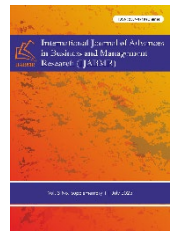




GREEN CONFUSION: IMPACT OF GREENWASHING ON CONSUMER ATTITUDES AND DECISION-MAKING



Payal Pattnayak

Original Article

Roots Degree College, 500033 Hyderabad, Telangana, India

*Corresponding Author's Email: drpayalpattnayak@gmail.com

Abstract

Consumers' increased focus on sustainability is evident in the current marketing scenario, prompting businesses to align their branding and marketing strategies with eco-friendly offerings. This practice has helped many companies build consumer trust. However, many companies are misusing sustainability values and making misleading and unsubstantiated claims about the environmental benefits of their products. This trend is known as Greenwashing. This study aims to identify the prevalence and impact of greenwashing on consumers' psychology and behaviour in purchase decision-making. It tries to investigate the influence of greenwashing on creating consumer confusion vs. consumer trust. For the purpose of the study, multiple variables are examined, such as consumer attitudes, confusion, trust, knowledge about environmental issues, and the presence of third-party certifications and authentications. This paper utilises a mixed-methods approach; the primary data is collected through a structured questionnaire, and 124 responses are recorded. It is combined with secondary data collection from existing literature, environmental reports, and companies' sustainability claims. The findings suggested that greenwashing negatively affects consumer psychology and behaviour. Authorities and policymakers play a crucial role in devising practical tactics to counter false sustainability claims. This study is significant for fostering ethical marketing practices, empowering consumers to make informed decisions, and encouraging businesses to set sustainable goals and ensure corporate accountability.

Keywords: *Consumer Behaviour; Consumer Confusion; Consumer Trust; Greenwashing; Sustainability*

Introduction

Over the past few years, consumer behaviour has been greatly impacted by environmental sustainability issues [1]. Consumers are inclined towards eco-friendly products and services due to increased awareness of climate change, pollution, and natural resource depletion. To match consumers' expectations, companies have started to market their offerings, labelling them "green."

Companies highlight the features of their products, such as recyclability, a low carbon footprint, and primarily the use of organic ingredients, to attract customers. This increasing demand and awareness for sustainable products has led to the birth and growth of deceptive marketing practices and false claims; this tactic is known as greenwashing. Greenwashing is the method of designing misleading and unsupported environmental and sustainability claims to attract and target eco-conscious consumers [2].

The practice of greenwashing is a grave threat to both ethical marketing and sustainable development approaches, as it creates confusion among consumers and develops mistrust. As a result, consumers find it difficult to differentiate

between honest environmental claims and mere promotional tactics. As a result, consumers' trust in green packaging and labelling has drastically declined, leading to increased cynicism, reduced consumer engagement, and a blurred presence of authentic sustainable products [3].

In spite of its growing trend, greenwashing remained under-researched, particularly in the area of its psychological and behavioural influence on consumers. It is crucial to study the impacts of greenwashing on consumers' confusion, attitudes, trust, and purchase behaviour. Moreover, it is important to understand whether third-party certifications and consumer awareness can decrease the effectiveness of greenwashing [4].

This study aims to fill the gap by identifying the relationship between greenwashing and its notable outcomes, which include confusion, attitudes, trust, and decision-making. The findings will address the need for ethical branding and labelling and recommend promoting transparency and integrity in the age of green marketing.

Problem Statement

Although global authorities, consumers, and environmental activists are focusing on the environment and sustainability, greenwashing is contributing to confusion and scepticism. The pivotal concern is about false environmental claims, which have impacted the credibility of authentic eco-friendly products, consumer trust, distorted perceptions, and purchasing behaviour. Although the awareness is growing, the research in this area is still limited. This study aims to bridge this gap by identifying how greenwashing has shaped consumer purchase behaviour and decision-making.

Research Objectives

- To explore and understand greenwashing in the consumer market.
- To study the impact of greenwashing in creating consumer confusion and trust.
- To evaluate the impact of greenwashing on consumer purchase behaviour and attitude.
- To understand the role of third-party authentication & certifications towards consumer awareness.

Conceptual Model

Greenwashing → Consumer Confusion → Consumer Attitudes → Purchase Decision

Moderating Variables:

- Consumer Knowledge
- Third-party Certification

Dependent Variables:

- Trust
- Purchase Decision

Research Hypotheses

- **H₁:** Greenwashing positively influences consumer confusion.
- **H₂:** Consumer confusion negatively affects consumer attitude towards eco-friendly products.
- **H₃:** Consumer attitudes significantly influence purchase decision-making.
- **H₄:** Greenwashing directly and negatively impacts consumer trust.
- **H₅:** The presence of third-party certifications moderates the relationship between greenwashing and consumer trust.

Literature Review

The concept of greenwashing has been extensively debated in sustainability and green marketing literature due to its impact on consumer behaviour and environmental accountability. Greenwashing is a strategic deception used by companies to present themselves as environmentally responsible without providing proof for the same [4]. The practice

of Greenwashing was categorised into the “Seven Sins of Greenwashing”; those are hidden trade-offs, no proof, vagueness, worshipping false labels, irrelevance, lesser of two evils, and fibbing, which are prevalent in the market [5].

The pervasiveness of greenwashing has led to scepticism and confusion among consumers. Such misleading claims weaken consumer trust, making it difficult for consumers to distinguish between authentic green products and deceptive green marketing tactics [1, 6]. This deception leads to cognitive dissonance in consumers when they are misled [7]. This psychological discomfort eventually leads to mistrust and loss in credible environmental practices.

Psychological dimensions of greenwashing were studied by many scholars. It was emphasised that consumers with high Perceived Consumer Effectiveness (PCE) believe that their purchases make a difference and are highly susceptible to greenwashing [8]. Although they are highly motivated, they are at a higher risk of being misled, which can have a long-term negative attitude towards sustainability. It is also found that greenwashing essentially decreases brand equity and trust, as it negatively impacts consumers’ perceptions of authenticity [9].

Digital platforms have played a very vital role in detecting and exposing greenwashing. Social media has played a crucial role in raising awareness and ensuring accountability, as consumers persistently call out companies that promote deceptive environmental claims [10, 11]. This transparency is critical, as repeated encounters with greenwashing practices lead to consumer cynicism, which creates disbelief in green marketing activities [12].

To minimise the impact, researchers demand third-party certification and the creation of environmental literacy [2]. Third-party authentication serves as a mode of trust, which helps consumers be less likely to fall for greenwashing claims and enables them to make conscious and ethical decisions [13].

Methodology

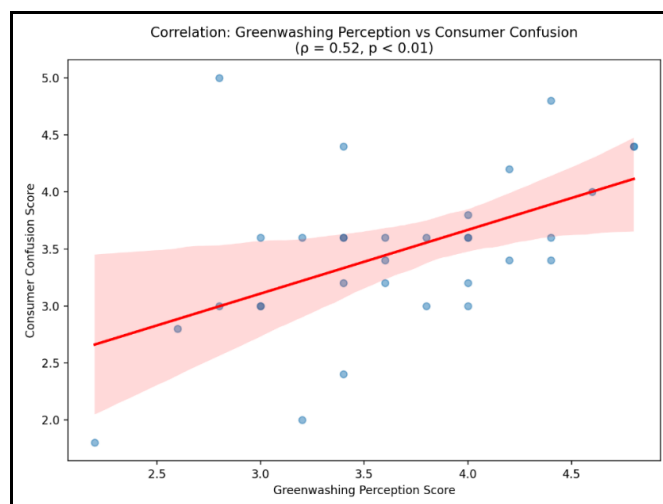
For the purpose of the study, data are collected from 124 respondents using a structured questionnaire, which is further analysed using non-parametric methods. Spearman’s rank correlation assessed the relationship between greenwashing and dependent variables, such as consumer trust, scepticism, and purchase decisions. Chi square test studied the relation between demographic attributes and awareness levels among consumers. Ordinal Logistic Regression (OLR) is instrumented to study the influence of greenwashing perception on decision-making and consumer trust. The analysis offered substantiated insights into the effects of greenwashing on consumer attitudes and behaviour.

Result

H₁: Greenwashing positively influences consumer confusion (refer to Figure 1)

- Spearman's $\rho = 0.52$ (moderate positive correlation)
- p -value = 0.002 (statistically significant)

Figure 1: Greenwashing Perception vs Consumer Confusion



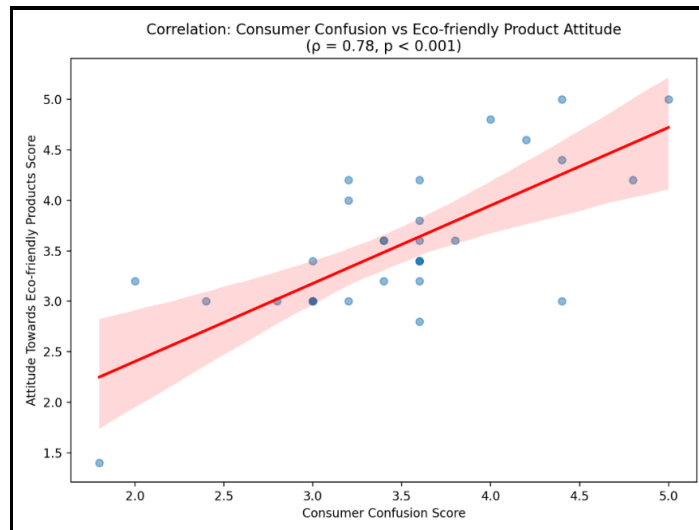
Source: Collected by Author

Null hypothesis ($\rho=0$) is rejected. There is statistically significant evidence that greenwashing perceptions positively influence consumer confusion ($p<0.01$), which supports the H_1 .

H₂: Consumer confusion negatively affects attitude towards eco-friendly products (refer to Figure 2)

- Spearman's $\rho = 0.78$ (strong positive correlation)
- p -value < 0.001

Figure 2: Consumer Confusion vs Eco-Friendly Product Attitude



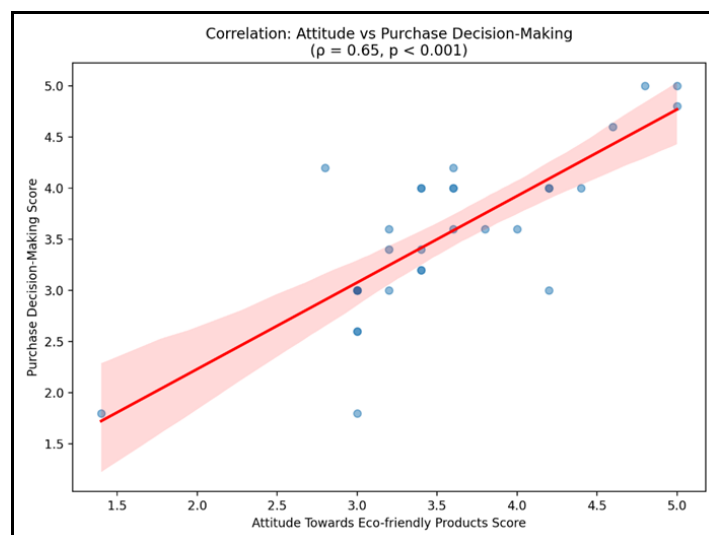
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The analysis shows a strong positive correlation, which indicates that increased confusion is associated with reduced trust in authentic brands. This supports H_2 , which states that consumer confusion negatively affects attitudes towards eco-friendly products.

H₃: Consumer attitudes significantly influence purchase decision-making (refer to Figure 3)

- Spearman's $\rho = 0.65$
- p -value < 0.001

Figure 3: Correlation vs Purchase Decision-Making



Source: Collected by Author

The analysis demonstrated that there is a statistically significant strong positive relationship between negative attitudes and avoidance behaviour. Consumers who have lost trust in brands due to greenwashing are more likely to avoid purchasing from those companies.

H₄: Greenwashing directly and negatively impacts consumer trust (refer to Figure 4)

- Spearman's $\rho = 0.61$
- p -value < 0.001

Figure 4: Greenwashing Perception vs Consumer Trust



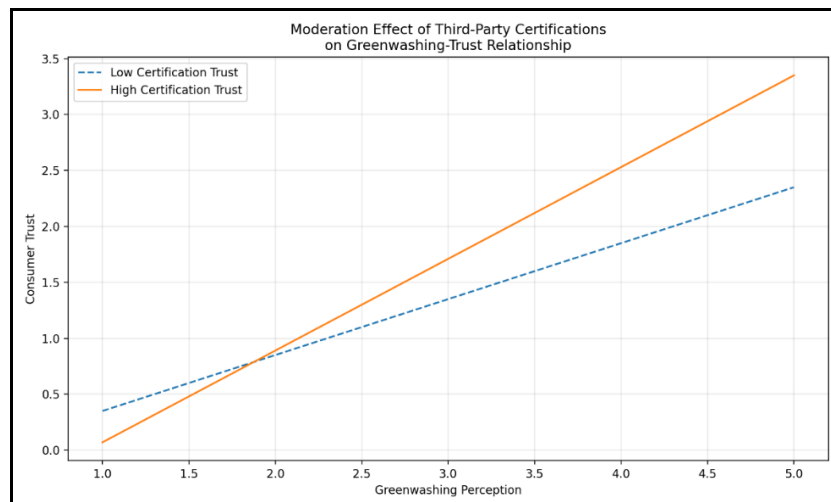
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The study supported hypothesis H₄, indicating that perceived greenwashing significantly reduces trust in companies ($p < 0.001$).

H₅: Third-party certifications moderate the greenwashing-trust relationship (refer to Figure 4)

- Greenwashing perception coefficient: $\beta = 0.42$ ($p = 0.003$)
- Certification trust coefficient: $\beta = -0.15$ ($p = 0.21$)
- Interaction term coefficient: $\beta = 0.08$ ($p = 0.04$)

Figure 5: Effect of Third-Party Certifications on Greenwashing-Trust Relationship



Source: Collected by Author

The significant interaction term ($p=0.04$) indicates moderation. The negative impact of greenwashing on trust is comparatively reduced when third-party certifications are present (β interaction > 0), which supports hypothesis H5 (see Table 1 below).

Table 1: Summary of Analysis

Hypothesis	Test Used	Key Statistic	p -value	Supported
H ₁	Spearman	$\rho = 0.52$	0.002	Yes
H ₂	Spearman	$\rho = 0.78$	<0.001	Yes
H ₃	Spearman	$\rho = 0.65$	<0.001	Yes
H ₄	Spearman	$\rho = 0.61$	<0.001	Yes
H ₅	OLS	$\beta = 0.08$	0.04	Yes

Source: Collected by Author

Greenwashing creates significant consumer confusion (H₁) and decreases trust (H₄). This confusion leads to negative attitudes (H₂) that directly impact purchasing decisions (H₃). Third-party certifications provide a partial remedy by weakening the greenwashing-trust relationship (H₅).

Discussion

The findings of this study reveal the significant negative impact of greenwashing on consumer behaviour, specifically through the creation of confusion and mistrust, which ultimately undermines purchase intentions. The positive correlation between greenwashing and consumer confusion ($\rho = 0.52$, $p = 0.002$) highlights how misleading green claims exacerbate uncertainty among consumers regarding product authenticity. This confusion is a critical factor that leads to negative attitudes towards eco-friendly products ($\rho = 0.78$, $p < 0.001$), aligning with previous studies that have identified greenwashing as a key contributor to decreased consumer confidence in environmental claims [14, 15].

Furthermore, the strong correlation between consumer confusion and avoidance behaviour ($\rho = 0.65$, $p < 0.001$) is consistent with research indicating that consumers who feel deceived by greenwashing are more likely to disengage from eco-friendly product categories altogether [16]. This sentiment is reflected in the diminished trust consumers place in brands associated with deceptive practices, which, according to the study, has a direct impact on purchase decisions ($\rho = 0.61$, $p < 0.001$).

The study also underscores the role of third-party certifications as a moderating factor in mitigating the negative effects of greenwashing. Although the direct impact of certification trust was not statistically significant ($\beta = -0.15$, $p = 0.21$), the interaction term ($\beta = 0.08$, $p = 0.04$) suggests that credible certifications can reduce the negative impact of greenwashing on consumer trust, a finding supported by recent research on the effectiveness of certification labels in improving consumer confidence [17, 18]. These findings emphasize that while greenwashing is detrimental to brand credibility, third-party validation plays an essential role in restoring consumer trust and mitigating adverse effects on purchasing decisions [11].

This study illustrates that greenwashing not only misguides consumers but also damages the overall perception of sustainability, highlighting the need for transparent and trustworthy communication strategies, especially those backed by independent certifications.

Conclusion

In conclusion, addressing the adverse effects of greenwashing requires a multi-faceted approach. Standardising environmental claims and establishing clear industry-wide definitions will help prevent misleading marketing practices. Enhanced regulatory supervision, including stricter penalties for deceptive green marketing, is necessary to ensure

compliance and accountability. Consumer education campaigns are vital to help individuals identify greenwashing and distinguish between authentic and misleading sustainability claims. Transparency from brands is equally important, as companies must provide verifiable evidence of their environmental practices to regain consumer trust. Finally, promoting the use of third-party certifications can significantly restore confidence in eco-friendly products, offering a reliable form of validation for sustainable initiatives. By implementing these strategies, the detrimental impact of greenwashing on consumer behaviour can be mitigated, fostering a more transparent and trustworthy marketplace for sustainable products.

Suggestion

These findings highlight that greenwashing creates confusion and minimises trust; brands that prioritise clarity, accountability, and ethical communication have a strong opportunity to differentiate themselves in the market. Implementation of these measures can lead to stronger consumer relationships and long-term brand credibility in an increasingly sustainability-conscious world.

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Conflict of Interest

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