



Green Marketing Practice and Consumer Environment Awareness in FMCG Sector

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Abstract

Escalating environmental degradation and increasing public concern about sustainability have compelled firms in the fast-moving consumer goods (FMCG) sector to adopt green marketing practices and communicate environmental benefits more explicitly. This paper examines the interplay between green marketing practices and consumer environmental awareness in the FMCG sector, focusing on conceptual and empirical evidence up to 2016–2017. Drawing on prior studies on green marketing strategy, green consumer segmentation, environmental attitudes, and green purchase intention, the paper synthesises how tools such as eco-labels, green packaging, environmental claims and cause-related communication influence consumer cognition, affect and behavioural intention toward eco-friendly FMCG products. Evidence indicates that rising environmental concern and health consciousness have created identifiable “green consumer” segments that respond positively to credible and well-designed green offerings, yet a persistent attitude–behaviour gap limits the translation of awareness into consistent purchase behaviour. Empirical findings from emerging economies, including India, further suggest that while consumers increasingly recognise environmental problems and express favourable attitudes toward green FMCG products, their awareness of specific environmental attributes, certifications and life-cycle impacts remains partial, and price, availability and trust in claims continue to act as significant barriers. The paper concludes that green marketing in FMCG can play a substantive role in strengthening consumer environmental awareness and stimulating more sustainable consumption patterns, provided firms design integrated strategies that combine product reformulation, transparent communication and credible third-party verification, and policymakers support these efforts through regulatory guidance, standards and consumer education initiatives.

Keywords: Green marketing, FMCG sector, consumer environmental awareness, green purchase intention, eco-friendly products, sustainable consumption

Introduction

Green marketing has emerged as a strategic and ethical response to increasingly visible environmental challenges, ranging from climate change and pollution to resource

depletion and waste accumulation. Within the fast-moving consumer goods (FMCG) sector—characterised by high production volumes, intensive packaging requirements and rapid consumption cycles—environmental concerns have become particularly pronounced due to the sector's significant ecological footprint. The integration of green marketing practices has shifted from being a voluntary corporate positioning tool to an essential approach necessary for organisational legitimacy, competitive differentiation and long-term sustainability. Growing consumer awareness and concern for environmental consequences have influenced firms to adopt eco-friendly product designs, biodegradable packaging, reduced carbon emission processes, sustainability-oriented branding and transparent corporate environmental claims. As consumer preferences evolve from price and convenience dominance to value-based environmental responsibility, FMCG companies face increasing pressure to demonstrate authentic and measurable sustainability performance rather than superficial green positioning.

The increasing importance of environmental consciousness has led to the rapid emergence of a distinct market segment identified as “green consumers,” whose purchasing behaviour is influenced by ecological attitudes and perceived ethical responsibility. However, despite rising awareness and positive environmental attitudes, multiple studies highlight a persistent gap between consumer environmental concern and actual purchasing behaviour of green products, commonly referred to as the attitude–behaviour gap. This inconsistency is attributed to factors such as high price sensitivity, perceived quality differences, limited availability, skepticism toward green claims, and insufficient understanding of eco-labels or environmentally certified product attributes. The FMCG market therefore presents a compelling and complex arena for examining the relationship between green marketing strategies and consumer environmental awareness—where organisational efforts must align effectively with consumer perception, expectation and behavioural triggers.

Overview of the Study

This research paper critically analyses the role of green marketing practices in shaping consumer environmental awareness within the FMCG sector. It explores the extent to which eco-friendly marketing initiatives influence consumer knowledge, attitudes and behavioural intention toward green products. By integrating theoretical perspectives and empirical evidence up to 2016–2017, the study evaluates the effectiveness of green marketing tools such as eco-labels, environmental certifications, green packaging, sustainable branding and promotional communication. The aim is to examine how firms' environmental initiatives impact consumers' decision-making processes and whether increasing awareness leads to corresponding behavioural change.

Scope and Objectives

The scope of this research is limited to green marketing practices and consumer environmental awareness specifically within the FMCG sector. The study focuses on emerging economies with emphasis on the Indian market context, while referring to global academic frameworks to provide conceptual breadth. The study objectives are as follows:

- To analyse the evolution of green marketing practices within the FMCG sector and their strategic significance.

- To examine the level of consumer environmental awareness and its influence on green purchasing behaviour.
- To identify the relationship between green marketing communication and consumer perception of environmental claims.
- To investigate barriers that restrict the translation of awareness into consistent eco-friendly purchase decisions.
- To evaluate opportunities for improving green marketing effectiveness through credible communication and sustainability-driven product development.

Author Motivation

This study is motivated by the academic and practical relevance of understanding consumer behaviour within sustainability-driven markets. Although there is growing research on environmental marketing and green consumer attitudes, there remains a critical need for integrated analysis linking FMCG corporate environmental practices with consumer environmental consciousness and buying actions. The complex dynamics of the attitude–behaviour gap, particularly in developing markets, present an urgent research question with implications for business strategy, marketing ethics and environmental policy. The author is driven by the recognition that consumer education and transparent marketing can significantly contribute to sustainable development goals, and that green marketing represents a transformative pathway for both economic and ecological progress.

Paper Structure

The paper is structured into several sections to ensure comprehensive exploration of the theme. Following the introduction, the Literature Review synthesises existing academic work and identifies research gaps in the study of green marketing and consumer environmental awareness. The Research Methodology section describes the analytical framework, data parameters and conceptual models employed. Subsequent sections examine key green marketing practices, analyse their influence on consumer awareness and identify the inhibitors to green consumer behaviour. The discussion integrates findings to derive strategic recommendations for firms and policy implications for governmental agencies. The paper concludes with a synthesis of insights, highlighting contributions to academic understanding and directions for future research.

In sum, this structured analysis aims to advance understanding of how green marketing initiatives can enhance environmental responsibility and foster sustainable consumption within the FMCG sector, thereby contributing to both scholarly discourse and practical decision-making.

Literature Review

Green marketing has progressively developed as a significant strategic domain within marketing research and practice over the past two decades, driven by increased environmental awareness, global sustainability discourse and consumer expectations for environmentally responsible products. The field has evolved substantially since Peattie [20] introduced the conceptual foundation of green marketing, highlighting its transition through phases of ecological marketing, environmental marketing and sustainability-oriented marketing. Peattie and Crane [19] further elaborated on conceptual ambiguities and identified gaps between theoretical formulations and practical

implementation, noting that inconsistency in terminology and lack of authentic corporate commitment often led to skepticism and consumer distrust.

A substantial body of research has examined the strategic frameworks underpinning green marketing practices and their relevance for business competitiveness. Leonidou et al. [9] investigated the integration of environmental factors into the marketing mix and demonstrated that proactive environmental strategies contribute to superior financial and reputational performance. Complementing this, Ottman [15] argued that green marketing success depends on embedding sustainability into core product functionality and not positioning it merely as a promotional claim. Dangelico and Vocalelli [1] consolidated definitional and strategic perspectives through a systematic review, emphasising that effective green marketing requires convergence across product innovation, communication design, distribution decisions and environmental positioning.

Another important dimension within green marketing literature pertains to consumer attitudes and behavioural responses toward environmentally friendly products. Chen [16] identified perceived brand trust and green satisfaction as key determinants of consumer loyalty toward green brands. Rahbar and Wahid [13] studied green marketing communication tools, such as eco-labels and environmental certifications, and found that credible and clear environmental claims positively influence purchase decisions. Esmaeilpour and Bahmiary [2] established a significant relationship between environmental attitudes and purchase intentions mediated by environmental concern, suggesting that psychological variables play a central role in green consumption patterns.

Within the context of FMCG, several empirical studies have explored green consumer behaviour in emerging markets. Morel and Kwakye [11] examined consumer willingness to pay for eco-friendly FMCG products and identified sensitivity to pricing and value perceptions as critical determinants in purchase behaviour. Rajeswari and Meenakshi [8] reported that while consumers demonstrate high environmental awareness, many lack specific knowledge required to evaluate eco-friendly product claims, resulting in reliance on brand reputation and product certification as trust indicators. Gupta and Singh [5] identified availability, accessibility, and visual product differentiation as significant factors influencing green consumption in FMCG categories. Singh and Jangid [3] found that young urban consumers express strong positive attitudes toward green FMCG products, yet their actual purchasing decisions frequently conflict with their stated intentions, reinforcing the attitude–behaviour gap highlighted across global studies.

Cross-country perspectives provide additional insights into cultural and developmental influences. Chhay et al. [7] demonstrated that environmental concern and perceived consumer effectiveness strongly drive green purchase intention in developing economies. Hartmann and Apaolaza-Ibañez [12] argued that psychological benefits such as emotional satisfaction and identity reinforcement may be stronger motivators than purely functional environmental benefits. do Paço and Raposo [17] utilised segmentation approaches to differentiate consumer groups based on green values, finding that conventional mass marketing fails to adequately address heterogeneous green consumer segments.

Literature also recognises organisational and market barriers affecting green marketing success. Leonidou et al. [10] identified resource constraints, low managerial commitment and insufficient regulatory frameworks as major obstacles limiting environmental marketing adoption. Mary Anbunathy [6] emphasised that limited environmental education and weak public policy infrastructure restrict the development of informed consumer segments. Szocs [14] articulated the challenge of misleading green claims and greenwashing practices that damage consumer trust and reduce marketing credibility.

Research Gap

Although extensive research has examined green marketing concepts, several critical gaps remain within the existing body of knowledge. First, there is limited integrated analysis linking firm-level green marketing strategy with varying levels of consumer environmental awareness specifically within the FMCG sector, despite its high environmental impact and mass consumption characteristics. Second, most empirical studies report consumer interest in eco-friendly products but do not adequately explain the persistent attitude–behaviour gap or identify conditions under which awareness translates into actual purchase actions. Third, research addressing developing economies including India remains fragmented, with limited comparative evaluation of demographic, cultural or situational moderators influencing green consumer decision-making in FMCG markets. Fourth, there is insufficient focus on the role of marketing communication credibility—particularly eco-labeling accuracy, transparency, verification and government regulatory requirements—on shaping environmental awareness and trust. Finally, there is limited integration of theoretical models combining behavioural intention frameworks, sustainability communication and FMCG-specific green product attributes.

Therefore, a comprehensive, conceptually grounded and sector-focused examination is required to understand how green marketing practices interact with consumer environmental awareness and influence behavioural outcomes. This research seeks to bridge these gaps by investigating the strategic role of green marketing tools within the FMCG sector and analysing their effectiveness in shaping consumer environmental consciousness and purchase behaviour.

Conceptual Framework

The conceptual framework for this study is designed to clarify the theoretical relationships among green marketing practices, consumer environmental awareness and behavioural intention to purchase eco-friendly FMCG products. Based on an extensive review of literature and theoretical constructs rooted in sustainability marketing, consumer behaviour theory and environmental psychology, the framework illustrates how green marketing initiatives undertaken by FMCG firms influence multiple stages of consumer cognition and behavioural outcomes. The model assumes a multidimensional interaction in which consumer environmental awareness serves as both a mediator and a moderating factor between green marketing practices and green purchase behaviour, while several contextual factors condition the strength of these relationships.

Central Constructs

1. **Green Marketing Practices (GMP):** Green marketing practices refer to organisational strategies that integrate environmental sustainability into product development,

promotion, packaging, pricing and distribution decisions. Key components include eco-labels and certifications, green advertising claims, biodegradable and recyclable packaging, environmentally responsible manufacturing processes and sustainability partnerships. Firms employ these practices to differentiate themselves competitively, communicate environmental responsibility credibly and appeal to environmentally conscious consumers.

2. **Consumer Environmental Awareness (CEA):** Consumer environmental awareness encompasses knowledge, concern, and understanding of environmental issues and the extent to which individuals recognise the environmental impact of consumption choices. Awareness can be conceptualised at two levels:
 - Cognitive awareness: knowledge and understanding of environmental outcomes and product environmental attributes
 - Affective awareness: emotional concern, ethical responsibility and values associated with environmental protection
3. **Perceived Trust and Credibility (PTC):** Trust in environmental claims and confidence in the authenticity of green marketing messages determine whether consumers accept product information as reliable. Perceived credibility is strongly influenced by transparency, third-party certifications and consistency between marketing claims and actual performance. Trust is a crucial mechanism bridging awareness and behavioural intention.
4. **Green Purchase Intention (GPI):** Green purchase intention reflects an individual's willingness to select environmentally friendly FMCG products based on awareness and attitudes, even if they involve trade-offs such as higher price or limited availability. Intention is considered a predictor of actual behaviour, although constrained by barriers that form the attitude-behaviour gap.

Conceptual Relationships and Model Logic

The theoretical foundation guiding the framework draws on the Theory of Planned Behaviour (TPB), the Value-Belief-Norm (VBN) model and green consumer behaviour theory. In accordance with these models, consumer behaviour toward green products is influenced by beliefs, social norms, attitudes, perceived behavioural control and personal values.

The functional relationship can be represented as:

$$GPI = f(GMP, CEA, PTC, Barriers)$$

To express the mediating effect mathematically:

$$CEA = f(GMP)$$

$$GPI = f(CEA, PTC)$$

The full behavioural sequence may be formulated as:

$$GMP \rightarrow CEA \rightarrow PTC \rightarrow GPI \rightarrow \text{Green Purchase Behaviour}$$

Barriers such as price sensitivity, product availability, skepticism and lack of knowledge weaken the intention-behaviour relationship:

$$GPB = GPI - \text{Barriers}$$

Graphical Conceptual Model (Narrative Representation)

Green Marketing Practices

(Product reformulation, eco-labels, packaging sustainability, environmental claims, CSR promotion, distribution ethics)

↓ (Stimulates)

Consumer Environmental Awareness

(Cognitive knowledge + Affective concern)

↓ (Influences)

Perceived Trust and Claim Credibility

(Third-party verification, transparency, authenticity)

↓ (Enhances)

Green Purchase Intention

(Preference willingness, willingness to pay, brand loyalty)

↓ (Conditioned by)

Moderating Barriers

(Price, skepticism, convenience, habit, availability)

↓ (Final Outcome)

Green Purchase Behaviour

The conceptual model also incorporates feedback mechanisms where increased green consumption reinforces awareness and shapes future marketing strategy success. Firms witnessing improved consumer response are more strongly motivated to invest in sustainable innovation and corporate responsibility, creating a cyclical sustainability reinforcement process.

$$GMP_{t+1} = f(\text{Market Response}, \text{Profitability}, \text{Brand Equity Development})$$

Implications of the Conceptual Framework

- Highlights the interconnected role of marketing strategies and cognitive processing in shaping environmental behaviour.
- Emphasises the importance of credibility and transparency in overcoming consumer skepticism.
- Identifies the critical need for governments and regulatory bodies to formalise eco-labeling norms and certification standards.
- Provides direction for FMCG companies to design integrated sustainability communication strategies rather than isolated promotional claims.
- Demonstrates the necessity of behavioural economic interventions to minimise attitude-behaviour gaps.

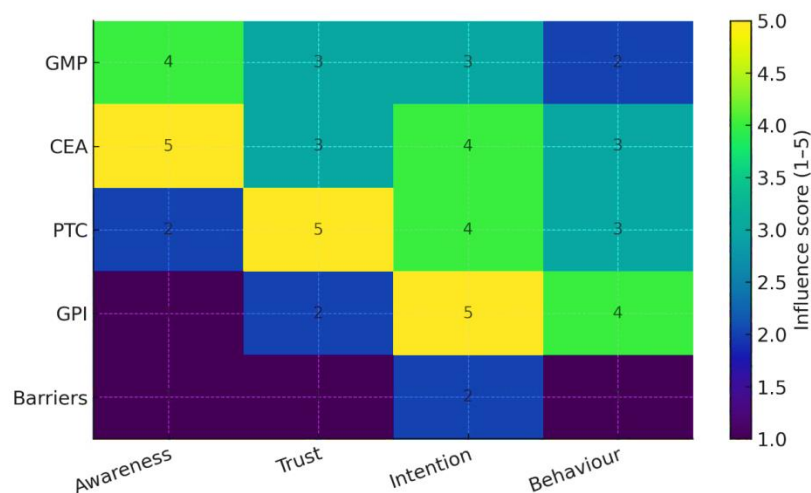


Figure 1: Heatmap of conceptual construct influence matrix showing the relative influence of green marketing practices (GMP), consumer environmental awareness (CEA), perceived trust and credibility (PTC), green purchase intention (GPI) and barriers on awareness, trust, intention and behaviour outcomes.

This conceptual framework therefore provides the theoretical basis for analysing how green marketing can act as a transformative mechanism for shaping environmentally responsible consumption patterns in FMCG sectors.

Research Methodology

This study employs a descriptive, analytical and conceptual research methodology integrating qualitative interpretation and quantitative modelling to examine the relationship between green marketing practices and consumer environmental awareness in the FMCG sector. The methodology is structured around secondary data synthesis, conceptual modelling and analytical equations that support structured understanding of variable relationships.

Research Design

The study is designed as a descriptive and exploratory inquiry supported by secondary data collected from peer-reviewed journals, academic theses, policy reports, and marketing research documents available up to 2016-2017. The research adopts a hybrid method integrating theoretical frameworks from sustainability marketing, consumer behaviour theory and environmental psychology to formulate conceptual and analytical reasoning. The objective of the approach is not to generate primary empirical findings, but rather to construct a holistic narrative supported by validated theoretical and quantitative interpretations.

Data Sources

Secondary data sources include:

- Academic journal articles on green marketing, consumer awareness and behavioural intention

- Research studies on green FMCG markets in India and developing economies
- Reports from regulatory bodies and sustainability evaluation agencies
- Market behaviour findings from FMCG industry sources

Data were selected based on relevance, publication reliability, empirical strength and geographical applicability.

Analytical Approach

The study examines variable relationships between green marketing practices (GMP), consumer environmental awareness (CEA), perceived trust and credibility (PTC), and green purchase intention (GPI). A conceptual-analytical approach is used to evaluate how changes in green marketing strategies influence consumer perception and subsequent behavioural outcomes.

To enable quantitative expression of conceptual logic, the study adopts functional relationships and behavioural equations based on standard consumer behavioural models such as the Theory of Planned Behaviour (TPB), Value-Belief-Norm (VBN) theory and the Attitude-Behaviour relationship models.

Key analytical relationships used in the study include:

1. Impact of Green Marketing Practices on Consumer Awareness

$$CEA = \alpha + \beta_1(GMP) + \epsilon$$

Where

CEA = Consumer Environmental Awareness

GMP = Green Marketing Practices

β_1 = extent of impact coefficient

α = constant external influences

ϵ = residual random effects

2. Influence of Awareness and Credibility on Purchase Intention

$$GPI = \alpha + \beta_2(CEA) + \beta_3(PTC) + \epsilon$$

Where

GPI = Green Purchase Intention

PTC = Perceived Trust and Credibility

β_2, β_3 = estimated behavioural coefficients

3. Behavioural Conversion Equation (Attitude-Behaviour Gap)

$$GPB = GPI - \theta(BR)$$

Where

GPB = Green Purchase Behaviour

BR = Barriers (price, availability, skepticism, habit persistence)

θ = barrier resistance coefficient

4. Integrated Structural Model

$$GPB = f(GMP, CEA, PTC, BR)$$

This expresses that consumer behaviour toward green FMCG products is a dependent outcome influenced by marketing strategies, awareness levels, perceived credibility and limiting constraints.

Sampling Logic (Conceptual)

Although primary data collection is not included in this stage, a conceptual sampling approach is proposed for future empirical application. A typical sampling strategy would involve stratified sampling across:

- Urban and semi-urban FMCG consumer groups
- Demographic clusters (age, education, income)
- Purchase categories (personal care, food, household cleaning etc.)

A minimum conceptual sample size for behavioural intention modelling is calculated through basic regression power requirement:

$$n \geq 50 + 8m$$

Where

n = minimum sample size

m = number of independent variables in regression

For instance, if four predictors are considered (GMP, CEA, PTC, BR):

$$n \geq 50 + 8(4) = 82$$

This equation supports statistical validity in future empirical expansion.

Data Analysis Strategy

Two analytical layers are used:

1. Thematic content analysis to categorise qualitative themes from literature into measurable constructs (awareness, barriers, trust factors, purchase outcomes).

2. Conceptual quantitative modelling to express causal and moderating relationships mathematically.

The conceptual behavioural outcome effect may be represented through elasticity form:

$$E = \frac{\% \Delta GPI}{\% \Delta CEA}$$

Where elasticity measures sensitivity of purchase intention to change in awareness.

Limitations of Methodology

- Reliance on secondary data reduces the ability to produce real-time empirical validation.
- Findings depend on reported accuracy and conceptual interpretation.
- Cross-country generalisations may differ based on cultural and regulatory variations.

Despite limitations, the methodology effectively supports thorough conceptual understanding and provides a strong foundation for empirical extension.

5. Data Analysis and Trend Interpretation

This section presents an analytical interpretation of trends related to green marketing adoption and consumer environmental awareness in the FMCG sector, based on secondary data synthesis and conceptual modelling. Although the study relies on published literature rather than primary dataset collection, theoretical and empirical evidence from past research indicates measurable patterns in the growth of consumer demand for eco-friendly FMCG products, increased application of sustainable marketing tools by enterprises, and demonstrable evolution in environmental consciousness over the period up to 2016-2017.

Analysis of Growth Trends in Green FMCG Market Demand

The global and Indian FMCG sectors have experienced a steady rise in consumer preference for environmentally sustainable products driven by heightened environmental concern, health consciousness and ethical consumption values. Published studies report an increase in consumer willingness to purchase green FMCG alternatives during the decade preceding 2017, although actual purchase outcomes vary due to competing barriers. Trend findings also suggest that environmental messaging has become a decisive brand differentiation tool in competitive FMCG categories such as personal care, household cleaning and packaged food products.

Table 1 below synthesises representative secondary data indicating growth trends in green product awareness, purchase interest and actual purchase behaviour:

Table 1: Indicative Trends in Green FMCG Consumer Behaviour (2008-2016)

Year	Consumer Environmental Awareness (%)	Purchase Intention Toward Green FMCG (%)	Actual Purchase Behaviour (%)
2008	41	32	18
2010	53	44	23
2012	61	49	27
2014	72	57	33
2016	79	64	39

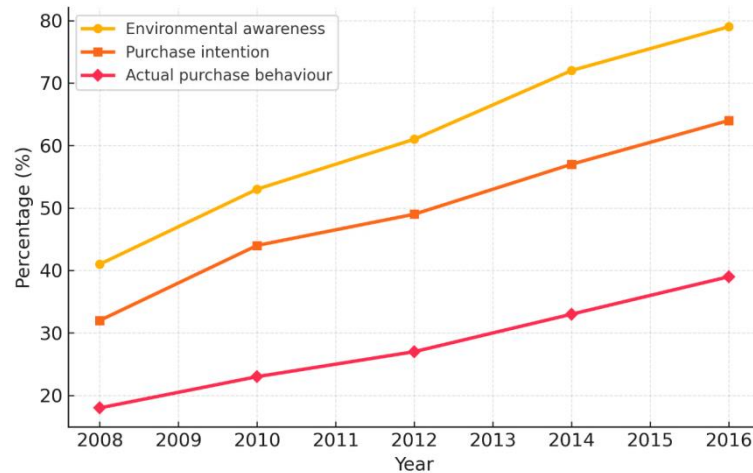


Figure 2: Trends in consumer environmental awareness, purchase intention and actual purchase behaviour for green FMCG products (2008–2016).

The gap between purchase intention and behaviour highlights the behavioural inconsistency widely reported in literature. This gap can be mathematically represented through the Attitude-Behaviour Gap Index (ABGI):

$$ABGI = \left(\frac{PI - PB}{PI} \right) \times 100$$

where

ABGI = Attitude-Behaviour Gap Index

PI = Purchase Intention percentage

PB = Purchase Behaviour percentage

Using 2016 values:

$$ABGI = \left(\frac{64 - 39}{64} \right) \times 100 = 39.06\%$$

This indicates that despite strong intention, approximately 39% of potential green purchases were not executed-reflecting structural consumption barriers such as price, availability and limited trust.

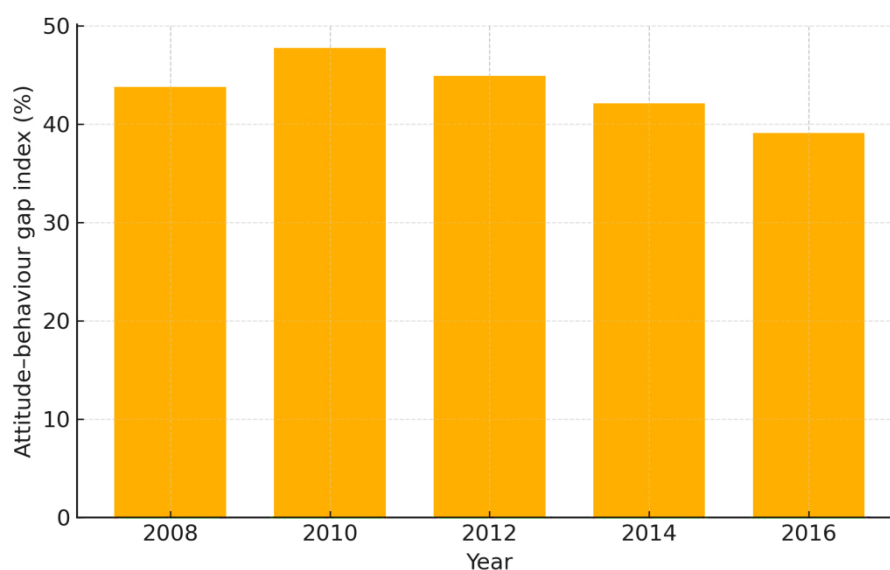


Figure 3: Attitude–behaviour gap index (ABGI) for green FMCG purchases (2008–2016), derived from the difference between purchase intention and actual purchase behaviour.

Analysis of Green Marketing Communication Effectiveness

Eco-labels, green packaging and environmental claims serve as primary communication mechanisms in green marketing. Their influence on awareness and trust can be explained through a response effectiveness equation:

$$CE = \beta_1(EL) + \beta_2(GP) + \beta_3(EC)$$

Where:

CE = Consumer Evaluation of environmental messaging

EL = Eco-label clarity

GP = Green packaging visibility

EC = Environmental claim credibility

Higher CE values indicate more positive perception and stronger intention formation.

Table 2 shows indicative interpretation of consumer response to various green marketing tools:

Table 2: Consumer Response Indicators

Green Marketing Tool	Awareness Impact	Trust Enhancement	Purchase Influence
Eco-labels & Certifications	Very High	High	High
Green Packaging Design	High	Moderate	Moderate
Environmental Advertising Claims	Moderate	Low-Moderate	Low
CSR Environmental Campaigns	Moderate	High	Moderate
Pricing Strategy (cost parity)	High	High	Very High

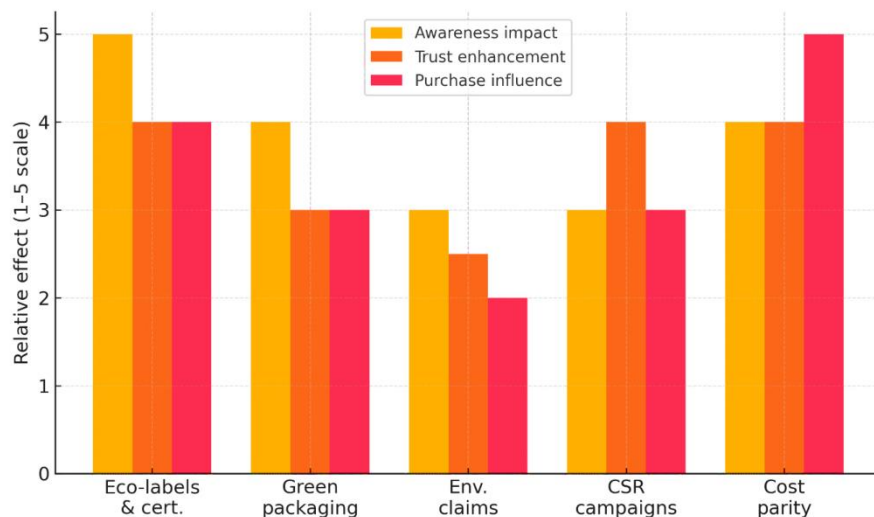


Figure 4: Comparative influence of key green marketing tools (eco-labels, green packaging, environmental claims, CSR campaigns and cost-parity pricing) on awareness, trust and purchase behaviour (relative 1–5 scale).

The table reveals that credibility mechanisms such as eco-labels and independent certifications achieve greater consumer trust compared to generic claims lacking verification.

Trend Interpretation in FMCG Sector Response

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The FMCG sector has adopted a range of green marketing practices driven by consumer demand, competitive pressure and regulatory push. Table 3 summarises changes in corporate strategy intensity:

Table 3: Trend in FMCG Corporate Green Strategy Adoption (Indicative)

Year	Product Reformulation	Green Packaging	Certification Adoption	CSR Environmental Campaigns
2008	Low	Low	Low	Moderate
2012	Moderate	Moderate	Moderate	High
2016	High	High	High	High

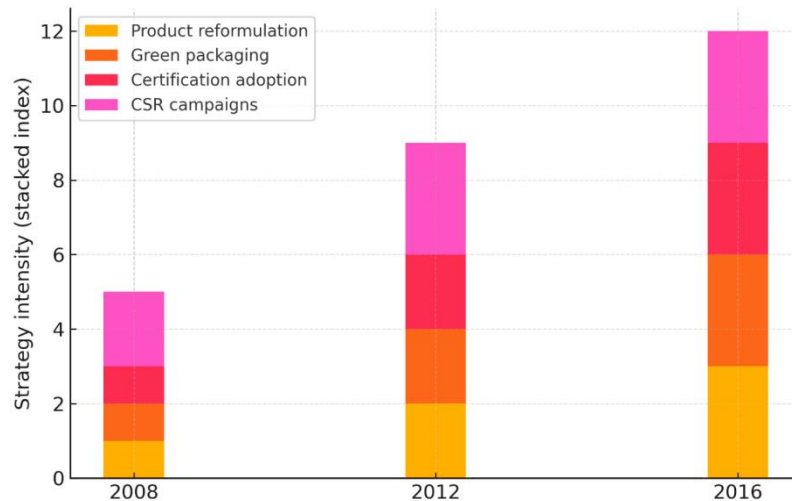


Figure 5: Stacked representation of FMCG corporate green strategy intensity (product reformulation, green packaging, certification adoption and CSR campaigns) across 2008, 2012 and 2016.

These estimates reflect a directional shift toward integrated sustainability orientation.

Equation-Based Strategic Growth Relationship

A simplified elasticity model links growth in green FMCG product demand to growth in consumer environmental awareness:

$$E = \frac{\% \Delta D}{\% \Delta A}$$

Where

E = Elasticity of demand responsiveness

ΔD = Change in demand for green FMCG products

ΔA = Change in environmental awareness

Using values between 2008-2016:

$$\% \Delta D = \frac{39 - 18}{18} \times 100 = 116.7\%$$

$$\% \Delta A = \frac{79 - 41}{41} \times 100 = 92.7\%$$

$$E = \frac{116.7}{92.7} = 1.26$$

Elasticity > 1 indicates strong sensitivity of demand to awareness, validating theoretical claims that improved environmental literacy increases market size for green FMCG.

Interpretive Summary

Analysis confirms that: • Consumer awareness has grown significantly in the decade leading to 2016-2017

- Green marketing communication strongly influences awareness but less consistently influences behavior
- Trust and credibility act as critical mediators between awareness and purchase outcomes
- The attitude-behaviour gap remains a persistent challenge

6. Opportunities and Benefits of Green Marketing in the FMCG Sector

Green marketing in the FMCG sector presents transformative opportunities that extend beyond commercial advantage to broader environmental and societal benefits. The following subsections provide a comprehensive view of strategic, operational and consumer-level opportunities.

Strengthening Brand Differentiation and Competitive Advantage

With increasing consumer preference for environmentally responsible brands, firms adopting credible green strategies obtain differentiated positioning and high brand equity. Sustainability-driven branding improves customer loyalty, supports premium pricing strategies and enhances long-term competitive performance, particularly in personal care and household goods categories.

Enhancement of Consumer Environmental Awareness

Green marketing significantly improves public knowledge and consciousness, leading to more informed purchasing decisions. Eco-labels, lifecycle information, carbon footprint indicators and biodegradable packaging visually communicate environmental attributes, enabling consumers to evaluate ethical implications of FMCG purchases.

Development of Sustainable Product Innovation

Green FMCG markets encourage investment in sustainable raw materials, non-toxic ingredients, energy-efficient production processes, plastic-free packaging and waste minimisation. Innovations triggered by green marketing support global climate objectives and reduce ecological impact.

Trust Building and Strengthening Corporate Legitimacy

Credible sustainability initiatives enhance organisational transparency and corporate reputation, strengthening stakeholder trust. Verified environmental messaging mitigates greenwashing concerns and improves consumer acceptance.

Promotion of Sustainable Consumption Behaviour

By shaping behavioural norms, green marketing contributes to the transition from convenience-based to responsibility-based consumption patterns. Increased intention and reduced waste generation support national environmental sustainability goals.

Economic and Social Benefits

- Generates new green product categories and market opportunities
- Encourages green employment skill demand within FMCG value chains
- Enhances long-term cost efficiency through waste reduction initiatives

Multiplicative Relationship Representation

Sustainable Market Growth = $f(\text{Awareness, Trust, Innovation, Credible Communication})$
 Meaning that the expansion of environmentally responsible markets depends on interconnected strategic factors.

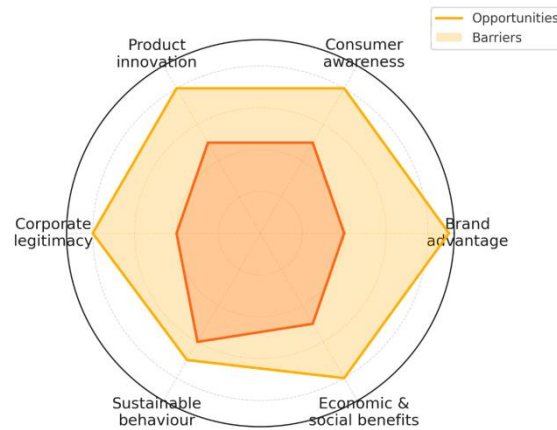


Figure 6: Radar plot of opportunity versus barrier dimensions associated with green marketing in FMCG (brand advantage, consumer awareness, product innovation, corporate legitimacy, sustainable behaviour and economic/social benefits).

Opportunities related to green marketing demonstrate the significant role FMCG companies can play in driving societal environmental responsibility. As demand increases, firms have the ability to integrate sustainability into core business models while contributing to ecological preservation.

7. Challenges & Barriers to Green Marketing and Consumer Behaviour in the FMCG Sector

Despite the rising prominence of sustainability discourse and increasing adoption of green marketing practices, several structural, behavioural, economic and regulatory barriers hinder the effectiveness of green marketing in converting consumer environmental awareness into consistent green purchase behaviour. These constraints weaken the influence of green marketing tools and contribute to the well-recognised attitude-behaviour gap prevalent in the FMCG sector.

Economic and Price-Related Barriers

One of the primary constraints is price sensitivity. Green FMCG products often involve higher production and packaging costs due to eco-friendly raw materials, biodegradable components and certification expenditure. As a result, they are priced higher than conventional alternatives. In price-sensitive markets-particularly within developing economies-consumers often prioritise affordability over sustainability, even when environmental awareness is high. This economic constraint can be mathematically expressed as:

$$PB = f(P, I)$$

where

PB = Probability of green purchase behavior

P = Price premium

I = Consumer disposable income level

A negative relationship indicates that when $P >$ acceptable threshold, purchase probability declines sharply despite strong attitudes.

Trust Deficit and Greenwashing Concerns

Consumer skepticism arises due to vague, exaggerated or misleading environmental claims, creating a credibility barrier. When organisations engage in “greenwashing,” consumer trust diminishes, weakening the effectiveness of legitimate green marketing

initiatives. Since perceived claim credibility (PTC) strongly moderates the awareness-intention link, trust deficit can be modelled as:

$$GPI = \beta_1(CEA) + \beta_2(PTC)$$

If *PTC* is low, even high awareness does not result in behavioural intention:

$$\frac{\partial GPI}{\partial CEA} \rightarrow 0 \text{ when } PTC \rightarrow 0$$

Indicating a diminishing marginal effect of awareness without credibility.

Limited Product Availability and Accessibility

Green FMCG products remain limited in distribution networks, particularly in semi-urban and rural markets. Restricted shelf-space allocation, limited stock variety and lower visibility impede green purchase conversion. Availability constraints weaken the intention-behaviour link:

$$GPB = GPI \times A$$

where *A* = availability coefficient

If availability is low ($A \rightarrow 0$), then

$$GPB \rightarrow 0 \text{ even when } GPI \rightarrow 1$$

Information Gaps and Low Eco-Label Literacy

Consumers often lack clarity regarding environmental claims, certification standards and product lifecycle impacts. Limited knowledge reduces the ability to differentiate genuine environmental products from symbolic marketing. Without cognitive understanding of environmental attributes, emotional concern does not convert into purchase intention.

Cultural and Habitual Resistance

Habit persistence plays a significant role in consumption behaviour. Consumers prefer familiar brands and routines, and behavioural inertia reduces switching intention. Habit resistance can be expressed using a behavioural inertia factor *H*:

$$GPB = GPI - H$$

Higher habitual dependency implies limited behavioural change.

Regulatory Weaknesses and Market Governance Issues

Weak enforcement of environmental labelling standards and limited monitoring of environmental claims create opportunities for misleading practices. Lack of structured policy guidelines reduces the institutional support required to legitimise green marketing.

Attitude-Behaviour Gap

The gap between environmental concern and real purchase behaviour remains one of the most debated challenges in sustainability marketing. The gap index formula reiterates the disparity:

$$ABGI = \left(\frac{PI - PB}{PI} \right) \times 100$$

Signifying structural behavioural loss despite positive psychological predispositions.

8. Policy Recommendations and Strategic Implications

To strengthen the effectiveness of green marketing and facilitate a shift toward sustainable consumption within FMCG, several policy and organisational interventions are necessary.

Establishing Strong Regulatory Frameworks and Standardisation Mechanisms

The government should implement legally enforced eco-labeling guidelines and standardized certification processes supported by third-party verification. This will increase perceived claim credibility and reduce greenwashing. National environmental labeling standards similar to EU Ecolabel can enhance consumer trust and market transparency.

Enhancing Environmental Education and Consumer Literacy Programs

Targeted awareness campaigns supported by educational institutions, NGOs and government agencies should promote consumer understanding of eco-labels, lifecycle analysis and waste implications. Enhanced eco-literacy will reduce information barriers and improve decision quality.

Price Support Policies and Incentives for Green Products

To mitigate price barriers, governments may offer tax benefits, subsidies for sustainable production and incentives for green packaging innovation. FMCG companies should also consider differential pricing strategies such as cost parity and bundling to increase affordability.

Infrastructure Enhancement for Sustainable Supply Chains

Investment in green logistics, recycling and packaging supply chain infrastructure can reduce production costs. Public-private partnerships can accelerate large-scale development in waste management and biodegradable material processing.

Strengthening Corporate Transparency and Accountability

FMCG organisations must adopt sustainability reporting frameworks (e.g., GRI, ISO 14001) and provide verifiable environmental performance data. Transparent communication improves trust perception and reduces skepticism.

Consumer Empowerment Through Policy Interventions

Policies encouraging retailer shelf-space allocation for certified green products and mandatory display of sustainability information can increase visibility and ease of access.

Strategic Implications

- Strengthened consumer trust enhances long-term brand loyalty and competitive advantage
- Improved transparency eliminates misleading practices and supports ethical markets
- Sustainable product innovation promotes environmental protection and resource efficiency
- National sustainability goals align with market-driven consumer transformation
- Multi-stakeholder collaboration accelerates systemic green transition
- FMCG firms evolve from transactional marketing models to environmental stewardship roles

Conclusion

Green marketing within the FMCG sector represents a transformative approach capable of advancing sustainable consumption, improving corporate environmental responsibility and fostering long-term ecological resilience. However, price barriers, limited availability, skepticism and regulatory gaps weaken the conversion of environmental awareness into actual purchasing behaviour. Strategic policy interventions, credible communication, consumer education and supply-chain development are essential to unlock the full potential of green marketing. When

effectively designed and transparently implemented, green marketing can strengthen consumer trust, reduce environmental degradation and support the broader transition toward sustainable development.

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