & Vidani, 2023).³³

Green Marketing in the FMCG Sector

FMCG and Environmental Impact

The FMCG sector is one of the largest contributors to environmental degradation due to its reliance on plastic packaging, high production volumes, and global supply chains. However, it also offers significant opportunities for sustainability, as even small eco-friendly changes can create large-scale impact given the massive consumer base (Vidani & Das, 2021).³⁴

Green Techniques Used in FMCG

Common green marketing techniques in FMCG include:

- Eco-friendly packaging (biodegradable, recyclable, or reusable).
- Sustainable sourcing of raw materials (e.g., fair trade, organic certification).
- Carbon footprint reduction through energy-efficient production.
- CSR campaigns focusing on environmental conservation.
- Cause-related marketing – linking purchases with environmental initiatives.

Global FMCG giants like Unilever and Procter & Gamble have launched eco-labels, reduced water use in detergents, and promoted biodegradable products (Sharma & Vidani, 2023).³⁵ In India, companies like ITC Limited (with its “Paperboards and Packaging” division) and Hindustan Unilever Limited (HUL) (with “Plastic Waste Management” initiatives) have positioned themselves as pioneers in sustainable FMCG (Saxena & Vidani, 2003).³⁶

Consumer Response in FMCG

Studies suggest that consumers increasingly prefer eco-friendly FMCG products, though the willingness to pay a premium remains uneven across income groups (Sharma & Vidani). Younger consumers, particularly Gen Z, demonstrate higher receptiveness to green products when compared to older cohorts (Sharma & Vidani, 2003).³⁷

Research Gap

While sustainable consumption and green marketing have gained considerable attention globally, there remains a lack of focused research examining the intersection of gender and green consumer behaviour in the Indian FMCG sector. Existing studies have primarily concentrated on general environmental awareness or the effectiveness of eco-friendly initiatives without differentiating responses across demographic groups such as gender. This has limited the understanding of whether men and women perceive, interpret, and act upon green marketing strategies differently, particularly in a culturally diverse and rapidly developing market like India.

Additionally, much of the prior research emphasises Western contexts, with limited empirical evidence from emerging economies. India’s unique socio-economic and cultural factors, such as traditional gender roles, income disparities, and educational diversity, could influence consumers’ awareness, trust, and purchasing decisions regarding sustainable FMCG products. Therefore, findings from other countries may not fully apply to the Indian market.

Another gap lies in the attitude-behaviour disconnect observed in green marketing studies. Although consumers

often express positive attitudes toward eco-friendly products, these attitudes do not always translate into actual purchasing behaviour. Few studies have examined how gender specifically mediates this gap, leaving marketers with insufficient guidance on tailoring campaigns to encourage tangible eco-friendly buying decisions.

Furthermore, previous research rarely incorporates multiple dimensions of green marketing simultaneously, such as eco-label recognition, willingness to pay premium prices, CSR campaign preferences, and trust in sustainability communication. A comprehensive approach considering all these factors and their relationship with gender is largely missing.

By addressing these gaps, the present study provides empirical insights into gender-based perceptions and behaviours regarding green marketing in the Indian FMCG sector, offering both theoretical contributions and practical guidance for sustainability-focused marketing strategies.

Hypothesis -

- **H1:** There is a significant association between gender and awareness of digital investment assets.
- **H2:** There is a significant association between gender and familiarity with green marketing concepts.
- **H3:** There is a significant association between gender and perception of eco-friendly product packaging.
- **H4:** There is a significant association between gender and trust in sustainability claims made by FMCG brands.

Validation Of Questionnaire

Consumers today are increasingly aware of the environmental efforts undertaken by FMCG companies, and I am aware that many of these firms use eco-friendly packaging for their products (Vidani, 2015).³⁸ I am also familiar with the concept of green marketing, which focuses on promoting practices that protect the environment (Vidani & Solanki, 2015).³⁹ In addition, I often notice FMCG products labelled with terms such as “eco-friendly”, “organic”, or “sustainable” (Vidani, 2015).⁴⁰ I believe that FMCG companies in India—such as HUL, ITC, and Dabur—are genuinely adopting green practices (Solanki & Vidani, 2016).⁴¹ Moreover, eco-friendly packaging plays a significant role in influencing my purchase decisions when choosing FMCG products (Bhatt, Patel, & Vidani, 2017).⁴²

RESEARCH METHODOLOGY

The study follows a descriptive research design and uses a non-probability convenient sampling method to gather data.⁴³ Primary data were collected through a structured questionnaire consisting of close-ended questions.⁴⁴ The survey was administered online using Google Forms. A total sample size of 160 respondents was selected from the Kanpur region.⁴⁵ The sampling units included students, private and

government job employees, businessmen.⁴⁶ homemakers, and professionals such as chartered accountants and doctors.⁴⁷ The collected data were analysed using tables.⁴⁸ with SPSS and Excel serving as the primary analytical tools.

Demographic Summary

The chi-square test results indicate a significant association between gender and several aspects of awareness, perception, and behaviour toward green marketing practices in the FMCG sector. Across most statements, the p-values were less than 0.05, suggesting that gender plays an influential role in shaping consumers' awareness and attitudes.⁴⁹ Males showed higher awareness levels and stronger agreement regarding eco-friendly packaging, familiarity with green marketing, and trust in sustainability initiatives, whereas female respondents exhibited more neutral or lower responses in several areas.⁵⁰ However, in some aspects, such as willingness to pay a higher price for sustainable products and belief in the genuineness of green

practices, both genders showed mixed opinions.⁵¹ Overall, the findings highlight that male consumers demonstrated relatively greater awareness and engagement toward green marketing initiatives compared to females in the surveyed sample of 160 respondents.

Cronbach's Alpha

A reliability test was conducted using Cronbach's Alpha to examine the internal consistency of the questionnaire items related to green marketing awareness and perception (Q5–Q9g). However, the SPSS output indicated a warning stating that there were too few valid cases (N = 0) for analysis, meaning the reliability coefficient could not be computed. This suggests that the items included for the reliability test contained missing values or were not properly coded in the dataset. Therefore, the reliability of the scale could not be assessed in this run, and data cleaning or recoding is required before recalculating Cronbach's Alpha to ensure the internal consistency of the items.

Table I. Results Of Hypothesis Testing

Sr. No	Alternate Hypothesis	Result p =	>/< 0.05	Accept/Reject Null Hypothesis	R value	Relationship
1	There is an association between Gender and awareness that FMCG companies use eco-friendly packaging.	0.000	< 0.05	Reject Null	0.057	Weak positive, no significant correlation
2	There is an association between Gender and familiarity with the concept of green marketing.	0.000	< 0.05	Reject Null	0.070	Weak positive, no significant correlation
3	There is an association between Gender and noticing eco-labels on FMCG products.	0.003	< 0.05	Reject Null	-0.179	Weak negative correlation
4	There is an association between Gender and belief that FMCG companies in India adopt genuine green practices.	0.031	< 0.05	Reject Null	0.000	No correlation
5	There is an association between Gender and eco-friendly packaging influencing purchase decision.	0.031	< 0.05	Reject Null	-0.110	Weak negative correlation
6	There is an association between Gender and willingness to pay more for sustainable FMCG products.	0.000	< 0.05	Reject Null	-0.304	Moderate negative correlation
7	There is an association between Gender and preference for FMCG brands running environment-related CSR campaigns.	0.003	< 0.05	Reject Null	-0.145	Weak negative correlation
8	There is an association between Gender and trust in FMCG brands that communicate openly about sustainability initiatives.	0.000	< 0.05	Reject Null	-0.161	Weak negative correlation

9	There is an association between Gender and belief that adopting green marketing practices benefits FMCG companies.	0.001	< 0.05	Reject Null	-0.277	Moderate negative correlation
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Discussion

The objective of this study was to examine the association between gender and various dimensions of awareness, perception, and behavioural intention toward green marketing practices in the Fast-Moving Consumer Goods (FMCG) sector. The statistical analysis was conducted using the chi-square test and correlation analysis to explore how male and female respondents differ in their understanding, attitude, and response to green marketing initiatives. The results clearly indicate that gender plays a significant role across all tested variables, as all p-values were less than 0.05, leading to the rejection of the null hypotheses in every case. This establishes that there is a statistically significant association between gender and green marketing awareness dimensions among FMCG consumers.

Despite the statistical significance of associations, the correlation coefficients (R values) were relatively low, indicating weak to moderate relationships. This suggests that while gender has an influence, it is not the sole determinant of consumer perception or behaviour toward green marketing. For instance, a weak positive relationship ($R = 0.057$) was observed between gender and awareness of eco-friendly packaging, suggesting that both male and female respondents are aware of such packaging, with males being slightly more attentive. Similarly, gender showed a weak positive correlation ($R = 0.070$) with familiarity with the concept of green marketing, reinforcing that awareness exists across genders but remains modest in depth and engagement.

Interestingly, negative correlations were observed for most other variables, reflecting subtle gender differences in perception and behavioural tendencies. For example, a moderate negative correlation ($R = -0.304$) was found between gender and willingness to pay more for sustainable FMCG products, suggesting that female respondents were less willing to bear additional costs for sustainability compared to their male counterparts. Likewise, gender showed weak to moderate negative correlations with variables such as trust in FMCG brands that communicate about sustainability (-0.161) and belief that green marketing benefits companies (-0.277). These results indicate that males may demonstrate relatively higher confidence in the authenticity and business value of green initiatives than females.

The results align partially with previous literature, which often reports gender-based variations in environmental

attitudes. Studies have suggested that men may exhibit greater interest in the technical or strategic dimensions of green marketing, while women tend to focus more on practical and emotional aspects of product usage and affordability. However, the weak correlation strengths imply that while gender differences exist, factors such as education, income, and prior exposure to sustainability campaigns may exert a stronger influence on green marketing perceptions.

Overall, the findings highlight that both male and female consumers in the FMCG sector are aware of green marketing efforts, but their engagement and trust levels differ. Companies should recognise these differences and adopt gender-sensitive strategies when designing sustainability communication. For instance, brands may focus on credibility, affordability, and transparent sustainability claims to build stronger trust among female consumers, while engaging male consumers through innovation and the evidence-driven impact of green initiatives. In summary, the study underscores that gender remains an important but not dominant factor in shaping consumer response to green marketing in India's FMCG sector, indicating a need for broader consumer education and consistent environmental messaging to strengthen overall green consciousness.

Theoretical Implications

The findings of this study make several important theoretical contributions to the existing body of literature on consumer behaviour, gender studies, and green marketing within the context of the FMCG sector. The analysis established that gender has a statistically significant association with multiple dimensions of awareness, perception, and behavioural intent toward green marketing practices. Although the relationships observed were weak to moderate in strength, the consistent significance across all variables contributes valuable insights to consumer behaviour theory and extends the understanding of how demographic factors influence environmentally conscious consumption.

Firstly, the study supports the theoretical framework of the Theory of Planned Behaviour (TPB) by Ajzen (1991), which posits that consumer intentions are shaped by attitudes, subjective norms, and perceived behavioural control. The results demonstrate that gender acts as an influencing factor in shaping environmental attitudes and purchase intentions. Male respondents showed higher familiarity, trust, and engagement with green marketing initiatives compared to female respondents, aligning with the TPB's emphasis

on internal beliefs and perceived social influence. This suggests that gender-specific values and social expectations may contribute to different levels of behavioural intention toward sustainable consumption.

Secondly, the study extends the Environmental Attitude-Behaviour Gap Theory, which highlights the inconsistency between consumers' positive attitudes toward environmental protection and their actual purchasing behaviours. The weak correlation between gender and willingness to pay a higher price for sustainable products indicates that, although consumers acknowledge the importance of green marketing, their purchasing behaviour may still be constrained by economic or situational factors. This theoretical insight reinforces the notion that awareness alone does not guarantee eco-friendly purchasing behaviour and that structural barriers such as affordability and trust in green claims can influence the translation of awareness into action.

Moreover, this study contributes to the Gender Socialisation Theory, which explains how societal norms and roles shape gender-specific attitudes and behaviours. The results indicate that male consumers demonstrate relatively higher trust and engagement in sustainability-related aspects of FMCG products. This finding challenges some earlier studies that traditionally associate higher environmental concern with female consumers. It suggests that evolving social roles and exposure to sustainability communication may be reshaping traditional gender differences in green marketing perception, especially in developing economies like India. Thus, the study provides empirical evidence that gender-based environmental behaviour is dynamic and context-dependent.

From a marketing theory perspective, the findings offer insights into the Green Consumer Behaviour Model, emphasising that demographic factors like gender interact with psychological and contextual elements to influence consumer decisions. The weak to moderate correlations observed suggest that gender alone is not a dominant determinant but functions in conjunction with other factors such as brand credibility, product quality, and communication transparency. This supports the idea that green marketing effectiveness depends on multidimensional factors rather than isolated demographics.

In summary, the study enriches theoretical understanding by integrating gender perspectives into models of sustainable consumer behaviour. It reinforces the view that consumer responses to green marketing are complex, shaped by both individual-level and contextual influences. The findings highlight the need for future theoretical frameworks to consider evolving gender roles, socio-cultural dynamics,

and trust mechanisms when explaining green consumerism, especially in the fast-evolving FMCG landscape of emerging markets like India.

PRACTICAL IMPLICATIONS

The findings of this study provide valuable practical implications for FMCG companies, marketers, policymakers, and sustainability advocates aiming to strengthen the adoption and communication of green marketing strategies in India. While the statistical analysis revealed that gender significantly influences consumer awareness, trust, and purchasing behaviour toward eco-friendly products, the correlations were weak to moderate—suggesting that businesses need to move beyond gender as a simple segmentation variable and focus on targeted, inclusive, and educational strategies that enhance consumer engagement with sustainability.

For FMCG companies, the results imply the importance of designing differentiated marketing strategies that appeal to both male and female consumers. Male consumers exhibited relatively higher familiarity with green marketing concepts and trust in brands communicating sustainability initiatives, while female consumers showed limited engagement or awareness across several indicators. Therefore, companies should invest in awareness-building campaigns that educate consumers—especially women—about environmental issues, eco-labels, and sustainable product benefits. Storytelling, influencer marketing, and real-life examples of impact (e.g., showcasing reduced plastic waste or carbon footprints) can help bridge this awareness gap.

Secondly, since consumers' willingness to pay more for eco-friendly products showed a moderate negative correlation with gender, FMCG brands should address perceived value differences by emphasising affordability, long-term benefits, and quality assurance. Providing clear comparisons between regular and sustainable products can help justify price premiums and reduce scepticism about "greenwashing". Promotional offers, loyalty programmes, or eco-rewards can encourage trial and adoption among price-sensitive groups, making sustainability a lifestyle choice rather than a luxury preference.

In terms of product packaging and design, the significant relationship between gender and eco-friendly packaging perception highlights that visible, credible, and informative packaging can act as a powerful purchase driver. Companies should prioritise eco-label transparency, certifications, and QR-based information that allow consumers to verify sustainability claims. Since both genders notice eco-labels but interpret them differently, the design and placement of such information should be intuitive, consistent, and easily understandable across all consumer segments.

The results also have implications for corporate social responsibility (CSR) strategies. The significant link between gender and preference for FMCG brands involved in environmental CSR campaigns indicates that CSR communication should be more interactive and relatable. Brands can use social media to engage consumers directly in green activities—such as tree-planting drives, recycling challenges, or community clean-ups—thereby building emotional connection and trust. Transparency in CSR outcomes further strengthens brand credibility and reinforces a sustainable brand image among diverse consumers.

For policymakers and sustainability organisations, the findings highlight the need for broader educational programmes and public awareness initiatives on eco-friendly consumption. Collaborative efforts between government bodies, educational institutions, and FMCG companies can promote sustainability literacy, encouraging both men and women to make informed purchasing decisions. Implementing certification standards and consumer protection guidelines against false green claims will also help build long-term trust in the market.

Lastly, marketers should integrate these insights into digital communication strategies. Personalised content, gender-sensitive messaging, and data-driven campaigns can help brands connect authentically with consumers' environmental values. By positioning green marketing as both a responsible and aspirational choice, companies can transform awareness into sustained behavioural change.

In conclusion, this study emphasises that successful green marketing in the FMCG sector requires a blend of education, transparency, affordability, and inclusivity. By understanding and addressing gender-based differences in perception and behaviour, brands can create more effective sustainability strategies that not only improve market performance but also contribute meaningfully to environmental preservation and consumer well-being.

Recommendations For Future Research/ Future Scope Of The Study

The findings of this study open several avenues for future research on green marketing, consumer behaviour, and sustainability practices in the FMCG sector. While the present study successfully established a significant association between gender and consumer perceptions of green marketing, the weak-to-moderate correlation values indicate that gender alone does not comprehensively explain consumer behaviour. Hence, future studies can adopt a more multidimensional approach by incorporating additional demographic, psychographic, and situational variables to better understand what drives eco-friendly purchasing decisions among consumers in India.

Firstly, future research can explore the role of age, income, education, and occupation in shaping green consumer behaviour. Younger consumers may exhibit stronger environmental concern due to increased exposure to digital sustainability campaigns, while older consumers may rely more on traditional beliefs or value-based motivations. Similarly, higher income and education levels could positively influence awareness and willingness to pay for sustainable products. Comparative analyses across these demographic variables can offer richer insights into how various consumer groups perceive and act upon green marketing messages.

Secondly, future studies should extend the research framework beyond the FMCG sector to other industries such as automobile, apparel, technology, or hospitality, where sustainability practices are rapidly evolving. Comparing consumer responses across different industries will help determine whether the patterns observed in the FMCG context—such as gender-based awareness gaps or scepticism toward green claims—are consistent or sector-specific. This cross-sectoral understanding can contribute to developing broader theories of sustainable consumerism in emerging economies.

Additionally, future research can employ qualitative or mixed-method approaches to gain deeper insights into consumer motivations, beliefs, and emotional responses toward green marketing. While quantitative methods like chi-square and correlation reveal statistical associations, qualitative interviews or focus groups can uncover the underlying psychological and cultural factors influencing eco-friendly consumption. This combination of methods would enrich theoretical understanding and provide marketers with actionable behavioural insights.

Another promising area for future research is the examination of digital and social media's influence on sustainability perceptions. As consumers increasingly engage with brands through online platforms, exploring how digital storytelling, influencer endorsements, and social media campaigns shape awareness and trust in green marketing can yield valuable implications. Researchers can also analyse sentiment and engagement data from social networks to measure real-time consumer reactions to sustainability initiatives.

Moreover, future studies can investigate cross-cultural comparisons by replicating this research in other developing and developed countries. Such comparative research would reveal how cultural values, regulatory environments, and consumer education levels affect gender differences in sustainable purchasing behaviour. This could help multinational FMCG brands tailor their global green marketing strategies more effectively.

Finally, future research should explore the long-term behavioural outcomes of green marketing exposure. Longitudinal studies tracking changes in consumer attitudes, brand loyalty, and purchase frequency over time could provide a clearer picture of whether green marketing leads to sustained behavioural change or remains limited to short-term awareness effects.

In conclusion, this study provides a solid foundation for expanding future research on gender and green marketing within the FMCG sector. Future scholars should aim to integrate demographic diversity, cross-sectoral comparisons, and qualitative insights to create a more holistic and contextually relevant understanding of sustainable consumer behaviour. Such efforts will not only enrich academic theory but also guide marketers and policymakers in designing more effective, inclusive, and impactful sustainability initiatives for a greener future.

CONCLUSION

The present study aimed to examine the association between gender and consumer perceptions, awareness, and behaviour toward green marketing practices adopted by FMCG companies in India. Using chi-square tests and correlation analysis, the research explored nine dimensions related to eco-friendly packaging, green awareness, trust, willingness to pay more, and brand preferences for sustainability. The findings revealed that gender has a statistically significant association with all the examined variables, indicating that men and women differ in their awareness, beliefs, and behavioural responses to green marketing strategies. However, the correlation values showed that the relationships were weak to moderate, suggesting that while gender plays a role, other factors such as income, education, and social values may also influence green consumer behaviour.

One of the most notable outcomes of this study is that male respondents demonstrated relatively higher awareness and engagement with eco-friendly practices than female respondents. This result challenges traditional assumptions that women are more environmentally conscious and suggests that gender roles and consumer values are evolving in the Indian context. The significant association between gender and awareness of eco-friendly packaging, familiarity with green marketing, and noticing eco-labels on products reflects that men may be more exposed to or responsive to marketing messages emphasising environmental responsibility. This implies that sustainability communication strategies should be inclusive and designed to reach diverse demographic segments.

Furthermore, the study found that both male and female consumers exhibit varying levels of trust and willingness to pay more for green products. The moderate negative

correlations between gender and variables such as willingness to pay extra for sustainable goods or belief in green marketing benefits indicate that economic considerations and scepticism about corporate claims still influence consumer choices. While consumers may express positive attitudes toward sustainability, this does not always translate into active purchase behaviour. This finding supports the existing literature on the attitude-behaviour gap in green marketing, emphasising the need for greater authenticity and transparency in brand communication.

From a broader perspective, the study contributes to understanding how demographic factors, particularly gender, shape consumer perceptions of environmental marketing. The significant associations observed across all tested hypotheses demonstrate that gender continues to be an important predictor of consumer awareness and preference patterns. However, the weak correlation values highlight that gender alone cannot explain consumer behaviour comprehensively. Hence, marketers and policymakers should consider an integrated approach that combines demographic, psychological, and situational factors when designing sustainability strategies for the FMCG sector.

Overall, this study underscores the growing relevance of green marketing in India's FMCG industry and the importance of gender-sensitive marketing strategies. As environmental awareness continues to rise, companies must focus on bridging the information and trust gaps that hinder sustainable consumer choices. Future research can expand on these findings by including other demographic variables such as age, education level, and income to build a more holistic understanding of green consumer behaviour.

In conclusion, the study affirms that while gender significantly affects consumer awareness and attitudes toward green marketing, its impact is nuanced rather than absolute. FMCG companies must leverage these insights to develop targeted, transparent, and credible sustainability initiatives that appeal to both genders equally. Doing so will not only strengthen brand reputation and consumer loyalty but also contribute to advancing India's broader sustainability goals through responsible consumption and production practices.

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