

Consumer boycott of greenwashing practices

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Abstract

Purpose – This study aimed to understand the motivations behind consumers' decisions to boycott greenwashing practices.

Design/methodology/approach – We conducted a quantitative survey with a sample of 1,251 consumers, using a questionnaire composed of four main constructs: perception of greenwashing practices, skepticism toward environmental claims made by organizations, motivation to engage in boycott behavior, and knowledge of related terms and topics. Data were analyzed using structural equation modeling based on the covariation matrix.

Findings – Skepticism was significantly associated with consumers' judgments of greenwashing practices, which, along with knowledge, proved to be influential in motivating boycott behavior.

Originality/value – The study offers a novel understanding of consumer motivation to boycott greenwashing practices, grounded in the variables of skepticism, knowledge, and judgment, and highlights its potential as a form of consumer-led regulation.

Keywords Misleading marketing communication, Greenwashing, Skepticism, Boycott, Consumer behavior

Paper type Research paper

1. Introduction

The growing adoption of sustainable discourse and practices in the marketplace has created a favorable environment for organizations to capitalize on the green movement, aiming to add value and achieve competitive differentiation (Qayyum, Jamil, & Sehar, 2023). However, this same environment has also opened the door to misuse, particularly through the dissemination of misleading marketing communications, such as greenwashing, related to environmental claims (Andreoli, Minciotti, & Batista, 2024).

Greenwashing refers to the deliberate attempt by organizations to deceive stakeholders about their sustainability-related actions and commitments (Montgomery, Lyon, & Barg, 2023). The literature is largely in agreement about the alarming proliferation of greenwashing practices in the current context (Andreoli *et al.*, 2024; Montgomery *et al.*, 2023; Wang *et al.*, 2023). Exacerbating the issue is the continued absence of effective regulatory mechanisms capable of curbing or minimizing the practice (Andreoli *et al.*, 2024).

As a consequence, consumers are ultimately burdened with the responsibility of identifying and distinguishing greenwashing practices, as well as, more importantly, defending against

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and potentially reacting to them (Liu, Li, Wang, & Meng, 2023; Andreoli, Costa, & Prearo, 2022; Andreoli *et al.*, 2024; Farooq & Wicaksono, 2021). The argument lies in the fact that consumers, as the target audience, have the opportunity to question existing organizational practices and demand changes toward a more environmentally responsible approach (Liu *et al.*, 2023; Andreoli *et al.*, 2022; Jong, Huluba, & Beldad, 2020). In other words, the consumer is assigned the role of an active agent in regulating the practice of greenwashing (Liu *et al.*, 2023; Andreoli & Batista, 2020; Andreoli *et al.*, 2024).

One potential action that could be effective in this regard is the boycott, manifested through the act of refraining from purchasing and consuming a particular product due to the consumer's disagreement with some aspect related to the product and/or the organization responsible for it (Klein, Smith, & John, 2004; Cruz & Botelho, 2016). Thus, a boycott can be understood as a form of protest, repudiation, and/or retaliation by the consumer against an organizational practice perceived as negative (Cruz, Pires Junior, & Ross, 2013). From an anti-consumption perspective, boycotts are generally associated with a significant potential for impact, with various real-world examples of reconsideration and retraction by organizations targeted by such actions (Yuksel & Mryteza, 2009; Cruz & Botelho, 2016).

In light of the premises, this study aimed to understand consumers' motivation to engage in a boycott in response to the practice of greenwashing. This study is justified for several reasons. Previous research has highlighted the need for a better understanding of the greenwashing practice, particularly from the perspective of its most interested audience, the consumer (Qayyum *et al.*, 2023; Andreoli *et al.*, 2022). Furthermore, considering the absence of effective regulation and the delegation of this responsibility to the consumer, it becomes essential to gain deeper insights into this process (Liu *et al.*, 2023; Andreoli *et al.*, 2022). Despite the argument for the importance of consumer boycotts as potential regulatory actions against organizational behavior, a recent systematic review revealed the lack of studies linking this to the issue of deceptive marketing communications, such as greenwashing (Andreoli & Cardoso, 2024). Therefore, the novelty of this proposal lies in presenting a model for understanding consumer motivation to boycott greenwashing practices, given its potential as a regulatory action.

2. Greenwashing and consumer boycotts

Greenwashing is understood as the process of promoting a product, brand, or organization in a way that makes it appear environmentally responsible, without necessarily being so in reality (Andreoli *et al.*, 2024; Andreoli *et al.*, 2022). In this way, the practice of greenwashing involves the process of washing, embellishing, painting, or masking such images of "greenness," referring to nature, either by disseminating a false environmental marketing discourse, exaggerating an actually environmentally responsible stance, or even downplaying or hiding poor environmental performance (Wang *et al.*, 2023; Liu *et al.*, 2023; Andreoli *et al.*, 2024).

The practice of greenwashing is characterized as a deliberate attempt by organizations to intentionally act in an ambiguous, deceptive, camouflaged, and/or superficial manner (Andreoli *et al.*, 2024). For this reason, greenwashing is considered an organizational manipulation, regarded as irresponsible, hypocritical, misleading, and dishonest (Wang *et al.*, 2023; Liu *et al.*, 2023; Andreoli *et al.*, 2024). Additionally, there has been an increased diversification of this practice, encompassing various marketing aspects, such as environmental packaging and labeling, promotional advertisements, and the public dissemination of organizational performance indicators, balance sheets, and reports that include environmental components (Wang *et al.*, 2023).

The literature converges in highlighting the alarming current scenario of the proliferation of greenwashing practices, with a growing number of reported cases (Andreoli *et al.*, 2024; Montgomery *et al.*, 2023; Wang *et al.*, 2023). Adding to this context is the aggravating factor of the lack of effective regulation of the practice (Andreoli *et al.*, 2024), largely justified by the

voluntary nature of environmental practices within organizations (Mateo-Márquez, González-González & Zamora-Ramírez, 2022). In other words, greenwashing remains unregulated and, crucially, without subsequent legal punishment (Andreoli *et al.*, 2024).

One of the alternative pathways to mitigate the described scenario lies within the consumers themselves (Liu *et al.*, 2023; Andreoli *et al.*, 2024; Farooq & Wicaksono, 2021; Andreoli *et al.*, 2022; Jong *et al.*, 2020). As the target audience and primary stakeholder, consumers can play a crucial role within the commercial logic by questioning existing organizational practices and demanding changes toward more environmentally responsible behavior. Consequently, consumers are tasked with the responsibility of identifying and distinguishing greenwashing practices, as well as, more importantly, defending against and potentially reacting to them, elevating them as a potential regulatory agent (Liu *et al.*, 2023; Andreoli *et al.*, 2024; Farooq & Wicaksono, 2021; Andreoli *et al.*, 2022; Jong *et al.*, 2020).

If even the simple, individual, and unstructured consumer reaction is considered important and impactful, it is expected that a more active and collective movement would have an even stronger effect. In this context, the boycott emerges as one of the main forms of consumer expression, characterized by protest, repudiation, and/or retaliation toward a product, brand, or organization (Cruz *et al.*, 2013). A boycott may be defined as an anti-consumption action, where consumers intentionally reduce or cease buying and consuming a specific product due to their disagreement with some aspect related to it and/or the organization responsible for it (Klein *et al.*, 2004; Cruz & Botelho, 2016).

The motivations for consumers to join boycott movements are highly diverse (Yuksel & Mryteza, 2009), with the main trigger for participation being the perceived blatant nature of the action targeted by the boycott (Klein *et al.*, 2004). However, motivations for not boycotting are also significant, generally linked to the consumer's perception of the need for individual effort, the ineffectiveness of the action, or disagreement with the potential harm inflicted on the organization, as well as a lack of information, critical thinking, or even interest (Klein *et al.*, 2004; Yuksel, 2013).

Consumer boycott movements are associated with a significant potential for impact, with numerous real-world examples demonstrating the need for reconsideration and retraction by organizations targeted by such actions (Yuksel & Mryteza, 2009; Cruz & Botelho, 2016). Among the factors considered to be the drivers of boycotts, studies focused on corporate social responsibility and organizational sustainability are gaining prominence (Cruz & Botelho, 2016; Wang, Chang, & Chen, 2021).

However, such outcomes have not yet been replicated in the case of deceptive marketing communications, particularly with regard to greenwashing (Andreoli *et al.*, 2024). According to a recent systematic review focused on consumer boycotts of greenwashing practices, despite the growing interest and increasing production on the topic, there are still few studies offering depth discussions and empirical investigations on this issue are virtually nonexistent (Andreoli *et al.*, 2024). This is the direction of the present study, with the following conceptual model discussed.

2.1 Conceptual model

To understand consumers' motivation to boycott greenwashing practices, the main constructs discussed in the literature as potential influencers were identified. Of particular interest to this study are knowledge (Nguyen, Yang Zhi, Ninh Nguyen, Johnson, & Tuan Khanh Cao, 2019; Schmuck, Matthes, & Naderer, 2018; Andreoli & Batista, 2020), skepticism (Nguyen *et al.*, 2019; Rahman *et al.*, 2015; Aji & Sutikno, 2015; Zaid, Bawaqni, Shahwan, & Alnasr, 2024), and judgment of the greenwashing practice (Andreoli *et al.*, 2022; Andreoli *et al.*, 2024).

The most extensively researched in the related literature, consumer skepticism regarding environmental practices reflects greater consumer awareness, which may make consumers

more capable of identifying, distinguishing, and, most importantly, protecting themselves from greenwashing. Consumer skepticism has been validated as impactful both directly and indirectly, as a precursor and/or mediator. Directly, the negative influence of skepticism on purchasing situations has been highlighted, such as in the intention to purchase green products (Nguyen *et al.*, 2019), or in the intention to join a program and revisit an organization (hotel) (Rahman *et al.*, 2015). Despite this, studies that did not find a statistically significant relationship should also be noted (Aji & Sutikno, 2015; Zaid *et al.*, 2024).

Indirectly, validations were found for the negative influence of consumer skepticism on the judgment of greenwashing practices (Andreoli & Minciotti, 2023; Andreoli *et al.*, 2024), as well as on green trust, which in turn impacts the intention to switch from a brand targeted for purchase and consumption (Aji & Sutikno, 2015). The mediating effect on the perception of organizational purpose (true or greenwashing) for consumer purchase and consumption intentions was also validated (Rahman *et al.*, 2015; Nguyen *et al.*, 2019; Adil *et al.*, 2024). However, one study did not find a statistically significant relationship (Zaid *et al.*, 2024).

Thus, the study investigates the influence of consumer skepticism in both forms: direct (H1a), which could be considered an important motivator of boycott behavior (Nguyen *et al.*, 2019; Rahman *et al.*, 2015; Aji & Sutikno, 2015; Zaid *et al.*, 2024), and indirect (H1b), making the consumer more aware and less vulnerable (Aji & Sutikno, 2015; Rahman *et al.*, 2015; Nguyen *et al.*, 2019; Zaid *et al.*, 2024; Adil *et al.*, 2024), which would influence the judgment of greenwashing practices (Andreoli *et al.*, 2024).

H1a. Consumer skepticism has a positive influence on boycott behavior.

Consumers with higher ethical sensitivity evaluate not only the quality of products but also the integrity of the organizations behind them. When they identify greenwashing practices, these consumers perceive a violation of their ethical values, which can trigger the desire to sanction the company through a boycott (Bray, Johns, & Kilburn, 2011). This reaction is not limited to individual dissatisfaction but reflects a collective effort to promote corporate change and increase organizational transparency.

Moreover, organizational justice theory (Greenberg, 1987) provides a framework for understanding how boycotts emerge in response to greenwashing. Consumers evaluate not only the outcomes of corporate actions but also the perceived fairness of processes and communication. When greenwashing practices are seen as unjust and opportunistic, consumers with strong ethical and environmental orientations tend to adopt boycotting as a way to express their moral outrage and restore the perceived balance (Antonetti & Maklan, 2016; De Jong, Harkink, & Barth, 2020). In this context, the boycott functions as both a symbolic and practical mechanism to show dissatisfaction with the company, as well as to encourage higher standards of corporate responsibility.

H1b. Consumer skepticism has a positive influence on the judgment of greenwashing practices.

Consumer knowledge about the practice of greenwashing and related topics has been less researched and has been approached from various perspectives, such as environmental issues, sustainability, or even conscious consumption. In general, it follows a logic similar to skepticism, being argued as capable of making the consumer more aware and more reactive to misleading marketing communications (Nguyen *et al.*, 2019; Schmuck *et al.*, 2018; Andreoli & Batista, 2020). Thus, knowledge emerges as an important motivator of boycott behavior, as it empowers the consumer not only to understand what greenwashing entails but also to recognize the role they play as agents of change (Andreoli & Batista, 2020). This direct influence has been validated, making the consumer's evaluation of the offering less favorable, as well as reducing their purchase intention (Andreoli & Batista, 2020), including regarding green products (Nguyen *et al.*, 2019).

The perception of greenwashing affects not only the relationship between consumers and companies but also influences purchase decision-making processes. According to signaling

theory (Spence, 1973), consumers rely on signals sent by companies to assess their reliability and commitment to ethical and environmental practices. However, greenwashing practices distort these signals, creating distrust and challenging consumers' ability to discern genuine companies from opportunists (Delmas & Burbano, 2011). This distrust especially affects consumers who seek to align their personal values with their consumption choices. In situations where the perception of greenwashing is high, even consumers less sensitive to environmental issues may reconsider their purchase intentions due to the perceived deterioration of the company's credibility.

Psychological contract theory (Rousseau, 1995) also contributes to understanding how greenwashing affects the consumer-company relationship. This theory suggests that consumers form implicit expectations regarding companies' ethical behavior, particularly regarding environmental matters. When greenwashing practices are perceived, these expectations are violated, resulting in feelings of betrayal and dissatisfaction (Leonidou & Skarmeas, 2017). Furthermore, studies indicate that the breach of the psychological contract can lead to negative behavioral reactions, such as boycotts, negative evaluations, and reduced brand loyalty (Ewing, Allen, & Ewing, 2012). These processes illustrate how the impact of greenwashing goes beyond environmentally conscious consumers, also affecting those who value corporate integrity, contributing to a broader understanding of the impact of such practices.

Thus, the influence of consumer knowledge is investigated as an important motivator of boycott behavior (Andreoli & Batista, 2020; Nguyen *et al.*, 2019).

H2. Consumer knowledge has a positive influence on boycott behavior.

Finally, the judgment consumers make regarding the practice of greenwashing involves a more direct measurement effort, according to a recently validated scale in the national context, developed from three global reference mechanisms in the practice of greenwashing (Andreoli *et al.*, 2022). Although uses of this scale have been identified (Costa & de Oliveira Costa, 2024; Andreoli *et al.*, 2024; Andreoli & Batista, 2020), no application has proven to be convergent with the method used in this study. Despite this, the suitability of the scale for the purposes of this research is reinforced, given the complexity related to the evaluation of the greenwashing practice, where both a scarcity of efforts and a lack of standardization among them are witnessed (Bernini, Giuliani, & La Rosa, 2024). According to a recent systematic review focused on measuring greenwashing, 22 articles were found that worked on the measurement of greenwashing from the consumer's perception as an independent variable. However, in many of these cases, a combination (or confusion) with related constructs such as skepticism, reliability, and trust was identified (Bernini *et al.*, 2024). Thus, reflecting the consumer's critical sense or criticism, it is expected that the consumer's judgment regarding the practice of greenwashing will have a positive influence on the motivation for boycott behavior.

H3. Consumers' judgment regarding the practice of greenwashing has a positive influence on boycott behavior.

Figure 1 presents the conceptual model with the constructs of interest and the relationships to be verified.

3. Methodological procedures

We conducted a quantitative survey with 1,251 Brazilian consumers, selected using convenience sampling method. Data collection occurred remotely between July and October 2023. The survey link was widely disseminated, being shared in various WhatsApp groups and on social media platforms, as well as through partnerships to extend its reach (researchers, students, faculty, digital influencers in related fields, and organizations linked to them). Responses that were started but did not progress sufficiently were disregarded.

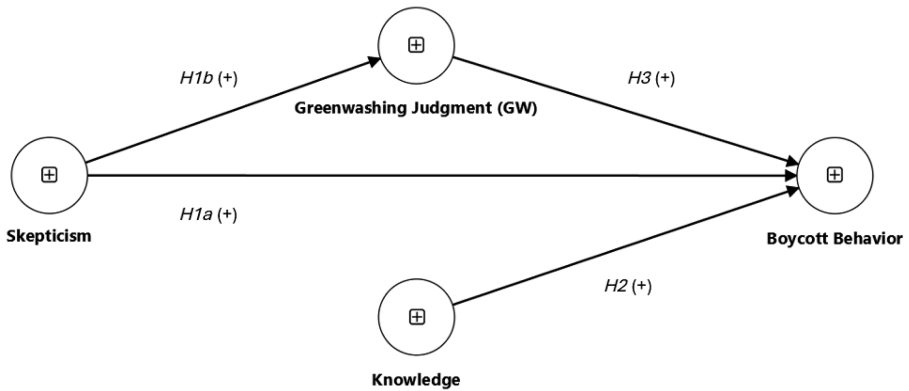


Figure 1. Conceptual model. Source: The authors

The research instrument (Table 1) consisted of four key metrics of interest, namely: judgment regarding the practice of greenwashing, using a reverse scale validated by Andreoli et al. (2022), with thirteen statements; skepticism regarding environmental practices communicated by organizations, adapted by Andreoli et al. (2024), with four items; motivation for boycott behavior, using an adapted version of the scale validated by Cruz et al. (2013), with seven items; and knowledge about topics and terms related to greenwashing, with

Table 1. Scales

Judgment on the practice of greenwashing (reverse – Andreoli et al., 2022): It is very easy for consumers to correctly interpret the environmental practices communicated by organizations./The information provided by organizations regarding their environmental practices clearly demonstrates their environmental impact./The information provided by organizations regarding their environmental practices is always easily understood by consumers./The communicated environmental practices ensure that products contribute positively to the preservation of the environment, regardless of the impacts generated during their process./Environmental benefits are fully guaranteed when the product has an environmental (green) label./Organizations never intend to confuse consumers with irrelevant information./Organizations always provide proof of the environmental practices communicated to consumers./Consumers are always able to understand the truth about the information contained in the environmental practices communicated by organizations./The environmental labels, seals, and figures (green) adopted on products are a guarantee that the organization cares about the environment./The arguments highlighted in the environmental practices communicated by organizations are true./Nearly no organization provides false information about its environmental practices./There is no reason for consumers to doubt the environmental practices communicated by organizations./Any and all environmental practice communicated by organizations is true

Skepticism towards reported environmental practices – Andreoli et al. (2024): Most of the environmental practices communicated by organizations are not true./Since the environmental practices communicated by organizations are exaggerated, it would be better for consumers if they were eliminated./Most of the environmental practices communicated by organizations aim to deceive rather than inform the consumer./I do not believe in most of the environmental practices communicated by organizations

Boycott motivation behavior – Cruz et al. (2013): I would feel guilty if I bought products from these brands./I would feel uncomfortable if others who are not buying saw me buying/consuming products from these brands./I would feel much better about myself if I stopped buying from these brands./I would feel bad if I continued buying products from these brands./Everyone should stop buying from these brands because every contribution, no matter how small, is very important./By boycotting, I can help make these brands change their decisions./Stopping purchases is a very effective way to make these brands change their actions

Prior knowledge – Social and environmental responsibility in organizations/Cause-related marketing/Marketing discourses/False marketing discourses/Greenwashing

Source(s): The authors

five items. All of these scales presented the items in random order for each participant, who was asked to assign a score, with the first three items using an 11-point Likert scale, anchored from 0 = strongly disagree to 10 = strongly agree, and one of knowledge related to performance.

The data analysis was conducted using SPSS and SmartPLS software. For the scales, we carried out exploratory factor analyses, ensuring the fulfillment of consistency assumptions (Hair, Black, Babin, Anderson, & Tatham, 2006), which allowed for a classification score of subjects in the evaluated metrics. Additionally, Cronbach's alpha coefficient was estimated to assess the internal consistency of the psychometric scales used.

The metrics of interest composed a single factor, with the following results: judgment of the greenwashing practice, with 62% of the total variance explained ($KMO = 0.956$ and $\alpha = 0.948$); skepticism regarding the communicated environmental practices, with 70% ($KMO = 0.683$ and $\alpha = 0.783$), after the elimination of the second item due to a communality issue; motivation for boycott behavior, with 62% ($KMO = 0.890$ and $\alpha = 0.892$); and knowledge of topics and terms related to greenwashing, with 67% ($KMO = 0.806$ and $\alpha = 0.872$). Additionally, an exploratory factor analysis was conducted with all variables, validating the distribution of metrics into their respective scales, resulting in the composition of factors.

A structural equation modeling (SEM) was conducted with estimation of the covariance matrix (CB-SEM). To mitigate the common method bias, considering the online data collection format (in which both independent and dependent variables were collected simultaneously), and the randomization of scale items presented to participants, we also performed a Harman's single factor test through an unrotated exploratory factor analysis (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Fuller, Simmering, Atinc, Atinc, & Babin, 2016).

4. Data presentation and analysis

The common method bias check indicated that the total variance explained was close to 32%, below the critical threshold of 50% (Podsakoff *et al.*, 2003; Fuller *et al.*, 2016), thus confirming that the data collection is free from common method bias. The sample ($n = 1,251$) was predominantly composed of cisgender female respondents (66.5%), followed by male respondents (32.8%), with high educational levels, the majority being postgraduates (49.9%) and individuals with higher education (41.9%), and an average income of R\$ 12,400.00, with an average age of 39 years ($SD = 13.48$). Regarding current employment allocation, there was a broad distribution, including private company employees (27.5%), private company managers (18.1%), self-employed workers (15%), university students (14.2%), public servants (9.7%), as well as NGO managers (5.5%) and NGO employees (4.3%), among others.

Considering the covariance matrix – CB – SEM, the unstandardized estimate of the manifest variables (items) in the manifest variable (construct) was used for the model's convergent validity. The set of loadings of the independent variables in the model is called the lambda matrix x (λ_x), and the loadings of the dependent variables are in the lambda matrix y (λ_y), with all items being significant ($p < 0.01$). Furthermore, convergent validity was accepted based on the analysis of the lambda matrices and the factor analysis (AFC).

The analysis of the construct's validity and reliability revealed internal consistency indicators that were above the critical threshold established in the literature (Cronbach's $\alpha \geq 0.70$), as well as composite reliability and average variance extracted (AVE) indicators within the critical limits (Composite reliability ≥ 0.7 ; AVE ≥ 0.5). Discriminant validity was assessed using the two main criteria indicated by the literature: the Heterotrait-monotrait (HTMT) ratio, which is considered more rigorous (Bido & Silva, 2019), showed that the ratio between the average correlations of indicators from different constructs and the average correlations of indicators from the same construct was lower than 0.85. Additionally, using the Fornell-Larcker criterion, widely used in research in applied social sciences (Afthanorhan, Ghazali, & Rashid, 2021), we found that all square roots of the constructs were higher than the correlations between the construct and the others.

The two main model fit indicators presented satisfactory results (RMSEA <0.08 and standardized RMR <0.05), while two others were close to the critical threshold (CFI and NFI ≥0.9), as shown in Table 2.

Consumer skepticism did not show a significant relationship with boycott behavior, failing to validate H1a. It is important to note that, as discussed in the theoretical framework, other studies also failed to confirm the influence of consumer skepticism on related variables (Aji & Sutikno, 2015; Zaid et al., 2024). Additionally, a possible inadequacy in the scale selection should be noted, specifically since the exploratory factor analysis required the elimination of one of the items for a better fit. Despite this, the relationship between consumer skepticism and the judgment of greenwashing practices was significant ($p < 0.001$), confirming H1b, supporting the prior discussion of its importance as a state of greater consumer criticality. It is important to remember that the scale is reverse-coded, meaning that a lower score indicates greater criticality, which explains the valence of the result.

The relationship between consumer knowledge and boycott behavior ($p < 0.001$) was also significant, validating H3, reinforcing the discussion on the potential role of education as an awareness-raising tool and promoter of critical reactions. Finally, the relationship between the judgment of greenwashing practices and boycott behavior ($p < 0.09$) was marginally significant, which, from a radial analysis perspective, provides support for H3. Similarly, the criticality of the consumer is reiterated as a determinant for engagement in reactive actions against greenwashing practices.

Thus, the analyzed model is presented graphically in Figure 2

Table 2. Adjustment indicators and results

Adjustment Indicator	Observed indicator	Critical limits
χ^2 – Qui-quadrado	2911.818	Positive
Number of model parameters	60.000	
Number of observations	1251.000	
df – Degrees of freedom	346.000	
p -value	0.000	Significant
χ^2/df	8.416	<10
RMSEA – Root Mean Square Error of Approximation	0.077	<0.08
RMSEA Low 90% CI	0.074	<0.08
RMSEA High 90% CI	0.080	<0.10
PGFI – Parsimony Good of Fit Index	0.712	<1
GFI – Goodness of Fit Index	0.836	Desirable >0.90. Acceptable >0.80
AGFI – Adjusted Goodness of Fit Index	0.808	
NFI – Normed Fit Index	0.871	
TLI – Tucker-Lewis Index	0.873	
CFI – Comparative Fit Index	0.884	
SRMR – Standard Root Mean Residual	0.050	Desirable <0.05. Acceptable <0.08
AIC – Akaike Information Criterion	3031.818	Comparative criterion
BIC – Bayesian Information Criterion	3339.720	

Structural path	Original standardized loads	Bootstrapping average loads	DP	Test t	p -value
Skepticism → Boycott (H1b)	0.019	0.018	0.037	0.526	0.599
Skepticism → Judgment (H1b)	-0.186	-0.188	0.042	4.406	0.000
Knowledge → Boycott (H2)	0.254	0.253	0.035	7.225	0.000
Judgment → Boycott (H3)	-0.053	-0.052	0.031	1.708	0.088

Source(s): The authors

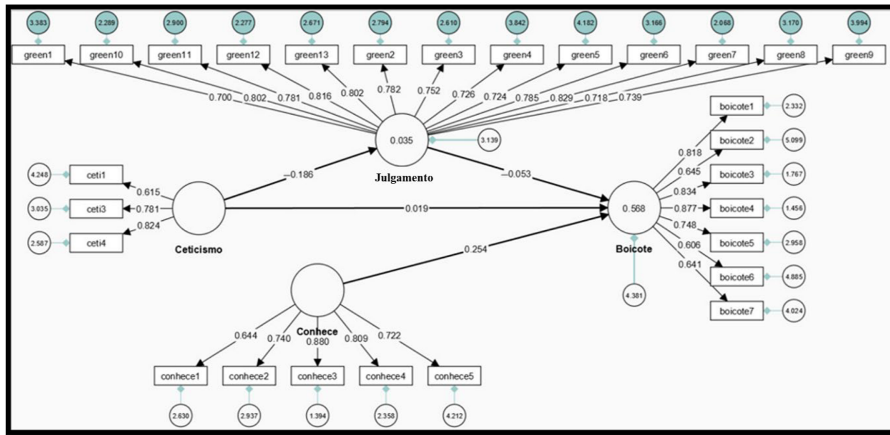


Figure 2. Resulting model. Source: The authors

5. Discussion of results

The complexity associated with the practice of greenwashing can be observed through the recurrence of current efforts to systematize and review academic production, which aim not only to consolidate current knowledge but also to highlight existing research gaps (Wang *et al.*, 2023; Liu *et al.*, 2023; Montgomery & Lyon, 2023; Bernini *et al.*, 2024). In this sense, in alignment with the authors mentioned above, it is safe to state that the understanding of the topic has not yet reached a truly satisfactory point, especially considering the ongoing proliferation of the practice within organizations.

One of the main discussions in this regard revolves around the need for regulatory mechanisms concerning greenwashing practices, calling upon all possible stakeholders to exercise this role (Montgomery & Lyon, 2023; Wang *et al.*, 2023; Liu *et al.*, 2023). Among these, the consumer is highlighted due to their position as the target audience of organizational efforts (Liu *et al.*, 2023; Andreoli *et al.*, 2024). Thus, the responsibility for monitoring, identifying, and even protecting against the practice of greenwashing has been shifted to the consumer, positioning them as a potential regulator of greenwashing practices (Andreoli & Batista, 2020; Andreoli *et al.*, 2022; Farooq & Wicaksono, 2021). In this context, the boycott stands out as one of the main forms of consumer manifestation, active and collective (Cruz *et al.*, 2013), especially for its anti-consumption nature (Klein *et al.*, 2004; Cruz & Botelho, 2016).

This aspect is precisely the focus of this study. Consumer skepticism showed a significant relationship with their judgment of greenwashing practices, identifying it as an important precursor and even promoter of critical thinking regarding false marketing discourses. Moreover, this judgment and the consumer’s knowledge were found to influence the behavior of boycott motivation, positioning them as determinants for raising awareness and promoting effectively reactive responses.

Thus, first, even without showing a direct influence on boycott motivation behavior, skepticism influences the judgment that consumers make regarding greenwashing practices, indicating its contribution in fostering the consumer’s critical sense or criticality (Andreoli *et al.*, 2024; Andreoli, Silva & Prearo, 2022). It is also important to recall the considerations previously made regarding skepticism, such as the complexity of the construct, as well as the self-declaration measurement of respondents and the adoption of the scale in question. Despite this, skepticism is emphasized as fundamental to raising consumer awareness regarding deceptive marketing communications, positioning it as a necessary first step (Andreoli *et al.*, 2024; Urbanski & Hacke, 2020).

In this sense, secondly, the judgment regarding greenwashing practices, reflecting the consumer's critical sense or criticality, proved to be a determinant for boycott motivation behavior (Andreoli *et al.*, 2022, 2024). It is important to emphasize that this construct involves a direct and specific measurement of greenwashing practices, going beyond related metrics adopted in the literature, such as more general perceptions of organizational practices, even those related to environmental or sustainable practices, or assessments of trust, authenticity, credibility, among others (Bernini *et al.*, 2024).

Although the relationship between judgment and boycott is marginally significant (at the 10% level), it suggests that even subtle perceptions of ethical incongruence can trigger negative behavioral reactions. This result reinforces theories such as cognitive dissonance, indicating that consumers, upon identifying inconsistencies between corporate discourses and practices, seek to align their attitudes through actions like boycotting. Therefore, managers should prioritize strategies of transparency and consistency to mitigate the risk of rejection behaviors by sensitive consumers.

Finally, knowledge is emphasized as a mandatory path to empower consumers to defend themselves against greenwashing practices (Nguyen *et al.*, 2019; Schmuck *et al.*, 2018; Andreoli & Batista, 2020). It is highlighted that, among the variables investigated, knowledge had the greatest influence on boycott motivation behavior, which supports the importance advocated by the literature, both in general terms and specifically regarding deceptive marketing communications and greenwashing (Nguyen *et al.*, 2019; Schmuck *et al.*, 2018; Andreoli & Batista, 2020). In this way, it became clear that consumer knowledge is not limited to a state of awareness regarding organizational practices but, more importantly, represents an essential precursor for a more active and engaged anti-consumption action (Nguyen *et al.*, 2019; Andreoli & Batista, 2020).

6. Final considerations

The objective of this study was to understand consumers' boycott motivation behavior in response to the practice of greenwashing. As a result, a parsimonious model was validated, explaining 57% of consumers' boycott motivation behavior towards greenwashing. In this model, skepticism showed a significant relationship with the consumer's judgment of greenwashing, which, along with knowledge, were influential in the motivation for boycott behavior.

This work contributes academically by advancing the understanding of greenwashing from the perspective of the main stakeholder, the consumer. More than that, this study investigates the consumer as a potential regulatory agent, considering both declared criticality, regarded as an important first step, and, more significantly, the predisposition for boycott motivation behavior, a fundamental and indeed effective reaction. In other words, it is not enough to place the responsibility for regulating greenwashing on the consumer. It is necessary to understand the dynamics of this context, especially in relation to their own behavior. Therefore, this work is positioned as a pioneering first effort to understand consumer motivation to boycott deceptive marketing communications, specifically greenwashing, given its potential as a regulatory action.

The findings of this study provide valuable insights for managers to align their sustainability strategies with consumer perceptions and expectations. The results show that greenwashing negatively affects purchase intentions, particularly among consumers who are more aware and engaged with environmental issues. Based on this, a practical recommendation is that companies develop campaigns prioritizing clear and specific messages, avoiding vague or generalized claims about sustainability. For instance, instead of merely claiming that a product is "environmentally friendly," managers could highlight specific and verifiable metrics, such as carbon emissions reduction or the use of recycled materials, aligning messages with the expectations of consumers who value authenticity.

Additionally, this study suggests that greenwashing practices not only damage brand trust but also intensify negative reactions, such as boycotts, especially among consumers with a greater ethical sensitivity. To mitigate this impact, managers can implement initiatives that enhance transparency during image crises related to greenwashing. For example, creating a direct communication channel with consumers, such as online sustainability panels or interactive reports detailing the company's environmental actions, can restore trust and minimize reputational damage.

Even at a marginal significance level, the relationship between judgment and boycott highlights the need for proactive strategies to avoid negative perceptions. Companies should implement preventive actions, such as sustainability reports and swift responses to public criticism, especially in a scenario where social media amplifies individual complaints on a collective scale.

Finally, the results show that boycotting is a common response to practices perceived as deceptive. Therefore, managers should work proactively to identify early signs of consumer dissatisfaction and act before these sentiments result in organized boycotts. Real-time monitoring tools, such as social media analysis or regular perception surveys, can provide crucial insights into how consumers perceive the company's sustainability initiatives and enable rapid strategic adjustments. These actions help mitigate negative impacts and align corporate practices with the expectations of an increasingly attentive and engaged public.

Despite these contributions, they must be considered in light of the study's potential limitations. It is important to note that this was a methodological procedure developed by the authors, with a specific research instrument applied to a convenience sample. Although a substantial number of consumers participated, the results found here cannot be generalized.

In light of the results, some suggestions for future research emerge. Further investigations are needed on the potential of boycott movements in response to greenwashing. In this regard, both real-life cases, through case studies, and simulated situations, using the experimental method, could be analyzed.

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Further reading

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Supplementary material

The supplementary material for this article can be found online.

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