



## The Ethical and Educational Implications of Greenwashing in Corporate Sustainability Practices

M. Kamraju\*

Army Welfare Education Society, India

\*Correspondence: E-mail: [kamraju65@gmail.com](mailto:kamraju65@gmail.com)

### ABSTRACT

Greenwashing has become a widespread concern as corporations increasingly use misleading sustainability claims to attract environmentally conscious consumers. Because many businesses prioritize profitability over genuine environmental responsibility, deceptive marketing tactics often obscure the true impact of their operations. This study examines the prevalence of greenwashing in various industries, analyzing how companies manipulate consumer perception through vague terminology, selective disclosures, and misleading certifications. Based on survey data and case studies, findings reveal that a significant portion of consumers distrust corporate sustainability claims, leading to weakened brand loyalty and calls for stricter regulatory oversight. Because regulatory frameworks remain inconsistent across different markets, companies often exploit legal loopholes to continue these deceptive practices. From an educational perspective, this study highlights the need for integrating sustainability literacy into curricula to equip consumers with critical thinking skills that help them identify and challenge greenwashing. Addressing this issue requires a combination of stricter policies, corporate accountability, and improved public awareness.

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## 1. INTRODUCTION

In recent years, corporate sustainability has become a crucial aspect of business ethics and consumer engagement. Many companies have integrated environmental responsibility into their branding, promoting initiatives such as carbon neutrality, eco-friendly packaging, and renewable energy investments (Grewal & Roggeveen, 2020; Soni *et al.*, 2025; Rabbi *et al.*, 2022; Zahoor *et al.*, 2024). However, while some businesses have taken genuine steps toward sustainability, others have engaged in misleading marketing tactics, a practice commonly known as greenwashing. Greenwashing occurs when corporations exaggerate, falsify, or selectively disclose information about their environmental impact to enhance their public image without implementing meaningful sustainability efforts (Johnson & Patel, 2021; Wu *et al.*, 2020). This deception erodes consumer trust, misguides purchasing decisions, and ultimately hinders the progress of genuine environmental initiatives.

The prevalence of greenwashing is particularly evident in industries such as fashion, food and beverage, technology, and automotive. Fast fashion brands, for instance, often market their products as "sustainable" while continuing to rely on exploitative labor practices and environmentally harmful production methods (Evans *et al.*, 2022a). Similarly, major beverage corporations have been accused of labeling their plastic bottles as "100% recyclable," despite contributing significantly to global plastic pollution (Gillespie, 2020). In the tech industry, companies claim to manufacture energy-efficient devices while simultaneously engaging in planned obsolescence, forcing consumers to replace products more frequently than necessary (Park & Li, 2021a; Park & Li, 2021b). The automotive sector, too, has faced scrutiny for greenwashing, as many manufacturers promote hybrid and electric vehicles without addressing the environmental impact of battery production and disposal (Smith *et al.*, 2023). These examples highlight the systemic nature of greenwashing and the challenges in distinguishing between authentic and deceptive sustainability efforts.

A major driver of greenwashing is the lack of standardized regulatory enforcement. While some countries, particularly within the European Union (EU), have implemented strict guidelines to prevent false sustainability claims, other regions lack comprehensive legislation, allowing corporations to exploit loopholes (Testa *et al.*, 2018). Inconsistent enforcement makes it difficult to hold companies accountable, leading to widespread consumer skepticism. Research indicates that nearly 63% of consumers believe that sustainability claims are primarily used for marketing rather than actual environmental responsibility (Johnson & Patel, 2021). This distrust negatively affects corporate credibility and diminishes the effectiveness of legitimate sustainability efforts, as consumers struggle to differentiate between authentic and misleading claims.

From an educational perspective, addressing greenwashing requires enhanced sustainability literacy among consumers. Many individuals lack the knowledge and critical thinking skills necessary to assess corporate sustainability claims effectively (Evans *et al.*, 2022b). Without adequate education, consumers are susceptible to misleading marketing tactics, leading to uninformed purchasing decisions that inadvertently support environmentally harmful practices. Integrating sustainability education into school curricula and consumer awareness programs can help individuals critically analyze sustainability labels, corporate reports, and environmental certifications. Additionally, universities and business schools play a crucial role in teaching ethical marketing and corporate social responsibility, ensuring that future business leaders prioritize transparency over deception (Grewal & Roggeveen, 2020).

Given the growing urgency of climate change and environmental degradation, it is imperative to develop more stringent regulations, corporate accountability measures, and educational interventions to combat greenwashing. This study aims to analyze the impact of greenwashing on consumer trust, evaluate the effectiveness of existing regulations, and propose educational strategies to empower consumers against deceptive marketing practices. The novelty of this research lies in its integration of an educational perspective, emphasizing the role of sustainability literacy in combating misinformation. By bridging the gap between corporate accountability and consumer awareness, this study contributes to the broader discourse on ethical business practices and environmental responsibility.

## 2. METHODS

This study employs a mixed-methods approach, combining quantitative surveys and qualitative focus group discussions to analyze consumer perceptions of greenwashing and assess the effectiveness of sustainability education in mitigating its impact. The mixed-methods design allows for a comprehensive examination of how consumers interpret corporate sustainability claims and the extent to which education influences their purchasing decisions.

The quantitative component consists of an online consumer survey distributed to 500 respondents across various demographic groups. The survey includes Likert-scale questions to measure consumer trust in sustainability claims, awareness of greenwashing tactics, and willingness to pay a premium for genuinely sustainable products. Additionally, the survey evaluates the impact of sustainability literacy on consumer skepticism, analyzing whether individuals with higher environmental education levels are more adept at identifying misleading claims.

The qualitative component involves focus group discussions with 30 participants from diverse backgrounds, including students, professionals, and environmental advocates. These discussions explore consumers' personal experiences with greenwashing, their ability to assess corporate sustainability efforts, and their perspectives on the role of education in promoting informed decision-making. Thematic analysis is used to identify recurring patterns and key insights, particularly regarding the effectiveness of corporate transparency measures and the need for regulatory intervention.

Data from the survey and focus groups are analyzed using descriptive statistics and thematic coding. The statistical analysis identifies correlations between consumer awareness levels and susceptibility to greenwashing, while the qualitative analysis provides deeper insights into how consumers perceive and react to deceptive sustainability claims. Additionally, this study compares corporate sustainability reporting across industries to examine the prevalence of greenwashing tactics, utilizing publicly available data from environmental organizations and corporate sustainability reports.

To ensure ethical compliance, all participants provide informed consent, and the study adheres to data privacy regulations. The research aims to contribute to the development of consumer education programs, emphasizing the importance of sustainability literacy in fostering a more transparent and ethical marketplace.

## 3. RESULTS AND DISCUSSION

The findings of this study reveal significant insights into consumer perceptions of greenwashing and the role of sustainability education in fostering critical awareness of corporate environmental claims. By analyzing survey responses, focus group discussions, and

corporate sustainability reports, this section explores the extent of greenwashing, its impact on consumer trust, and the effectiveness of educational interventions in mitigating deceptive marketing tactics.

### 3.1. Consumer Awareness of Greenwashing

Survey results indicate that a majority of consumers (68%) express skepticism toward corporate sustainability claims, citing vague terminology, lack of transparency, and misleading packaging as common indicators of greenwashing. However, only 42% of respondents could accurately distinguish between legitimate and deceptive environmental claims, highlighting a gap in sustainability literacy among consumers.

**Table 1** presents a summary of key survey findings related to consumer trust in sustainability claims. These findings align with previous research indicating that many consumers lack the necessary tools to critically evaluate sustainability claims (Evans *et al.*, 2022a; Hosseini *et al.*, 2018). While the majority of participants recognize that greenwashing exists, fewer than half possess the ability to accurately assess corporate environmental commitments, suggesting that education plays a crucial role in equipping consumers with analytical skills.

**Table 1.** Consumer trust in sustainability claims.

Survey item	% of Respondents Agreeing
Trusts corporate sustainability claims without verification	32
Sceptical of most sustainability marketing	68
Believes sustainability education improves consumer decision-making	74
Can distinguish between greenwashing and legitimate sustainability claims	42
Supports stricter regulations on environmental advertising	81

### 3.2. Impact of Sustainability Education on Consumer Decision-Making

Focus group discussions further highlight the importance of sustainability education in enhancing consumer resilience against greenwashing. Participants with formal exposure to environmental education—such as sustainability courses, climate awareness campaigns, or eco-certification training—demonstrated a greater ability to critically evaluate green marketing claims and demand greater transparency from brands.

For instance, participants with higher sustainability literacy exhibited lower susceptibility to misleading claims such as:

- (i) “100% natural” labels without regulatory backing,
- (ii) “Eco-friendly” packaging without clear material composition, and
- (iii) “Carbon-neutral” claims without evidence of carbon offset programs.

In contrast, participants lacking formal sustainability education expressed greater difficulty in differentiating between genuine and misleading corporate claims, underscoring the need for widespread sustainability education initiatives.

These results suggest that education can serve as a key intervention strategy in combating greenwashing. By integrating sustainability literacy into school curricula and corporate training programs, consumers can become more discerning in their purchasing behaviors, thereby reducing the effectiveness of deceptive marketing practices (Grewal & Roggeveen, 2020).

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### 3.3. Greenwashing Trends Across Industries

An analysis of corporate sustainability reports reveals significant variations in transparency and accountability across different industries. While some sectors, such as renewable energy and organic food production, tend to adhere to stricter environmental reporting standards, others—particularly fast fashion, electronics, and packaged goods—exhibit a higher prevalence of misleading sustainability claims (Johnson & Patel, 2021).

Common greenwashing tactics observed include:

- (i) Vague or Unverified Claims – Terms like “eco-conscious” or “sustainable” without measurable environmental benchmarks.
- (ii) Irrelevant Certifications – Use of self-created eco-labels that lack third-party validation.
- (iii) Hidden Trade-Offs – Products marketed as “green” in one aspect while having negative environmental impacts elsewhere (e.g., “biodegradable” plastic that still requires industrial composting).

These tactics contribute to a deterioration of consumer trust and highlight the need for stricter regulatory oversight. The study findings align with prior research, emphasizing that corporate accountability must be reinforced through stronger enforcement of environmental marketing standards (Gillespie, 2020).

### 3.4. Educational Interventions and Policy Implications

Given the strong correlation between sustainability literacy and consumer resilience against greenwashing, this study advocates for policy reforms that integrate sustainability education into formal learning systems. Key recommendations include:

- (i) Mandatory Sustainability Education – Incorporating environmental awareness programs into school curricula to foster early critical thinking skills regarding corporate sustainability claims.

- (ii) Public Awareness Campaigns – Launching nationwide initiatives that educate consumers on how to assess environmental labels and corporate sustainability reports.
- (iii) Regulatory Frameworks – Strengthening government policies to hold companies accountable for misleading sustainability claims and impose fines for false advertising.

These interventions can empower consumers to make informed decisions, ultimately reducing the impact of greenwashing on purchasing behavior. By combining education with stricter regulatory oversight, governments and organizations can work toward a more transparent and ethical marketplace (Smith *et al.*, 2023; Bieler *et al.*, 2022; Pickett *et al.*, 2012).

#### 4. CONCLUSION

This study highlights the pervasive issue of greenwashing in corporate sustainability marketing and the crucial role of education in equipping consumers with the skills needed to critically evaluate environmental claims. The findings indicate that a significant portion of consumers struggle to distinguish between genuine and misleading sustainability claims, leading to distrust in corporate environmental initiatives. However, consumers with higher sustainability literacy demonstrate greater resilience against deceptive marketing tactics, underscoring the need for widespread sustainability education initiatives.

The research further reveals that certain industries, such as fast fashion, electronics, and packaged goods, exhibit a higher prevalence of greenwashing practices. Common tactics include vague environmental claims, unverified eco-certifications, and hidden trade-offs that mislead consumers about the true environmental impact of their purchases. This reinforces the need for stricter regulatory enforcement and greater transparency in sustainability reporting.

To combat greenwashing, this study suggests integrating sustainability education into school curricula, launching public awareness campaigns, and strengthening regulatory frameworks. By fostering critical thinking skills and consumer empowerment, these interventions can help create a more ethical and transparent marketplace, ensuring that corporate sustainability commitments translate into meaningful environmental action.

#### 5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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