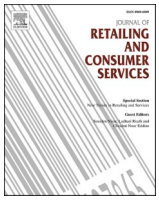
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When going green goes wrong: The effects of greenwashing on brand avoidance and negative word-of-mouth

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ABSTRACT

This study analyzes the impact of greenwashing on brand avoidance and Negative Word-of-Mouth (NWOM) using a scenario-based survey conducted in malls/supermarkets. Leveraging the Stimulus-Organism-Response model, the study demonstrates how greenwashing leads to brand hate and hypocrite, influencing consumers to avoid brands and engage in NWOM. Findings stress the need for authentic, transparent environmental practices in brand communication to reduce greenwashing perceptions. This research confirms greenwashing's negative brand effects and introduces new insights into greenwashing-brand avoidance and NWOM dynamics, contributing to the existing literature and emphasizing methodological rigor.

1. Introduction

An increasing concern among management theorists revolves around the condition of the world that will be inherited by future generations (Islam et al., 2023; Sajid et al., 2023). Issues such as oil spills, deforestation, global warming, unethical scandals, and pandemics have prompted global entities like the United Nations and the World Economic Forum to intensify their calls for conducting business in a sustainable manner. In response, consumers show a strong interest in buying environmentally friendly products, motivated by environmental concerns (Ioannou et al., 2023). Correspondingly, due to escalating pressures from consumers and other stakeholders, a multitude of corporations have initiated the launch of environmentally friendly products and engaged in various environmental initiatives (Islam et al., 2023; Sajid and Zakkariya, 2022). However, it has been observed across diverse sectors, ranging from energy to retail, that certain firms engage in deceptive practices (Adegeest, 2022; Li et al., 2022). These firms inaccurately represent their environmental contributions, aiming to garner benefits without substantial investment or effort. This pervasive phenomenon, referred to as 'greenwashing' involves the dissemination of misleading information regarding a company's environmental practices or the ecological attributes of its offerings (Baum, 2012). The phenomenon of greenwashing has become a significant concern as businesses increasingly respond to the call for sustainability (Li et al., 2022; Sajid and Ertz, 2024).

Academically, greenwashing has received much scholarly attention in recent years due to its increasing prevalence in the global market. A large body of past research has tended to examine how greenwashing perceptions influence green purchase intentions (Lu et al., 2022). There have also been studies that observe whether greenwashing affects brand equity in the long term (Qayyum and Jamil, 2022), its influence on product/environmental perceptions and objective responses (Szabo et al., 2021) and brand attitudes (Paladino, 2014). However, the existence of a relationship between greenwashing and brand avoidance has not yet been adequately documented.

Brand avoidance is a practice in which consumers purposely avoid or reject a brand (Ittefaq et al., 2024). This behavior is observed when consumers choose not to purchase a brand despite having the financial means, and the brand is readily available on the market. Various reasons may lead consumers to avoid brands, such as negative experiences, moral misconduct, or conflicts arising from personal identity (Lee et al., 2009). In the current context, as soon as environmentally concerned consumers become aware that a brand is not safeguarding the environment as it claims, they will be disappointed and may detest the greenwashed brand (Xiao and Wang, 2022). Due to the high likelihood of brand avoidance for brands accused of greenwashing, it is critical to

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comprehensively understand how greenwashing perceptions influence brand avoidance intention.

A further flaw of the green marketing literature is that it has given limited emphasis to the effect of greenwashing perceptions on the intention to spread negative word-of-mouth (NWOM) about the brand. Negative feelings can arise when brands fail to meet consumer expectations, culminating in NWOM (Kashif et al., 2021). Revealing a brand's greenwashing practices leads to dissatisfaction and related negative feelings, which may persuade NWOM (Ioannou et al., 2022). However, previous research shows that not all dissatisfactions lead to NWOM (Surira et al., 2023). Thus, a comprehensive investigation is required to ascertain the potential connection between perceptions of greenwashing and the emergence of NWOM.

Although some scholarly efforts, such as those by Chen et al. (2019) and Zhang et al. (2018), have initiated exploration into the influence of greenwashing perceptions on WOM, certain constraints within these studies warrant consideration. Chen et al.'s (2019) investigation, for instance, was confined to a narrow scope within the hospitality industry, encompassing only two specific scenarios. Besides, these scenarios solely revolved around sustainability initiatives rather than the core products or services offered by the firm. Similarly, the study conducted by Zhang et al. (2018) centered on a fictitious brand scenario pertaining to a singular product type, with a primary focus on elucidating the correlations between greenwashing perceptions and positive WOM. These constraints, inherent in previous studies, limit a comprehensive understanding of the broader implications of greenwashing.

This gap in holistic understanding becomes particularly crucial in light of real-world incidents like the Volkswagen Dieselgate scandal. The scandal, which involved the manipulation of emissions tests by Volkswagen, had substantial market repercussions, including an 18% decrease in car sales and a 6% reduction in resale value in Israel (Ater and Yosef, 2022). These outcomes highlight the tangible impacts of greenwashing on brand avoidance and NWOM (Ater and Yosef, 2022). Such real-world examples stress the importance of understanding the psychological mechanisms that connect greenwashing to these consumer behaviors, revealing how deceptive environmental practices can significantly affect consumers' active (NWOM) and passive (brand avoidance) responses to the brand.

Given the importance of these research gaps, the authors adapt the Stimulus, Organism, Response (SO-R; –Mehrabian and Russell, 1974) framework to resolve them. This study employs greenwashing as a stimulus, while brand avoidance and NWOM serve as responses, and brand hate, along with brand hypocrite, as organismic states that bridge the connection between stimulus and response. The rationale for selecting brand hate and brand hypocrite as organismic states in this study is well-founded. They hold distinct significance due to their potent capacity to elucidate the pathways linking the stimulus (greenwashing) to the responses (brand avoidance and NWOM). Brand hate encapsulates the intensity of emotional aversion arising from adverse experiences, which is pivotal in shaping ensuing behaviors (Aziz and Rahman, 2022). In the context of greenwashing, it amplifies negative emotions, thereby driving brand avoidance and NWOM. Conversely, brand hypocrite targets trustworthiness and credibility (Guèvremont, 2017). Instances where a brand's asserted values diverge from its actions, erode trust and evoke cognitive dissonance. When applied to greenwashing, this inconsistency diminishes credibility, leading to brand avoidance and NWOM. The unique capacity of these constructs to capture the interplay of emotions and cognition triggered by greenwashing validates their selection over alternative constructs.

This study enriches the existing green marketing literature in the following ways: Firstly, it reinforces the understanding of adverse consequences stemming from consumers' perceptions of greenwashing on brands, empirically validating the detrimental impact. Secondly, it introduces a novel dimension by uncovering a relatively less-explored link between greenwashing and brand avoidance. Thirdly, it advances comprehension of the complex relationship between greenwashing perceptions and NWOM, refining the extant literature. Lastly, the study innovatively employs a scenario-based survey methodology, delving into consumer perceptions, emotions, and cognitive processes. This methodological approach, encompassing a diverse range of scenarios, strengthens the study's robustness and accuracy.

2. Background

2.1. Greenwashing

Greenwashing refers to the practice of making false or misleading environmental claims about a product or service (Ioannou et al., 2022). The term is derived from the word "whitewash," which means to hide or downplay the negative aspects of a situation. Greenwashing is similar in that it involves hiding or downplaying the negative environmental impact of a product or service and making false or exaggerated claims about its environmental benefits (Ioannou et al., 2022). Companies often use greenwashing to appeal to consumers who are becoming increasingly concerned about the environment and sustainability (Qayyum and Jamil, 2022). Greenwashing, however, has the disadvantage of creating confusion and distrust among consumers since it can be difficult to distinguish between genuine eco-friendly products and those that merely make false claims.

The practice of greenwashing is pervasive across various industries, including consumer goods, automotive, fashion, and food. The Volkswagen 'dieselgate' scandal stands out as a prominent example of greenwashing, where Volkswagen falsely claimed their diesel vehicles met environmental regulations but used software to manipulate emission tests (Ater and Yosef, 2022). This instance exemplifies how false claims about meeting environmental regulations can lead to a loss of consumer trust and damage sustainability credibility. Similarly, H&M's Conscious Collection reflects another instance of greenwashing, where marketing a sustainable clothing line is met with criticism for perceived short-term trends and insufficient transparency (Kaner, 2021). These examples underscore the need for greater accountability and transparency in sustainability practices across industries to build trust and ensure genuine environmental stewardship.

2.2. Stimulus-Organism-Response (S–O-R) framework

The S–O-R framework, which stems from environmental psychology, theorizes that a broad spectrum of environmental factors (Stimulus) determine the internal beliefs and affections (Organism) of an individual, which in turn influence the behavioral outcomes (Response) (Mehrabian and Russell, 1974). More precisely, the theory suggests that, as a result of stimuli (S), individuals' organismic state (O) is impacted, leading to external responses (R) such as approach or avoidance (Mehrabian and Russell, 1974).

The S–O-R framework is adeptly utilized in this study to illustrate how greenwashing (stimulus) leads to brand hate and brand hypocrite (organismic states), which in turn precipitate brand avoidance and NWOM (responses). This model traces the journey from the initial exposure to greenwashing to the internal emotional and cognitive reactions of brand hate and brand hypocrite, driven by cognitive dissonance from inconsistent brand actions (Ittefaq et al., 2024; Islam and Rahman, 2017). These organismic states are instrumental in understanding the consumer's transition from internal states to observable behaviors. Brand avoidance emerges as a passive reaction, while NWOM represents an active response to the disillusionment and frustration engendered by greenwashing. Hence, the S–O-R framework provides a structured approach to comprehensively analyze the progression from greenwashing to these complex behavioral outcomes, justifying its application in our study.

In its early phases of development, the S–O-R theory was primarily employed in marketing to characterize on-site shopping behaviors; however, the theory has subsequently developed and has been utilized

in diverse consumer behavior contexts (Akram et al., 2023; Morais et al., 2023). Behavioral studies applying the S–O-R model can be categorized into three distinct groups: (i) studies engaging elaborate scenarios during data collection, encompassing descriptions accompanied by visual representations and fictitious websites (Laroche et al., 2022); (ii) studies exclusively relying on descriptive scenarios (Kini et al., 2023); and (iii) studies that do not involve the provision of any scenarios (Tseng et al., 2021).

In order to optimize external validity and minimize potential biases associated with direct questioning, a descriptive scenario-based survey approach was adopted in this study. By presenting participants with hypothetical scenarios, this method provides a more authentic and contextually grounded setting for their responses, thereby enhancing the realism and applicability of the findings. Additionally, the utilization of scenarios helps control the participants' level of greenwashing awareness, ensuring that the study's outcomes are primarily influenced by the specific stimuli presented.

3. Formulation of hypotheses

3.1. Greenwashing and brand hate

Consumers see brands as human companions, showing sentiments and emotions for their preferred brands, which are regarded as "humans" (Patrizi et al., 2023). Consequently, consumers' relationship with the brand is found to be impacted by negative experiences more than positive ones, reflecting the concept of negativity bias. Consumers who encounter such negative experiences can develop negative feelings and emotions toward the brand in various ways, adversely impacting the brand (Curina et al., 2020). As a negative phenomenon, greenwashing attempts from a preferred or familiar brand may elicit negative feelings among consumers. When consumers perceive that a familiar or preferred brand has committed greenwashing, they tend to associate a fallacious character with the brand's personality (Akturan, 2018).

One form of negative emotion that can stem from greenwashing perception is brand hate. Brand hate refers to a strong negative emotion directed towards a brand that performs inadequately and leads customers to have terrible, unpleasant experiences in both the personal and societal realms (Aziz and Rahman, 2022). Greenwashing can lead to brand hate because it undermines consumers' trust in the brand. When a brand is perceived to be engaging in greenwashing, consumers may feel misled and deceived, which can lead to negative feelings toward the brand (Qayyum and Jamil, 2022). Moreover, many individuals place importance on environmental issues and believe in the need for sustainable practices. When a brand engages in greenwashing, it is perceived as undermining these values and prioritizing profit over environmental responsibility (Kaner, 2021). This perceived violation of moral values can evoke strong negative emotions and intensify the feeling of brand hate. Thus, we hypothesize.

H1. Greenwashing positively affects brand hate.

3.2. Greenwashing and brand hypocrite

Brand hypocrite refers to a situation where a brand claims to support or promote certain values, beliefs, or causes, but its actions or practices are not aligned with those claims (Arli et al., 2017; Guèvremont, 2017). In the current context, a brand is perceived to be hypocritic when it makes environmental claims but fails to live up to them in its practices and policies (Xiao and Wang, 2022). From a psychological perspective, consumers are often drawn to brands that align with their values and beliefs, and many consumers today place a high value on environmental sustainability (Ishaq and Di Maria, 2020). By making false or exaggerated environmental claims, brands that engage in greenwashing are attempting to manipulate consumers' perceptions of their brand and exploit their desire to make environmentally conscious choices.

However, when these claims are exposed as false or exaggerated, consumers may feel deceived and experience a sense of brand hypocrite, which can harm the company's reputation and erode trust in the brand (Chen et al., 2019). This is because consumers have a fundamental need for consistency and coherence in their beliefs and actions, and they tend to react negatively to inconsistencies or contradictions. From the above discussion, we propose the following hypotheses.

H2. Greenwashing positively affects brand hypocrisy.

3.3. Brand hate and brand avoidance

Brand avoidance is the deliberate decision of consumers to stay away from or reject a specific brand (Lee et al., 2009). According to the expectations-confirmation theory (ECT) and anti-consumption literature, unfavorable brand experiences lead to consumer brand avoidance (Odoom et al., 2019). This is due to the emergence of negative emotions that result from negative experiences with the brand, which give rise to distancing and avoidance behavior (Costa and Azevedo, 2022), much same manner as positive emotions evoke favorable disposition and association with the brand. Studies on brand avoidance also contend that adverse brand-related events, such as brand hate, can result in consumers avoiding a particular brand (Roy et al., 2022). When individuals perceive greenwashing from a brand, they may form negative emotional associations such as brand hate, leading to brand avoidance as a passive behavioral response to the negative emotion. Therefore, we formulate the following hypothesis.

H3. Brand hate positively affects brand avoidance.

3.4. Brand hypocrite and brand avoidance

In the intricate realm of consumer-brand interactions, it is critical to acknowledge that the perception of hypocrite can significantly impede the establishment and sustenance of brand trust (Jung et al., 2020). When a brand is perceived as hypocritical, the ensuing confusion and doubt cast aspersions on the brand's reliability and veracity (Guèvremont, 2017). This, in turn, creates a sense of hesitancy among consumers, who are reluctant to choose the brand's products due to the uncertainty surrounding the extent to which such products will satisfy their needs and desires (Arli et al., 2019). Consequently, trust in the brand's products is compromised, with consumers perceiving a higher level of risk in purchasing them (Chen and Chang, 2013). It is notable that such concerns may extend beyond environmental claims to functional ones, further exacerbating the issue at hand. Even in situations where a brand fulfills its environmental claims, the stereotype of hypocrite can persist, with consumers questioning the underlying motives behind such Corporate Social Responsibility (CSR) actions (Arli et al., 2019). Based on these arguments, we presume that the perception of hypocrite can generate an aversion towards the brand, dissuading potential customers from trying the brand altogether. Hence, the following hypothesis is proposed.

H4. Brand hypocrisy positively affects brand avoidance.

3.5. Brand hypocrite, brand hate and NWOM

Word of mouth involves informal and personal communication between two individuals, where the person receiving the information sees the communicator as not having a commercial interest in the brand or product (J. Chen et al., 2023; Errajaa et al., 2022). NWOM arises when informal communication between individuals takes a negative turn (Lee et al., 2022). It occurs when a consumer articulates negative feedback, criticizing, complaining about, or advising against a product, service, brand, or entity (Lee et al., 2022). Within the realm of NWOM, two overarching categories can be identified: firstly, private grievances shared with friends and family regarding a brand, and secondly, public

dissemination of negative sentiment. Aligned with the prevailing trend, this study utilizes the broader term "negative word of mouth" without making a distinction between its private and public manifestations (Kashif et al., 2021).

Sharing is emphasized as a component of consumer identity. When consumers possess information, whether positive or negative, they tend to share it with others, thus enhancing their identity within the social group (González-Soriano et al., 2020). Typically, people are inclined to share negative experiences more frequently than positive ones, which aligns with typical human behavior. Based on these arguments, we assume that feelings of brand hate and perception of brand hypocrite due to perceived greenwashing propel customers to spread NWOM about the brand. Therefore, we postulate the following hypothesis.

H5. Brand hate positively affects NWOM.

H6. Brand hypocrisy positively affects NWOM.

In light of the above discussion and review of the literature, we propose the following conceptual model (Fig. 1).

4. Methods

4.1. Qualitative study

We opted for a scenario-based method for this study to enhance the external validity and generalizability of the findings (Song et al., 2022). A focus group was conducted specifically to develop scenarios that are culturally and contextually relevant to the Indian audience, ensuring that identified instances of greenwashing accurately reflect local consumer perceptions and experiences. This approach guarantees that the scenarios resonate authentically with the target audience, thereby enriching the study's relevance and applicability.

To implement this approach, eight Master's students were recruited from a reputed Indian business school to participate in the focus group session. This group consisted of an equal representation of genders, with four men and four women. All participants had a background in and expressed interest in brands, sustainability, and consumer behavior. The focus group session was led by the first author, who also assumed the role of moderator. Initially, participants were briefed on the study's objectives and their expected contribution. This set the stage for an engaging session where the moderator initiated the dialogue by inviting participants to identify and list brands they suspected of making false environmental marketing claims.

To deepen the discussion, the moderator used open-ended questions, such as "What environmental marketing claims have you noticed in the marketing of these brands?" and "What makes you think these brands are making false environmental marketing claims?". The moderator also encouraged the participants to share personal experiences or stories about the brands they listed. Following the discussion, the moderator compiled a list of brands that were reported as making deceptive environmental claims. Even though numerous cases of greenwashing attempts emerged in the discussion, only three were found suitable for an Indian survey. These were Ikea, Volkswagen and H&M.

4.2. Quantitative study

4.2.1. Measures

Pre-validated scales are employed to guarantee that they adhere to the requisite standards for the psychometric properties of these measurement tools. Greenwashing is measured based on the scale developed by Chen and Chang (2012). Further, the scales for brand hate and brand hypocrite were adapted from Lee et al. (2009) and Wagner et al. (2009), respectively. Moreover, brand avoidance and NWOM were quantified based on Xiao and Wang (2022) and Hegner et al. (2017) (See Appendix A). A five-point Likert scale was utilized to measure the degree of agreement or disagreement with each scale item.

4.2.2. Survey administration

The study is conducted in Cochin, a rapidly developing second-tier city in India and the largest city in the state of Kerala, distinguished by its high GDP per capita. India is an ideal location for this study due to its growing market for green products, lack of proper regulations, diverse socio-economic landscape, and rich history of sustainability practices. Data were gathered from consumers in Cochin using a mall/supermarket intercept method in July 2023. The intercept method, commonly implemented in malls and supermarkets, is a widely adopted approach for data collection. For this study, a team of eight master's students with prior experience in consumer research were selected as research enumerators. Before being deployed into randomly selected malls/supermarkets, the enumerators underwent rigorous training on the nature of the study and the most appropriate methodologies for effectively approaching and engaging with consumers to collect data. The data collection procedure followed a systematic random sampling technique. Specifically, every fifth consumer exiting the mall/supermarket was approached to participate in the study. In instances of refusal, the enumerators remained stationed until the subsequent fifth consumer exited and was approached for participation. This method ensured that a representative sample of consumers was obtained while minimizing potential selection bias.

Participants were assigned randomly to one of seven distinct brands (scenarios) and were subsequently presented with comprehensive information concerning the environmental claims attributed to each brand. To capture different types of greenwashing, we used a combination of scenarios of three genuine brands obtained from focus group interviews and four fictitious brands. This encompasses both high and low-involvement products and a service. The information presented to the participants regarding real brands was sourced directly from reliable sources (Adegeest, 2022; Earthsight, 2021; Guilbert Gates et al., 2017; Guilbert, 2018; Harvey, 2020; Hotten, 2015; Lehren et al., 2021), and minor editing was performed to ensure comparability across all firms (See Appendix B). The accuracy of the content was validated by four subject experts who reviewed the companies and information provided. Using genuine and fictitious brands enabled us to have better control

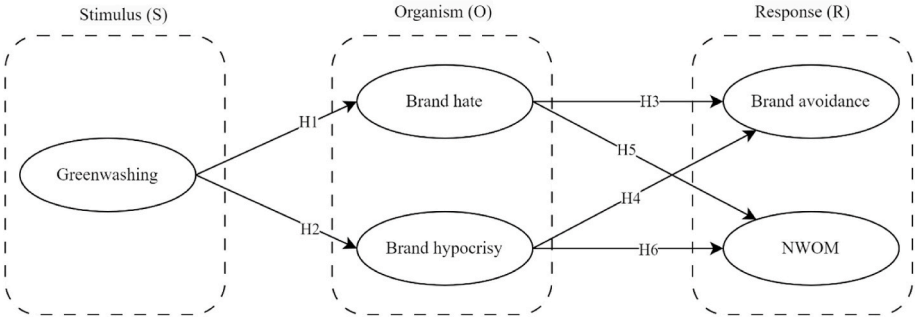


Fig. 1. Conceptual framework.

while providing a sense of realism that would have been missing if only fictitious companies were used. To commence the study, we presented the participants with a scenario and provided them with a brief set of instructions before administering the survey questions. The questionnaire and scenario were distributed in the local language (Malayalam). The translation procedure comprised translation and back-translation processes, as Brislin (1980) suggested.

After a pilot study among 49 consumers, the research enumerators carried out the final data collection and administered 456 questionnaires, resulting in 409 completed questionnaires received. To ensure data integrity, incomplete and outlier responses were meticulously screened, resulting in a final sample size of 372 responses suitable for statistical analysis. Out of the total 372 respondents, the majority of participants were male (52%), within the age range of 32–44 years (49%), employed on a full-time basis (56%), holding an undergraduate degree (57%), and earning a monthly income below INR 50,000 (39%).

4.2.3. Analytical procedures

This study used SmartPLS 4.0 to test the hypothesized relationship among constructs using Partial Least Squares-Structural Equation Modelling (PLS-SEM). PLS-SEM analysis is suitable for studies involving multiple constructs and various variables, enabling the simultaneous estimation of relationships (Hair et al., 2019).

5. Results

5.1. Common method bias

Owing to the exclusive reliance on self-reported data and collecting all variables from a single source, it is critical to examine the potential impact of common method bias (CMB) on the results (Podsakoff et al., 2003). Consequently, we performed Harman's single-factor test with a Promax rotation to verify the absence of CMB in the data. The analysis revealed that the maximum variance explained by a single factor is 37%, which falls within the acceptable limit of 50% (Podsakoff et al., 2003).

However, due to the limitations of Harman's single-factor test in detecting CMB, we employed additional techniques based on the common latent factor to address this issue (Afthanorhan et al., 2021). Specifically, we developed a new latent construct with a constrained variance of '1' in a confirmatory factor analysis model, which was applied to all observed variables in the measurement model. To assess the impact of CMB, we compared the standardized regression weights between the constrained and unconstrained models. According to Afthanorhan et al. (2021), a difference exceeding the threshold of 0.2 between the standardized regression weights of the constrained and unconstrained models indicates the presence of potential CMB. Evaluating the values using this criterion, we found that all observations were below the threshold of 0.2, indicating the absence of significant CMB in our study.

5.2. Measurement model

The measurement model analysis commenced by assessing the reliability of individual items. It is determined that items with loading below 0.708 should be excluded (Hair et al., 2019). Table 1 indicates that none of the loadings is less than 0.708, and hence, no items needed to be removed. Further, we assessed the internal consistency reliability, which involved an examination of the rho_A, Cronbach's alpha (α), and composite reliability (CR). The established conventional thresholds for rho_A, α, and CR are set at 0.70 (Hair et al., 2019). The analysis determined that all values for rho_A, α, and CR exceeded these predetermined limits, thus confirming strong internal consistency reliability. After ensuring reliability, we scrutinized convergent validity by examining the Average Variance Extracted (AVE) values. The AVE values reported in this study range between 0.631 and 0.762, exceeding the established threshold of 0.50 (Fornell and Larcker, 1981). Further, in light of several limitations associated with the Fornell and Larcker (1981) criteria, we opted for the heterotrait–monotrait ratio of correlations (HTMT) (Henseler et al., 2015) to ensure the discriminant validity. As indicated in Table 2, all HTMT values are less than the cut-off value of 0.85 (Henseler et al., 2015), thereby confirming discriminant validity.

Table 1
Reliability and convergent validity.

Construct	Items	Loadings	Alpha	rho_A	CR	AVE
Brand avoidance	BA1	0.832	0.883	0.886	0.911	0.631
	BA2	0.786				
	BA3	0.821				
	BA4	0.784				
	BA5	0.804				
	BA6	0.734				
Brand hate	BHA1	0.872	0.913	0.914	0.933	0.699
	BHA2	0.878				
	BHA3	0.886				
	BHA4	0.772				
	BHA5	0.806				
	BHA6	0.795				
Brand hypocrite	BHY1	0.851	0.811	0.815	0.888	0.725
	BHY2	0.871				
	BHY3	0.833				
Greenwashing	GW1	0.834	0.899	0.908	0.925	0.713
	GW2	0.864				
	GW3	0.786				
	GW4	0.811				
	GW5	0.922				
Negative Word-of-Mouth	NWOM1	0.877	0.922	0.925	0.941	0.762
	NWOM2	0.871				
	NWOM3	0.856				
	NWOM4	0.901				
	NWOM5	0.859				

5.3. Structural model

The analysis of the structural model began with the examination of Variance Inflation Factor (VIF) values to detect multicollinearity issues. Subsequently, we analyzed the hypothesized relationships and evaluated the explanatory power (R^2). Firstly, we conducted a thorough assessment of the VIF values in order to verify the absence of multicollinearity issues. Based on the findings, all VIF values fell within the reference value of 3 (Hair et al., 2019), indicating no challenges related to multicollinearity.

Secondly, we examined the hypothesized relationships by assessing the beta values (β), t statistics and p values. The results illustrate that all the proposed relationships are statistically significant. The hypothesis postulating the relationship between brand hate and brand avoidance (H3) has the highest beta value (β = 0.608), followed by H2 (β = 0.481), H1 (β = 0.418), H6 (β = 0.407), H5 (β = 0.398) and H4 (β = 0.383) (See Table 3). Thirdly, we examined the R^2 value to quantify the variance explained. The results depict that the model explains a 67.36 % variance in brand avoidance and a 58.3 % variance in NWOM; both represent moderate predictive power.

Table 2
Discriminant validity.

	BA	BHA	BHY	GW	NWOM
BA					
BHA	0.661				
BHY	0.513	0.557			
GW	0.562	0.455	0.559		
NWOM	0.713	0.782	0.829	0.568	

Table 3
Results of hypotheses testing.

Hypotheses	Path	Beta	Standard Deviation	T Statistics	P Values	Support?
H1	GW > BHA	0.418	0.055	7.621	<0.001	Yes
H2	GW > BHY	0.481	0.051	9.493	<0.001	Yes
H3	BHA > BA	0.608	0.042	14.428	<0.001	Yes
H4	BHY > BA	0.383	0.046	8.334	<0.001	Yes
H5	BHA > NWOM	0.398	0.058	6.845	<0.001	Yes
H6	BHY > NWOM	0.407	0.063	6.465	<0.001	Yes

6. Discussion

6.1. Discussion of the results

The present study examines the impact of greenwashing on brand avoidance and NWOM through the S–O-R model, confirming all proposed hypotheses using PLS-SEM. This research significantly enriches greenwashing literature by exploring psychological mechanisms such as brand hate and brand hypocrite, providing deeper insights into consumer reactions to deceptive environmental claims. It uncovers the complex emotional and ethical responses driving consumers away from greenwashing brands, linking these perceptions to both brand avoidance and NWOM. Additionally, the study utilizes a comprehensive scenario-based survey methodology, offering a nuanced understanding of consumer behavior in this context. This approach not only extends the theoretical discourse on greenwashing but also sheds light on the intricate relationship between consumer perceptions of greenwashing and their subsequent behaviors.

The results support H1, which states that greenwashing significantly influences brand hate, affirming the existing body of literature on branding, which suggests that negative experiences can result in brand hate (Roy et al., 2022). A logical justification for this result is that greenwashing can be seen as a deception that undermines consumer trust and damages the brand's reputation. When consumers feel that a brand has misled them, they may feel betrayed and develop negative emotions toward the brand, which can ultimately lead to brand hate.

Further, H2 is upheld as greenwashing positively affects brand hypocrite. This finding aligns with the observations made in prior research (Xiao and Wang, 2022). A plausible rationale for this outcome is that brands engaging in greenwashing often do so to create a perception that they are environmentally responsible or sustainable, even if their actual practices do not support that perception. This can be seen as hypocritical because the brand presents itself as something it is not.

Moreover, H3 is supported, confirming the positive relationship between brand hate and brand avoidance. This outcome is harmonious with previous studies (Jabeen et al., 2022; Roy et al., 2022). A plausible explanation for this result is that when consumers experience strong negative emotions toward a brand, they are more likely to avoid that brand or even the entire product category associated with it. This avoidance behavior is motivated by a desire to distance oneself from the negative emotions associated with the brand and to avoid any future negative experiences with it.

Similarly, H4 is confirmed as brand hypocrite is positively related to brand avoidance. This result is in line with studies in other contexts (Cheah et al., 2022; Xiao and Wang, 2022), and it can be explained by the psychological concept of cognitive dissonance. When a consumer encounters a brand that engages in hypocritical behavior, it creates a state of cognitive dissonance in which the consumer's beliefs and values are in conflict with their behavior of purchasing or supporting the brand. This dissonance creates discomfort and a desire to reduce the inconsistency, which can lead to brand avoidance as a way to resolve the conflict.

Next, we discuss the relationship between brand hate and brand hypocrite with NWOM (H5 & H6). The study affirms both H5 and H6, stating that brand hate and brand hypocrite positively influence NWOM. These results authenticate previous studies in diverse contexts (Costa and Azevedo, 2022; Yue et al., 2022). The reason behind the relationship between brand hate and NWOM could be that negative emotions are known to be more powerful and impactful than positive emotions, leading consumers to express their negative experiences more prominently. Additionally, consumers may feel a sense of satisfaction or social validation from sharing their negative experiences (greenwashing in this context) with others, thereby reinforcing their brand hate. Further, brand hypocrite is positively related to NWOM because consumers today are increasingly aware and concerned about ethical and social issues. They expect brands to not only make promises but also live up to them through their actions. When a brand fails to deliver its environmental promises, it damages the trust that consumers have placed in it. This can lead to negative word of mouth, where consumers share their disappointment and frustration with others.

6.2. Theoretical contributions

This study contributes significantly to the existing body of knowledge in several ways. Firstly, the study not only reaffirms and enriches the understanding of the adverse consequences that consumers' perceptions of greenwashing can have on brands but also delves into the underlying psychological mechanisms that drive these perceptions, offering a deeper insight into the why and how behind consumer behavior in response to greenwashing. Two key psychological mechanisms, brand hate and brand hypocrite, were explored in this study. These insights represent a substantial enrichment of the existing literature on greenwashing, moving beyond mere recognition of negative emotions and behaviors triggered by greenwashing. Instead, this research provides a comprehensive exploration of why and how these emotions and behaviors manifest.

In the context of brand hate, recognizing that consumers experience strong negative emotions like anger, frustration, and betrayal helps us better understand the emotional underpinnings of their reactions to greenwashing. This nuanced understanding enhances the literature by shedding light on the emotional processes that drive consumers to actively distance themselves from brands engaged in greenwashing. Similarly, the exploration of brand hypocrite contributes to the literature by unveiling the moral dimension of consumer responses to greenwashing. By revealing that consumers perceive brand hypocrite when they detect a misalignment between a brand's claims and actions, this research deepens our understanding of the ethical considerations at play. It underscores how consumers perceive brands exploiting their environmental or ethical concerns for profit, leading to moral outrage. This insight expands the literature's scope by emphasizing the ethical implications of greenwashing and how they influence consumers' willingness to engage in NWOM.

Secondly, this study introduces an innovative dimension by revealing an under-explored linkage between greenwashing and brand avoidance (Xiao and Wang, 2022). The empirical analysis establishes that consumers, when perceiving a brand as involved in greenwashing, are inclined to deliberately distance themselves from it. This contribution enhances the literature by revealing the behavioral repercussions of greenwashing, extending beyond perception to actual avoidance behaviors.

Thirdly, the study advances the current understanding of the complex relationship between greenwashing perceptions and the inclination to engage in NWOM. By addressing prior research's conceptual and methodological gaps, this study refines and reinforces the theoretical connections between these two phenomena. This contribution elevates the theoretical discourse by offering a comprehensive and nuanced perspective on the association between greenwashing perceptions and NWOM.

Lastly, the study's utilization of a scenario-based survey methodology constitutes a substantial contribution in its own right. By employing this innovative approach, the research delves deeply into consumers' perceptions, emotions, and cognitive processes concerning greenwashing, brand avoidance, and NWOM. Importantly, this approach goes beyond the limitations of previous studies that employed a limited number of scenarios (Chen et al., 2019; Zhang et al., 2018). In contrast, our study encompasses a comprehensive set of seven distinct scenarios, encompassing real and fictitious brands and a diverse array of product-service combinations. This methodological breadth reinforces the robustness of the theoretical framework by facilitating a more accurate portrayal of the relationships under examination.

6.3. Practical implications

Through a meticulous examination of the deleterious effects of greenwashing on brand avoidance and NWOM, this study illuminates the intricate dynamics, complexities, and underlying mechanisms of this phenomenon, thus offering invaluable insights and evidence-based recommendations for tackling it more effectively. To this end, the study outlines five strategies that can be implemented to mitigate the pernicious effects of greenwashing.

1. *Authenticity and Transparency:* This study highlights the significance of authenticity and transparency in brand communications. To avoid brand hate and hypocrite, companies should strive to provide accurate and honest information about their environmental practices and initiatives. By being transparent and genuine, companies can establish trust with consumers and minimize the perception of greenwashing.
2. *Substantive Environmental Actions:* Merely making eco-friendly claims without substantive actions can lead to negative consumer perceptions. It is crucial for companies to go beyond superficial green marketing and focus on implementing concrete environmental measures. By actively engaging in environmentally friendly practices and demonstrating tangible efforts toward sustainability, businesses can enhance their credibility and reduce consumer skepticism.
3. *Consistency and Coherence:* Consistency between a brand's environmental claims and actual practices is vital. Companies should ensure that their actions align with their green messaging. Inconsistencies or contradictions between environmental claims and business practices can result in brand hypocrite, leading to negative consumer attitudes and behaviors. A coherent and integrated approach to environmental management is vital to building a positive brand image.
4 *Addressing Consumer Concerns*: Companies need to proactively address consumer concerns and skepticism regarding greenwashing. This can be achieved through educational initiatives, transparency reports, or third-party certifications that validate a brand's environmental claims. By acknowledging and responding to consumer feedback, businesses can foster a more constructive dialogue with their audience, mitigating negative word of mouth and brand avoidance.
5. *Industry-Specific Considerations:* Industries with a high pollution footprint or high visibility should be particularly cautious about their environmental words and actions. Companies operating in these sectors should be more committed to substantive green management practices to counteract negative perceptions and build a positive brand image. Proactive steps to reduce environmental impact and engage in sustainable practices can help overcome brand avoidance and NWOM.

6.4. Limitations and future research avenues

While the present study provides valuable insights into the impact of greenwashing on brand avoidance and negative word of mouth, it is essential to acknowledge that there are some limitations to the study that could be addressed in future research. Firstly, participants' previous experiences with brands were not accounted for as a control variable in the model. Including this aspect could enhance the robustness of our findings. Additionally, the study's reliance on scenario-based data collection and mall intercept procedures, which might introduce artificiality and context-dependent responses, could be considered potential weaknesses. These methods may not fully capture the complexities and nuances of real-world consumer behavior. Therefore, exploring alternative data collection approaches that align more closely with natural settings could provide a more comprehensive understanding of the phenomenon. Finally, the study's cross-sectional design impedes the establishment of causal relationships; thus, employing longitudinal research designs would offer a more comprehensive understanding of the temporal dynamics between the variables in the model.

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CRediT authorship contribution statement

Muhammed Sajid: Writing – original draft, Software, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **K.A. Zakkariya:** Writing – review & editing, Supervision, Methodology. **Norazah Mohd Suki:** Writing – review & editing, Visualization, Supervision, Software, Project administration, Methodology. **Jamid Ul Islam:** Writing – review & editing, Software, Resources, Formal analysis.

Declaration of competing interest

The authors report there are no competing interests to declare.

Data availability

Data will be made available on request.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jretconser.2024.103773.

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