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Describing brown as green: an examination of the relationship between greenwashing and consumer negative emotive outcomes

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ABSTRACT

As the demand for sustainable and environmentally friendly products continues to rise, consumers have become more discerning in their brand choices. This has resulted in many companies resorting to greenwashing to appear environmentally friendly. While previous studies have explored different dimensions of greenwashing, its effects on consumer emotive outcomes have not been given much scholarly attention. Therefore, this study sought to examine the relationship between greenwashing and consumer negative emotive outcomes. Additionally, the study examined the potential moderating effect of brand loyalty on the relationship between greenwashing and these negative emotive outcomes. A cross-sectional survey involving a total of 490 respondents with usage experience of green household electronic appliances was utilized. Data were analyzed using the partial least squares-structural equation modeling (PLS-SEM) approach. The results of the analysis revealed a positive correlation between greenwashing and all four negative emotive outcomes examined. Furthermore, the findings demonstrated that brand loyalty plays a positive moderating role in the relationship between greenwashing and negative emotive outcomes. The study thus, strongly recommends that brands engaged in greenwashing discontinue the practice. The consequences of the negative outcomes associated with greenwashing extend beyond a decline in sales performance. It could potentially inflict significant damage on the corporate brand image and reputation. Therefore, brands should prioritize genuine environmental responsibility to mitigate these adverse effects and maintain a positive brand image among consumers.

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Introduction

The relationship between organizations and society is undergoing a global shift (Doni & Fiameni, 2023). This transformation stems from the rise of sustainability as a prominent concept in both the business sphere and international politics (Chavalittumrong & Speece, 2022). Against a backdrop of escalating global warming, pollution, deforestation, species extinction, and resource depletion (De Jong et al., 2020; Zheng et al., 2022), the United Nations (UN) adopted 17 sustainable development goals (SDGs) in 2015, aiming to safeguard the environment and eradicate poverty by 2030. Consequently, companies are increasingly aligning their economic growth objectives with social and environmental concerns (Acuti et al., 2022). SDG goal 12 underscores the importance of sustainable consumption and production, urging companies to minimize their adverse impact on the environment (Chen et al., 2018).

Consumers are gravitating toward brands perceived as sustainable (Acuti et al., 2022; Yadav & Pathak, 2017). A sustainable brand incorporates economic, social, and environmental dimensions into its operations, known as the triple-bottom-line approach (Adnan et al., 2017). Consequently, many companies are integrating sustainability into their marketing strategies to communicate their initiatives to consumers.

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However, not all sustainability claims made by brands may be true, a phenomenon termed greenwashing, which in recent times has garnered attention from both academia and industry (Lee et al., 2018; Santos et al., 2023).

Criticism against greenwashing is mounting due to its deceptive nature (Xiao et al., 2022). Greenwashing not only concerns environmentalists but also disillusioned green consumers who increasingly see through such tactics (Chen et al., 2020; Xiao et al., 2021). Consumers express disappointment and even anger upon discovering exaggerated sustainability claims, leading to negative emotions such as avoidance, negative word of mouth, and occasionally retaliation (Nguyen et al., 2019; Xiao et al., 2021).

The concept of greenwashing has spurred substantial scholarly interest, resulting in a plethora of research on the subject (Santos et al., 2023). Previous studies have explored various aspects of greenwashing, including its impact on green consumption, green trust, green purchase behavior, green communication, and its implications in the hospitality industry (Bulut et al., 2021; Jog & Singhal, 2024; Braga Junior, et al., 2019; Chen & Chang, 2013; Wang et al., 2020; Ahmad & Zhang, 2020; Akturan, 2018; Chen et al., 2020; Hameed et al., 2021; Nguyen et al., 2021; Zhang et al., 2018; Chen et al., 2014; Nyilasy et al., 2014; Parguel et al., 2011; Parguel et al., 2015; Schmuck et al., 2018; Chen et al., 2019; Rahman et al., 2015).

Furthermore, efforts have been made to synthesize existing research on greenwashing, providing evaluative analyses and highlighting key findings (de Freitas Netto et al., 2020; Gatti et al., 2019; Montero-Navarro et al., 2021; Saleem et al., 2021; Santos et al., 2023; Yang et al., 2020). Some studies have focused on conceptualizing greenwashing (de Freitas Netto et al., 2020; Delmas & Burbano, 2011). Despite these scholarly endeavors, gaps persist in the literature on greenwashing (Nemes et al., 2022; Santos). For instance, the relationship between greenwashing and consumer negative emotive outcomes remains underexplored. Additionally, the majority of studies on greenwashing have concentrated on developed countries, indicating a dearth of research on the subject matter in developing nations, particularly in Sub-Saharan Africa (Jog & Singhal, 2024).

Addressing these gaps, this study investigates whether or not greenwashing induces negative emotive outcomes for consumer brands. It contributes modest yet significant insights to the literature on greenwashing and consumer behavior. Specifically, it expands the discourse on greenwashing's impact on consumer behavior, particularly in resource-constrained environments like Ghana. Unlike previous studies (Bulut et al., 2021; Jog & Singhal, 2024; Braga Junior, et al., 2019; Chen & Chang, 2013; Wang et al., 2020; Ahmad & Zhang, 2020; Akturan, 2018; Chen et al., 2020; Hameed et al., 2021; Nguyen et al., 2021; Zhang et al., 2018; Chen et al., 2014; Nyilasy et al., 2014; Parguel et al., 2011; Parguel et al., 2015; Schmuck et al., 2018; Chen et al., 2019; Rahman et al., 2015), the current study focuses on consumers' emotional responses to greenwashing, shedding light on the negative emotional outcomes associated with the practice. Moreover, it contributes to the limited literature on negative outcomes of consumer-brand relationships, drawing on the psychological contract theory. Finally, this study offers practical insights for managers and practitioners, providing them with a contemporary understanding of the potential repercussions of greenwashing and how to effectively communicate sustainability practices.

Having presented a solid justification for this study in the above discussions, the remainder of the paper is structured as follows: the theoretical setting of the study is provided in Section 2. In Section 3 a literature review of greenwashing concerning consumer behavioral outcomes is provided allowing us to formulate some hypotheses. The methodology adopted for the study is discussed in Section 4. This is followed by results and analysis in Section 5. The discussion of findings is presented in Section 6. The final section, section 7, is comprised of a conclusion, implications, limitations, and avenues for future research.

Theoretical setting

The psychological contract theory

The study employs the psychological contract theory to elucidate the phenomenon of greenwashing. Originating from organizational behavior literature, the psychological contract theory delineates a tacit

understanding or expectation held by parties within a relationship. Its application in marketing was pioneered by Luo and Fan (2005), who construed it as consumers' perceptions and anticipations regarding brands or companies' responsibilities and commitments. This theory posits that all parties involved in a relationship carry certain obligations; hence, a failure on any party's part to fulfill these obligations constitutes a breach of contract (Chang & Zhang, 2019).

Consumers who opt for green products are perceived to have entered into a psychological contract with the brand, wherein the brand is expected to deliver on its green promises. Consequently, consumers may perceive it as a breach of contract if a purportedly green brand fails to uphold its commitments, potentially tarnishing the brand image and impeding future sales (Chih et al., 2017). In the context of greenwashing, this theory offers a distinctive lens through which to examine the underlying mechanisms driving consumers' reactions to brands practicing greenwashing (Sun & Shi, 2022).

Literature review and hypotheses development

Greenwashing and negative emotive outcomes

Greenwashing, a term introduced in the sustainability literature in the 1980s, refers to a communication strategy wherein brands make exaggerated claims about their adherence to sustainable practices to gain a competitive advantage (Dahl, 2010; Kahle & Gurel-Atay, 2015). Essentially, it entails deceptive advertising aimed at portraying a product as environmentally friendly when it is not (Nygaard & Silkoset, 2022). Studies reveal the pervasiveness of greenwashing, with reports indicating high levels of false and misleading green communications by companies. For instance, the European Commission found that over 50% of examined cases involved inaccurate green claims, while 37% featured unsubstantiated claims of products being "conscious," "eco-friendly," or "sustainable" (EU, 2021; Nygaard & Silkoset, 2022). Similarly, the International Consumer Protection Enforcement Network discovered that nearly half of green product claims could be illegitimate, including cases such as falsely labeled plastic-free baby wipes and "sustainably sourced" dairy-free milk (Nygaard & Silkoset, 2022).

Such deceptive practices driven by profit motives not only mislead consumers but also possibly jeopardize the credibility and reputation of brands (Nygaard & Silkoset, 2022). The consequences of greenwashing can be severe, leading to the loss of competitive advantages such as customer satisfaction and loyalty (Braga Junior, et al., 2019). Moreover, greenwashing diminishes brand value and competitiveness while eroding consumer trust (Schmuck et al., 2018; Xingqiang, 2015). Particularly detrimental is the impact on consumer-brand relationships, as consumers experience a range of emotions, with negative sentiments being predominant (Fetscherin, 2019; Fournier & Alvarez, 2013; Kucuk, 2019).

Consumers often feel betrayed upon discovering greenwashing practices by brands they trust, potentially leading to negative outcomes in the consumer-brand relationship (Grégoire & Fisher, 2008). This sense of betrayal could conceivably prompt consumers to engage in retaliatory behaviors such as negative word-of-mouth, brand dislike/hate, retaliation, brand avoidance, or even brand boycott (Farhat & Chaney, 2021). These actions are aimed at influencing other consumers or potential customers by disseminating negative perceptions about the greenwashed brand. Previous empirical studies have consistently shown that greenwashing adversely affects consumer emotions, attitudes, and behavioral intentions toward the implicated brand or company (Aji & Sutikno, 2015; Atkinson & Kim, 2014; Chen & Chang, 2013; De Jong et al., 2018). Thus, De Jong et al. (2018) concluded that greenwashing has the potential to ultimately harm a brand's green image. The sections below will further elaborate on four specific negative behavioral outcomes: brand avoidance, brand hate, brand retaliation, and negative word of mouth.

Brand avoidance

Brand avoidance refers to a consumer's deliberate choice to discontinue patronizing or associating with a specific brand (Hegner et al., 2017). It reflects the extent of consumer aversion towards a brand (Zarantonello et al., 2016) and represents a passive emotional response whereby consumers intentionally distance themselves from an existing consumer-brand relationship (Rodrigues & Martins 2020). The

passive nature of brand avoidance poses challenges for brand managers, as it may go unnoticed, making corrective measures difficult to implement (Hogg et al., 2009). However, when coupled with retaliatory actions such as negative word of mouth, brand avoidance can have significant repercussions for brands (Grégoire et al., 2009; Hogg et al., 2009).

Brand avoidance can be categorized into five dimensions: experiential, identity, moral, deficit-value, and advertising-related avoidance (Knittel et al., 2016; Lee et al., 2009; Odoom et al., 2019). Experiential-induced avoidance arises from negative consumption experiences leading to customer dissatisfaction, while identity avoidance stems from a lack of symbolic alignment between the brand image and consumer identities. Moral avoidance emerges from ideological disparities between consumers and brands, whereas deficit-value avoidance results from functional limitations of products. Advertising-related avoidance is triggered by inappropriate advertising content perceived by consumers (e.g., theme, music, endorser, and image). Greenwashing encompasses aspects that touch upon nearly all dimensions of brand avoidance outlined here.

Considering greenwashing as an unethical practice aimed at deceiving consumers about a brand's environmental efforts, exposure to such deceit may lead to brand avoidance (Nygaard & Silkoset, 2022). Consumers may perceive the brand as incongruent with their identity or moral beliefs or may be deterred by misleading advertising content. Empirical evidence supports the notion that greenwashing positively influences brand avoidance (Xiao et al., 2022). Therefore, it is hypothesized that:

H1: Greenwashing has a positive relationship with brand avoidance.

Brand hate

Despite its longstanding presence in green consumer markets, brand hate has only recently garnered attention from researchers (Hegner et al., 2017; Kucuk, 2018; Zarantonello et al., 2018). Kucuk (2016) defines brand hate as "consumers' detachment from a brand and its associations as a result of consumer's intense and deeply held negative emotions such as disgust, anger, contempt, devaluation, and diminution" (Kucuk, 2016, p. 19). In essence, brand hate represents a consumer's expression of extreme dislike towards a brand (Hegner et al., 2017). It may be triggered by negative brand experiences, symbolic incompatibility, unaligned ideologies, corporate wrongdoings, violation of expectations, or negative perceptions of the brand (Hegner et al., 2017; Zarantonello et al., 2016).

Brands that engage in practices incongruent with consumers' beliefs, values, and ideologies, such as greenwashing, are likely to evoke feelings of hatred, animosity, and anger (Boegershausen et al., 2015; Japutra et al., 2021). Consumers' choices of green products are often motivated by their commitment to environmental preservation, making greenwashing particularly egregious as it contradicts sustainability principles and consumers' self-image (Hegner et al., 2017). The deception inherent in greenwashing breeds disappointment and anger among consumers upon discovering exaggerated or false sustainability claims (Nguyen et al., 2019; Xiao et al., 2021). This not only damages the consumer-brand relationship but can also lead to extremely negative emotional outcomes such as hatred. Therefore, it is hypothesized that:

H2: Greenwashing has a positive relationship with brand hate.

Brand retaliation

Brand retaliation represents a vengeful behavior adopted by consumers in response to negative experiences with a brand or company (Kähr et al., 2016). It entails actions taken by consumers to penalize a brand or company for perceived deception, dissatisfaction, or losses incurred (Grégoire & Fisher, 2008; Hegner et al., 2017). As highlighted by Grégoire et al. (2010), consumers possess agency beyond passive disengagement or complaints, capable of actively seeking retribution against offending brands (p. 738). This retaliation can manifest in various forms, including vindictive complaints directly to the company, third-party complaints for negative publicity, and negative word-of-mouth (Gelbrich, 2010; Johnson et al., 2011).

Negative word-of-mouth, in particular, is a common form of brand retaliation, as consumers aim to tarnish a brand's reputation and dissuade others from patronizing it (Amezcua & Quintanilla, 2016).

Greenwashing, given its deceptive nature, has the potential to provoke negative emotions in customers, prompting retaliatory actions against greenwashed brands. With the proliferation of social media, consumers now have a platform to express their grievances and enact retaliation more efficiently (Grégoire & Fisher, 2008). Bavik and Bavik (2015) found that morally conscious consumers are more inclined to engage in retaliatory behaviors, such as vindictive complaining or negative word-of-mouth, when faced with negative consumer-brand relations. Some emotionally affected consumers are even willing to make financial sacrifices to harm the brand (Fetscherin, 2019). Based on these insights, the study hypothesizes that

H3: Greenwashing has a positive relationship with brand retaliation.

Negative word of mouth

Word of mouth is widely acknowledged as a potent form of advertising that can bolster brands and companies. Conversely, negative word of mouth, stemming from consumers' unfavorable experiences with brands, can have significant detrimental effects on brand reputation (Ribeiro et al., 2021). Consumers resort to negative word of mouth to express their discontent regarding poor shopping or consumption encounters with a brand or company (Ribeiro et al., 2021). This behavior serves as a means for consumers to alleviate their emotions or retaliate against a brand for a negative experience (Nguyen & Nguyen, 2021; Ribeiro et al., 2021). Negative word of mouth can manifest at different levels, encompassing private complaints shared with family and friends, as well as public grievances voiced in social gatherings and on social media platforms (Fetscherin, 2019; Zarantonello et al., 2016).

Greenwashing has the potential to trigger negative word-of-mouth among consumers. Those who feel deceived by a greenwashed brand are likely to share their negative experiences with their social circles as a form of retribution against the brand's deception. Negative word of mouth can subsequently lead to other adverse emotive behaviors, such as brand avoidance and boycotting (Thelen & Shapiro, 2012). Consumers may perceive greenwashing as a breach of trust in the consumer-brand relationship, fostering feelings of dislike and hatred toward the brand (Azemi et al., 2020; Rouliez et al., 2019). Victims of greenwashing are inclined to disseminate negative information about the brand to individuals who share their values and beliefs. Based on these observations, the study hypothesizes that:

H4: Greenwashing has a positive relationship with negative word-of-mouth.

The moderation effect of brand loyalty

Brand loyalty is defined by Oliver (1999, p. 34) as "a deeply held commitment to rebuy or patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same-brand-set purchasing." In other words, brand loyalty is a consumer's emotional attachment to a particular which is demonstrated by a continuous purchase of the brand in the midst of computing brands (Li et al., 2020; Putra, 2019). Research has taught businesses to prioritize customer retention since it costs almost six more to prospect new customers (Chinomona, 2016). Besides loyal customers are willing to pay premium prices (Xiao et al., 2021) which positively affects the bottom line of companies. The strategic importance of brand loyalty has instigated a plethora of studies on the concept in the last four decades (Loureiro et al., 2017). In this study, we examined the moderating effect of brand loyalty on the relationship between greenwashing and consumer negative emotive outcomes.

Consumer-brand relationships just like any relationship have their highs and lows for various reasons. Brands sometimes act in ways that betray the trust of the relationship partners (consumers) which results in negative outcomes. However, studies have shown that the positive effects of brand loyalty do not sometimes fade even when brands misbehave, for example by engaging in greenwashing (Guo et al., 2017; Xiao et al., 2021). Guo et al. (2017) report that despite the history of greenwashing by Sinopec its loyal customers stacked with it and even defended the Sinopec brand. Haberstroh et al. (2017) note that evidence in the literature suggests some consumers still purchase brands that behave unethically. These customers justify their continuous patronage of greenwash brands by engaging in moral decoupling (Xiao et al., 2021). However, some consumers are less forgiven and will avoid or boycott greenwash

brands, and even when these brands mend their ways consumers will doubt their green claims (Chen & Chang, 2013; Wang et al., 2020). Based on these it is hypothesized that;

H5: Brand loyalty moderates the relationship between greenwashing and negative emotive outcomes (brand avoidance, brand hate, brand retaliation, and negative word of mouth).

Figure 1 below shows the conceptual framework delineating the proposed relationships between the various constructs as hypothesized above.

Methodology

This study utilized a quantitative method to examine the hypothesized relationships among the variables. The adoption of a quantitative design was informed by the study objectives and the subsequent large sample size (Malhotra, 2010). Overall, five constructs were examined in this study. The items related to the four consumer emotive outcome constructs were adapted from the literature (Lee et al., 2009). The scale items on brand hate and negative-word-of mouth were adapted from Hegner et al. (2017), Brand avoidance scales were adapted from Odoom et al. (2019) and Hegner et al. (2017), Brand retaliation items were adapted from Grégoire et al. (2018) and Joireman et al. (2013), the items of greenwashing were adapted from Braga Junior et al. (2019); Qayyum et al. (2023) and finally, brand loyalty items were adapted from Sahin et al. (2011). The scale items were anchored on a five-point Likert scale ranging from 1= strongly disagree to 5= strongly agree. A pre-test involving 10 participants was conducted to assess the inter-item reliability and contextual fit (Hair et al., 2007) before the final deployment of the questionnaire. The results of this pilot test helped to make the scale items clearer and more precise (Malhotra et al., 2017).

Sample and data collection

This study targeted green consumers residing in Ghana, specifically those who purchase energy-saving electronic products. The focus was on household electronic items labeled as

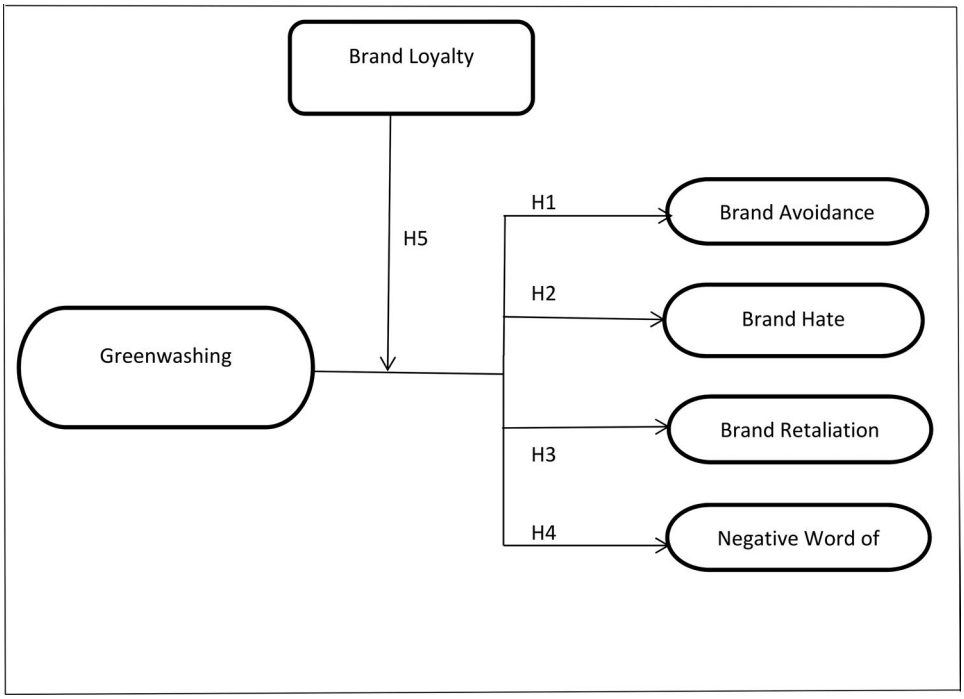

Figure 1. Conceptual framework.
Source: Authors (2023).

energy-saving. Data collection primarily relied on an online survey administered through a Google Form questionnaire. The introductory page of the questionnaire included a filter stipulating that only individuals with experience using green household electronic products were eligible to participate. This approach ensured that respondents possessed relevant experience with the products under investigation.

The utilization of online surveys offers several advantages, including the ability to efficiently gather data from a geographically diverse population (Elbeltagi & Agag, 2016). Online surveys are known for their convenience and effectiveness in reaching a wide range of respondents (Best & Krueger, 2002). Initially, 520 respondents completed the questionnaire. Following an evaluation of questionnaire completeness, a final sample of 490 respondents was deemed suitable for analysis. This represents an impressive response rate of approximately 98%.

Data analysis

The data for the study were analyzed using Smart PLS 3.3 software to perform the partial least squares-structural equation modeling (PLS-SEM) test. The PLS-SEM is an analytical tool that is widely applied in marketing, and business research (Hair et al., 2012; 2019) The PLS-SEM unlike the CB-SEM has a "causal predictive" feature (Jöreskog & Wold, 1982, p. 270) which seeks to explain the variances in a model's dependent variables (Chin et al., 2020). The PLS is also designed to analyze latent constructs under non-normality conditions involving small and complex data (Hair et al., 2013). We checked for skewness and kurtosis to ensure that the data were normally distributed as suggested by Kline (2011) and the results showed normality of distribution. Given that this was a cross-sectional study, we needed to check for method bias. This was done using the procedure suggested by Podsakoff et al. (2003). Besides, common method bias is less likely to exist in a study that uses proven measurement items (Fuller et al., 2016). We further checked for collinearity by adopting the variance inflation factor (VIF) and connecting all the variables to a single variable in the SmartPLS, the results show that none of the constructs or items had VIF higher than the threshold of 3.3 recommended by Kock (2015).

Sample profile

The majority of the respondents were male as they accounted for 63.3% of the sample. Females accounted for 36.7% of the sample. The majority (23.8%) of the respondents are in the age cohort of 34–42 years, followed by respondents in the age group of 43–49 years who accounted for 23.3% of the sample. Respondents in the cohort of 26–33 years accounted for 21.3% of the sample while those in the age group of 18–25 years made up 16.4% of the sample. The least cohort represented in the sample was 50 years and above as they accounted for 15.1% of the sample.

Ethical considerations

The study adhered to ethical guidelines by receiving approval from an institutional review board; that is, the Humanities and Social Science Ethics Committee, School of Arts and Social Sciences, University of Energy and Natural Resource, Sunyani, Ghana. (Reference No. HuSSREC/DEBS/80/Vol5) before collecting data. Participants were briefed on the study's objectives, their freedom to withdraw, and the confidentiality of their input. All participants provided written informed consent as was embedded in the questionnaire. Measures were implemented to safeguard respondent anonymity and privacy, such as employing unique identifiers and secure data storage procedures.

Results

Assessment of measurement model

The assessment of the measurement model was done by testing for the reliability of measurement items, discriminant validity, and convergent validity. The results of the factor loadings as illustrated in Table 1

below indicate that all the items tested met the significance threshold of 0.7 (Hulland, 1999). Items that fell below the acceptable threshold of 0.4 were dropped. Thus, two items BB2 of brand boycott and BR1 of brand retaliation were dropped and did not form part of further analysis. To determine the internal consistency and reliability of the items, Cronbach's Alpha (α), Composite Reliability (CR), and average variances extracted (AVE) were calculated (Hair et al., 1998). An item is deemed reliable when its Cronbach's alpha meets the threshold of 0.7 or higher. With regard to composite reliability, the acceptable threshold is 0.7 or higher (Hair et al., 2013).

The average variances extracted should have a value higher than 0.5 to be acceptable (Hair et al., 1998). The results displayed in Table 2 indicate that the Cronbach's alphas of all the six constructs which range from 0.718 and 0.867 exceed the required threshold of 0.7. The composite reliabilities of all six constructs have all exceeded the recommended value of 0.7. All the constructs except negative word of mouth have AVEs higher than the recommended 0.5 thresholds. This suggests that the constructs capture at least 50% variation of the items. A discriminant validity test was conducted to assess the inter-correlations among the constructs. In conducting the discriminant validity test we followed the criteria proposed by Fornell and Larcker (1981). To achieve discriminant validity a construct value should be higher than its corresponding co-efficient (Hulland, 1999). The results illustrated in Table 3 show evidence of discriminant validity as the values of the constructs are higher than their corresponding coefficient. Given the shortfalls identified with Fornell and Larcker procedure (Henseler et al., 2015) we conducted discriminant validity with heterotrait-monotrait (HTMT) approach proposed by Henseler et al. (2015). Hair et al. (2021) consider HTMT as a more reliable way of determining discriminant validity. Discriminant validity exists when the construct values are less than 0.9 (Henseler et al., 2015) or 0.85 (Clark & Watson, 1995; Kline, 2011). The results show that

Table 1. Factor loadings.

Constructs	Loadings
Brand Avoidance	
BA1 The brand is not socially responsible (packaging and production process).	0.792
BA2 I will not purchase products of a deceptive brand anymore.	0.823
BA3 The brand does not match with my personality.	0.777
BA4 My personal beliefs are contradictory to that of the brand	0.808
BA5 The brand failed to meet its promised value.	0.741
Brand hate	
BH1 I am disgusted by a deceptive brand.	0.861
BH2 I do not tolerate a deceptive brand and its company.	0.789
BH3 The world would be a better place without deceptive brand	0.783
BH4 I feel disappointed when I think about deceptive brand.	0.785
BH5 I have total dislike for a deceptive brand.	0.816
Brand Retaliation	
BR2 I have showed signs of impatience and frustration towards deceptive brands.	0.774
BR3 I complained to the deceptive brand to give a hard time to the representatives of the company.	0.833
BR4 I complained to the deceptive brand to be unpleasant with the representatives of the company.	0.810
BR5 I complained to the deceptive brand to make someone from the organization pay. 0.814	
Negative word-of-mouth	
NWoM1 I spread negative information about a deceptive brand.	0.669
NWoM2 I denigrated deceptive brands to my friends.	0.708
NWoM3 I advise my friends against buying products from deceptive companies.	0.820
NWoM4 I always tell my friends about my feelings towards deceptive brands.	0.714
NWoM5 I try to influence a lot of people against patronizing deceptive brands.	0.776
Greenwashing	
GW1 I'm sure that green products, in their majority, deceive consumers.	0.558
GW2 The manufacturers of green products always exaggerate the (green) characteristics of their products.	0.654
GW3 I'm sure that green products exist only in advertisements.	0.559
GW4 Companies' websites always exaggerate their products' green characteristics.	0.714
GW5 There is no real green product, only those that improve a few environmental practices.	0.649
GW6 Green companies are those that are truly ethical.	0.614
Brand Loyalty	
BL1 I intend to buy this brand in the near future	0.793
BL2 I consider this brand as my first choice in this category	0.826
BL3 I am willing to pay premium for this brand over competing brands	0.891
BL4 I consider this brand my first choice in the next few years	0.784

Source: Authors (2023).

Table 2. Constructs reliability and validity.

Constructs	Cronbach's Alpha	CR	AVE
Brand Avoidance	0.846	0.892	0.622
Brand Hate	0.855	0.896	0.632
Brand Retaliation	0.845	0.890	0.620
Negative Word of Mouth	0.718	0.806	0.410
Greenwashing	0.794	0.857	0.546
Brand Loyalty	0.802	0.877	0.642

Note: Composite Reliability (CR); Average Variances Extracted (AVE).
Source: Authors (2023).

Table 3. Discriminant validity based on Fornell and Larcker procedure.

Constructs	BA	BH	BR	NWoM	GW	BL
Brand Avoidance	**0.789**					
Brand Hate	0.570	**0.795**				
Brand Retaliation	0.485	0.352	**0.787**			
Negative Word of Mouth	0.475	0.585	0.308	**0.643**		
Greenwashing	0.671	0.537	0.534	0.326	**0.739**	
Brand Loyalty	0.634	0.590	0.562	0.453	0.475	**0.843**

Source: Authors (2023).

Table 4. Discriminant validity using Heterotrait- Monotrait (HTMT).

Constructs	BA	BH	BR	NWoM	GW	BL
Brand Avoidance	–					
Brand Hate	0.675	–				
Brand Retaliation	0.574	0.413	–			
Negative Word of Mouth	0.559	0.714	0.378	–		
Greenwashing	0.802	0.639	0.649	0.391	–	
Brand Loyalty	0.784	0.657	0.658	0.432	0.651	–

Source: Authors (2023).

discriminant validity is achieved as all the constructs have values less than the 0.85 recommended threshold (see Table 4).

Structural equation

The structural model test was carried out with a bootstrap of 5000 sub-samples as suggested by Hair et al. (2013) to examine the significance of the hypothesized relationships. The predictive relevance and R^2 of the model were examined. The model exhibited predictive relevance as all the values exceeded zero. The R^2 also known as the coefficient of determination is the proportion of variance in the dependent variable that is explained by the independent variable. The model was deemed substantial according to the standard of Cohen (1988) since all the R^2 values exceeded the recommended threshold of 0.26. The results show that greenwashing has a positive relationship with brand avoidance ($\beta = 0.475$, $P < 0.001$). Hence, H1 is supported. The model results also revealed that greenwashing leads to brand hate ($\beta = 0.585$, $P < 0.001$) brand retaliation ($\beta = 0.308$, $P < 0.001$), and negative word of mouth ($\beta = 0.326$, $P < 0.001$). See Table 5 for details.

Moderation analysis

To assess the moderating effect of brand loyalty on the relationship between greenwashing and negative emotive outcomes we utilized the PSL product–indicator approach. Using this approach, we observe the interaction term by adding an extra latent variable in the structural model to represent the product of the independent and the moderating variable (Henseler & Fassott, 2010). We followed this up by performing bootstrapping of 5000 samples as recommended by Henseler et al. (2015). The results ($\beta = 0.432$, $P < 0.001$) as shown in Table 4 indicate that brand loyalty has a positive moderating effect on the relationship between greenwashing and negative emotive outcomes (brand avoidance, brand boycott, brand hate, brand retaliation, and negative word-of-mouth). Hence, H6 is supported.

Table 5. Path analysis.

	Original sample (O)	Standard mean (M)	Deviation (STDEV)	T Statistic (|O/STDEV|)	P Value
Greenwashing -> Brand Avoidance	0.475	0.491	0.052	9.043	0.000
Greenwashing -> Brand Hate	0.585	0.597	0.049	12.052	0.000
Greenwashing -> Brand Retaliation	0.308	0.323	0.076	4.076	0.000
Greenwashing -> N.Word of Mouth	0.326	0.348	0.065	5.024	0.000
Greenwashing * Brand Loyalty -> Negative Emotive Outcomes	0.432	0.453	0.051	8.067	0.000

Note: Negative Emotive Outcomes (brand avoidance, brand boycott, brand hate, brand retaliation, negative word-of-mouth).
Source: Authors (2023).

Discussion of findings

The current study examined the relationship between greenwashing and consumers' negative emotive outcomes. Previous research has examined different dimensions of greenwashing including its effect on firm's financial performance (Birindelli et al., 2024; Chen & Dagestani, 2023; de Freitas Netto et al., 2020), greenwashing and brand attitude (Bladt et al., 2024), greenwashing and green purchase intentions (Nguyen et al., 2019) and greenwashing and green consumption (Braga Junior, et al., 2019; Bulut et al., 2021; Jog & Singhal, 2024). However, the present study sought to understand the relationship between greenwashing and consumer emotive outcomes (Brand avoidance, brand hate, brand retaliation, and negative word of mouth). The findings revealed that greenwashing has an influence on brand avoidance and this led to the acceptance of H1, which proposed that greenwashing is a significant predictor of brand avoidance. This finding suggests that avoiding a brand could be one of the emotive responses of consumers to a deceptive practice such as greenwashing. This finding encompasses the five dimensions of brand avoidance – experiential, identity, moral, deficit-value, and advertising-related avoidance. Consumption experience of a greenwashed brand could leave a consumer dissatisfied and the consumer might decide to avoid the brand. Green consumers would avoid greenwashed brands because of brand identity mismatch. Though brand avoidance may seem passive it can still cause great damage to the bottom line of companies engaged in greenwashing. This finding corroborates that of Xiao et al. (2022) who examined the effect of greenwashing on brand avoidance and found that greenwashing leads to deliberate brand avoidance by consumers.

Again, the results found greenwashing to be a significant predictor of brand hate, hence H2 which proposed that greenwashing has positive relationship with brand hate is accepted. This suggests that consumers express the strongest form of anger and revulsion for brands that engage in greenwashing. Brand hate is a consumer's demonstration of extreme emotion of dislike and disgust towards a brand. This finding confirms that of Santos et al. (2023) who found that greenwashing leads to consumers' negative behaviors of brand hate and negative perception of corporate reputation. When a consumer-brand relationship deteriorates to the point of brand hate it signifies the end of that relationship. This finding demonstrates to brown companies pretending to be green that the practice of greenwashing could be counter-productive.

Furthermore, our results found a significant positive relationship between greenwashing and brand retaliation, hence H3 is confirmed. This finding indicates consumers would not only avoid, and express hatred for brands engaged in greenwashing but would exhibit retaliatory actions. This finding demonstrates that consumers who feel deceived will not only passively exit the relationship and make passive complaints but could take vengeful actions to punish the deceptive brands. In an era of liberalized communication facilitated by the internet and social media, companies engaged in greenwashing have to be wary of the consequences of consumers' retaliatory actions. This result confirms the view in the literature that aggrieved customers would take retaliatory actions when necessary. For instance, Bavik and Bavik (2015) reported that highly moral consumers are more likely to engage in retaliatory behaviors such as vindictive complaining.

Again, our results confirmed H4 which proposed that greenwashing has positive relationship with negative word-of-mouth. This finding indicates that consumers with bad consumption experiences and

dissatisfaction could respond by engaging in negative word of mouth. Consumers will respond to the deceptive behaviors of greenwashed brands by sharing their bad experiences with family, and friends and sometimes negative campaigns in public. This finding corroborates that of Nguyen and Nguyen (2021) and Ribeiro et al. (2021) who found that consumers could adopt negative word of mouth to comfort their emotions or to avenge their experience with brands.

Finally, the study found brand loyalty to have a positive moderating effect on the relationship between greenwashing and negative emotive outcomes, confirming H5. This suggests that even when green consumers are deceived into buying greenwashed brands, their reaction upon discovering the deception will be mitigated by their emotional attachment to the brand. This finding contradicts that of Xiao et al. (2021) who tested the effect of greenwashing on brand loyalty and found that there is a negative relationship between greenwashing and brand loyalty. Xiao and his colleagues further explained that the negative relationship between greenwashing and brand loyalty is stronger when moral decoupling is low. This suggests to greenwash brands that our findings of positive moderation between greenwashing and negative emotive outcomes should be interpreted taking into account the moral decoupling levels of their customers.

Implications for theory and practice

This study provides a modest but valuable contribution to the existing body of knowledge on greenwashing by presenting empirical evidence of its detrimental impact on consumer-brand relationships. Unlike previous studies, this research specifically examines the emotional consequences of greenwashing on consumers, expanding our understanding of the negative emotional outcomes associated with this practice. Moreover, it aligns with a limited number of prior studies that explore the adverse effects on consumer-brand relationships, employing the theory of psychological contract. Ultimately, the study underscores that greenwashing is a risky shortcut that fails to reap the benefits of genuine green practices. The study also expands the applicability of the psychological contract theory to differing business contexts.

The implications of these findings extend to companies and corporate executives. The study provides tangible evidence of the consequences of greenwashing, alerting executives to the potential harm it can cause to a brand's reputation, public perception, sales, and overall corporate image. It is crucial for companies to realign their green strategies by genuinely integrating environmental concerns into their operations instead of resorting to greenwashing. For example, manufacturers of household electronics ought to source inputs that do not only enhance energy conservation features of the products but has minimal impact on the environment when it is disposed. The study indicates that exaggerating environmental claims to deceive green consumers is more damaging than not implementing green practices at all. Government regulatory bodies such as quality assurance and standards authority have to scaled up their market surveillance to flash out greenwashed products from the market. These regulatory bodies ought to design punitive measures such as heavy fines for companies who engage in greenwashing. Besides companies should refrain from making exaggerated claims that aim to deceive environmentally conscious consumers and undermine their trust. Regaining the trust of customers who have experienced greenwashing, as demonstrated by the findings, can be extremely challenging for former greenwashed brands (Chen & Chang, 2013; Wang et al., 2020).

Furthermore, the negative effects of greenwashing extend beyond greenwashed brands; even genuine green companies that genuinely prioritize environmental concerns face increased perceptions of green risks. Consumers who have been exposed to greenwashed brands tend to be skeptical of claims made by genuinely green brands. In fact, this study corroborates that of Sun and Shi (2022) who state that "consumers' perception of greenwashing negatively influences their intentions to make green purchases" (Sun & Shi, 2022, p. 12). Therefore, discontinuing the practice of greenwashing can enhance consumers' perception of a brand's environmental practices, reduce perceived green risks, and ultimately foster positive consumer-brand relationship.

Even though the finding of the moderating effect of brand loyalty highlights the need for firms to develop long term relationship with customers because consumers' emotional attachment to brands

mitigates the effects of greenwashing. We must add that it would be a mistake for greenwashed brands to assume that they can engage in deceptive practices like greenwashing as long as they cultivate a loyal customer base. Loyal customers exhibit varying degrees of moral decoupling, so brands should not assume that their customers' negative emotional reactions will be mitigated solely by their loyalty. The findings caution against such assumptions and emphasize the importance of genuine environmental practices to maintain strong consumer-brand relationships.

Conclusion

The primary objective of this study was to examine how consumers respond to brands that engage in greenwashing. The findings clearly indicate that greenwashing evokes a range of negative reactions, varying from passive outcomes like brand avoidance to more extreme outcomes such as brand hate, brand retaliation, and negative word of mouth. These results suggest that consumers are willing to take drastic measures to express their anger towards brands that engage in unethical practices with the intention to deceive them. The implications of these findings highlight the potential catastrophic effects of greenwashing, as the elicited negative emotional outcomes not only lead to a decline in sales but also inflict damage on the corporate image and reputation of the brand. It is therefore crucial for brands to recognize that environmental responsibility is not just a moral obligation but also a vital determinant of brand success.

Limitations and suggestions for future research

Like any research study, this study is not without its limitations. Firstly, although the sample size of the study is reasonably sufficient for statistical analysis, having a larger sample would have increased the generalizability of the findings. Therefore, future studies could aim to replicate this study with a larger sample size or conduct a multi-country study that takes into account the cultural nuances that may influence the relationship between greenwashing and negative emotional outcomes. Also, the study utilized only one particular product category, varying the product category may produce a different and an interesting outcome.

Secondly, since this study utilized a cross-sectional survey, there is a potential assumption of static relationships among the examined constructs. To address this, future studies could employ longitudinal techniques to investigate the relationship between greenwashing and negative emotional outcomes over an extended period. This would help determine whether consumer behavior changes in response to greenwashing brands discontinuing the practice and adopting more environmentally responsible behaviors.

Thirdly, this study examined the moderation effect of brand loyalty on the relationship between greenwashing and the five negative emotional outcomes, revealing a positive moderation effect. While this contributes to the understanding of greenwashing, future studies could delve further into the impact of emotional attachment. For instance, exploring the effect of brand love and demographic characteristics such as gender, age, and income level on the relationship between greenwashing and negative emotive outcomes would provide valuable insights. Examining the responses of both males and females to deceptive brand behaviors would be particularly illuminating.

Authors' contributions

Sayibu Ibrahim Nnindini and Justice Boateng Dankwah contributed to the conception and design of the study. Sayibu Ibrahim Nnindini wrote the introduction to the study. The literature review section was written by Justice Boateng Dankwah. Justice also organized the data and performed the statistical analysis. Sayibu interpreted the results and also wrote the discussion section. The drafting of the paper, revising it critically for intellectual content; and the final approval of the version to be published were undertaken by both authors. Both authors significantly contributed to different stages of the research process. They hold themselves accountable for all aspects of this research.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Data availability statement

Data for this study are available upon reasonable request from the corresponding author, Justice Boateng Dankwah. Justice can be contacted via email; jboatengdankwah@yahoo.com or justice.dankwah@uenr.edu.gh

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