GREENWASHING IN THE ERA OF SUSTAINABILITY: A SYSTEMATIC LITERATURE REVIEW

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Abstract

This study aims to synthesize contemporary research on greenwashing, examining its conceptual foundations, practices, impacts, and the efficacy of regulatory frameworks designed to curb its proliferation in environmental literature. Following methodological approaches established by de Freitas Netto et al. (2020), Gatti et al. (2019), and Pendse et al. (2022), we developed a systematic dataset using specific inclusion and exclusion criteria based on targeted keywords. The analysis encompasses peer-reviewed English-language publications spanning from 1995 to 2024. Our findings reveal that existing research primarily investigates the social construction of greenwashing symbolism, including its motivating factors, strategic tactics, and consequential effects while identifying key deterrent mechanisms. The greenwashing phenomenon is analyzed through distinctive socio-cultural and geopolitical lenses, challenging the prevailing homogeneous theoretical discourse. To advance the field, the review offers valuable insights for policymakers evaluating regulatory effectiveness and provides an essential knowledge foundation for emerging scholars in the field, while advancing critical perspectives on greenwashing research.

Keywords: Greenwashing, Greenwash, Corporate Social Responsibility, Systematic Literature Review, Sustainability

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1. INTRODUCTION

Environmental sustainability has been recognized as a fundamental human right by global organizations. Since Earth Day 1990, increased environmental awareness has led to a shift in corporate responses to planetary health concerns, culminating in the establishment of the Sustainable Development Goals (SDGs) in 2015. Literature has highlighted the voluntary nature of environmental disclosures, leading to ongoing scrutiny by multiple stakeholders. There is concern about whether organizations published environmental information is supported by effective strategies and implementation, considering that not all environmental claims are authentic, and the rise of green claims raises questions about the credibility of so-called green and environmental policies (Shahrin et al., 2017).

Previous discussions have noted the surge in greenwashing, following the rise of eco-labels and the growing market demand for corporate sustainability (de Jong et al., 2019; Delmas & Burbano, 2011; Du, 2014). This phenomenon of appropriating green values permeates corporate communications and is amplified through social media engagement. Companies use greenwashing tactics to present themselves as environmentally friendly, often through extensive green advertising campaigns covering their activities, products, and services (Pattanayak & Padhy, 2020). Literature has highlighted instances where firms have been accused of not aligning their actions with their stated environmental values (Walker & Wan, 2012). Greenwashing is viewed as a strategic "symbol" that is socially constructed and has become integrated into corporate identity, shaping market growth and

value enhancement (Gil-Cordero et al., 2021; Khorsand et al., 2023; Lyon & Montgomery, 2015; Martínez et al., 2020; Mateo-Márquez et al., 2022; Ruiz-Blanco et al., 2022). The rise of greenwashing poses challenges to corporate accountability and consumer trust, necessitating greater scrutiny and transparency in environmental claims (Zioło et al., 2024).

Previous research has identified several weaknesses in the conceptualization of greenwashing. Pendse et al. (2022) conducted a bibliometric analysis to explore the general characteristics of greenwashing literature, including years of publication, geographic distribution, and keywords used. Pizzetti et al. (2021) revealed how actors in the supply chain were assigned blame and how behaviors related to "indirect" and "vicarious" greenwashing, particularly among suppliers, were shaped. However, a limitation of this study is the lack of a detailed analysis focusing on a manual selection of literature that delves into the key themes of greenwashing conceptualization. Furthermore, Lyon and Montgomery's (2015) study, expanded upon in Montgomery et al. (2023), emphasized the importance of future research examining tools to combat greenwashing. There remain shades of green ambiguity and skepticism in both developed and developing economies, with the phenomenon being referred to as the "dark" and "white" sides of greenwashing (Yildrim, 2023). Another study by Free et al. (2024) suggested that a critical area for future greenwashing research should focus on developing policies to prevent its rapid spread and enhance the credibility of genuine sustainability reporting.

Despite increased environmental commitments, significant research gaps persist in understanding greenwashing practices, particularly regarding universal definitions, multi-stakeholder dynamics, and the effectiveness of deterrent mechanisms across developed and developing economies. Due to the centrality of the greenwashing topic in the global corporate social responsibility (CSR) debate, this study addresses these gaps through a systematic literature review examining greenwashing as a corporate strategy. Drawing on attribution, legitimacy, institutional and signaling theories, we analyze how organizations appropriate environmental discourse in their corporate communications while potentially diverging from substantive implementation. Our methodology encompasses a comprehensive analysis of peer-reviewed publications across multiple databases, examining greenwashing evolution, practices, and deterrent strategies. In our systematic review, we delve deeper into the concept to uncover patterns and trends in the evolution of greenwashing ideologies and practices. The review aims to shed light on the nature of greenwashing and identify weaknesses and gaps in current policies. Finally, our study emphasizes the importance of considering multi-level scales and the intersecting dynamics of diverse corporate practices.

The study's significance lies in its contribution to both theory and practice: theoretically advancing understanding of greenwashing's socio-cultural and geo-political dimensions, while practically informing policy development and corporate governance. Our findings reveal patterns in greenwashing tactics, identify key drivers of corporate environmental claims, and propose a novel framework for evaluating authenticity in environmental reporting.

This research addresses three primary questions:

RQ1: How is greenwashing conceptualized across different contexts?

RQ2: What are its main drivers, tactics, and impacts?

RQ3: What strategies effectively deter its propagation?

The study's contributions include a comprehensive analytical framework for future research, practical guidelines for policy development, and strategies for enhancing environmental reporting authenticity. Our analysis indicates that while organizations increasingly embrace environmental rhetoric, the complexity of greenwashing necessitates a more nuanced understanding of its multi-level manifestations and consequences.

The rest of this paper is structured as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology that has been used to conduct empirical research on greenwashing. Section 4 provides the main findings. Section 5 discusses the research findings. Section 6 concludes the research.

2. LITERATURE REVIEW

Greenwashing is conceptualized as a deceptive practice where organizations misrepresent their environmental effects to create a false impression of ecological responsibility. This phenomenon is driven by various factors, including competitive advantage, consumer demand for sustainability, and regulatory gaps. Understanding its drivers, tactics, effects, and strategies to mitigate its spread is crucial for fostering genuine environmental practices.

The following subsection presents a structured overview of the thematic landscape of greenwashing literature.

2.1. Greenwashing conceptualization: Symbolism, drivers, and tactics

The term "greenwashing" was coined in 1986 by environmental activist Jay Westerveld, who criticized a hotel's towel reuse program, arguing it prioritized cost savings over genuine environmental benefits. The term gained wider recognition a decade later with the publication of Greer and Bruno's (1996) influential work on environmental marketing. Greenpeace defines greenwashing as a misleading consumer regarding a company's environmental practices or the environmental benefits of a product or service (Chen & Chang, 2013; Delmas & Burbano, 2011).

The concept of greenwashing has garnered significant attention in recent literature, reflecting its complexity and the need for a unified understanding. Greenwashing involves a claim regarding environmental performance by a private sector organization that is not substantiated, has deceptive intent, and is aimed at establishing a competitive advantage (Spaniol et al., 2024). It is characterized as exaggerating or misrepresenting environmental benefits to appeal to eco-conscious consumers, which can lead to consumer confusion and mistrust (Savić & Furfulanović, 2024). In the fashion industry, greenwashing is prevalent as companies often lack transparency in their supply chains, leading to perceptions of insincerity in their green marketing efforts (Khorsand et al., 2023).

The literature consistently portrays greenwashing as a management strategy aimed at cultivating a positive public perception (Santos et al., 2024).

2.1.1. From symbolism to corporate performance

Early conceptions of environmental responsibility were largely framed within the development of CSR ideologies. However, Brazillier and Vauday (2009) cautioned against uncritically accepting CSR claims, recognizing their potential to mask greenwashing. The lack of a universally accepted definition of greenwashing reflects its dependence on cultural and geopolitical contexts (Hora & Subramanian, 2018; Lyon & Montgomery, 2015).

Greenwashing is not a recent phenomenon. Bowen's (2014) seminal work explored it as a specific subset of symbolic corporate environmentalism, characterized by deliberately superficial changes. However, the nature of greenwashing labels is evolving; they are increasingly decoupled from sustainability agendas, offering organizations more opportunities to align with themes that bolster their global image.

2.1.2. Greenwashing drivers

Ruiz-Blanco et al. (2022) suggest that environmental sensitivity within an industry and the adoption of Global Reporting Initiative (GRI) guidelines are key factors influencing a firm's propensity for greenwashing. Specifically, companies operating in environmentally sensitive sectors and adhering to GRI guidelines are less likely to engage in such practices. Numerous studies have investigated the drivers of greenwashing (Du, 2014; Testa et al., 2018). A common finding is that corporate legitimacy is a primary motivator for misleading communications. The increasing consumer preference for sustainable products encourages companies to exaggerate their environmental claims (Verma & Bharti, 2023). This is supported by Wedari et al. (2021), who found that poor environmental performance often drives greenwashing as a means of mitigating negative stakeholder perceptions, improving corporate image, and appropriating an ethical ethos. Organizations may resort to greenwashing to differentiate themselves in a crowded market, often without substantial environmental benefits (Spaniol et al., 2024).

Conversely, Uyar et al. (2020) argued that the publication of sustainability reports indicates improved performance and is not inherently a sign of greenwashing. Delmas and Burbano (2011) emphasized the significant role of societal and market pressures in driving the reporting of green practices, regardless of their legitimacy. Gatti et al. (2019) suggested that the voluntary and unregulated nature of environmental communication facilitates the proliferation of greenwashing. Blome et al. (2017) highlighted the influence of leadership styles moderated by ethical incentives on greenwashing. Similarly, Roulet and Touboul (2015) posited that a liberalism approach can be a significant determinant of greenwashing.

2.1.3. Greenwashing tactics

Numerous tactics contribute to greenwashing, beginning with vague and misleading environmental claims. Companies use vague or irrelevant claims to mislead consumers about their products' environmental benefits (Senyapar, 2024). These broad, unsubstantiated assertions of environmental benefit — often lacking certification — appear on websites, in advertisements, and within company reports (Bowen, 2014; Bowen & Aragon-Correa, 2014). Firms may highlight positive environmental actions while omitting negative impacts, creating a skewed perception.

Falsely claiming adherence to legitimate green certifications or standards is another common practice. Majláth (2017) identified the deception of third parties through the overemphasis of environmentally responsible behavior as a key greenwashing tactic. Furthermore, Ruiz-Blanco et al. (2022) demonstrated a frequent lack of investigation into partners' ethical and environmental practices. Building upon Lyon and Montgomery's (2015) review, Montgomery et al. (2023) identified emerging forms of greenwashing, including tailored greenwashing and unsupported promises of future action. This suggests that greenwashing tactics are constantly evolving, making the phenomenon more prevalent than ever. To further explore this, we will examine how the effects of greenwashing inform our understanding of this domain.

2.2. Greenwashing effects

The effects of greenwashing span three macro and micro levels: corporate performance, customer perception, and corporate reputation.

2.2.1. Corporate performance

The impact of greenwashing on corporate performance is complex and contested. Cao et al. (2022) found that environmental communication, particularly carbon emissions disclosures, positively affects company value, especially in strong regulatory environments. Conversely, Du (2014) demonstrated a negative effect of greenwashing practices on cumulative abnormal returns (CAR) and, consequently, on overall performance. Martín-de Castro et al. (2017) found that symbolic corporate environmental certifications had no significant impact on firm performance. Li et al. (2017) showed a robust link between corporate social initiatives and financial indicators. However, Li et al. (2023) suggested that in the absence of strong government regulation and media scrutiny, greenwashing has a significant positive association with company financial performance. This contrasts with Johnson and Greenwell (2022), who found no influence of green initiatives, including greenwashing, on firm value or stock price. Finally, Testa et al. (2018) argued that a lack of visible green initiatives is detrimental to firm value, negatively affecting accounting-based financial indicators and shareholder wealth.

2.2.2. Consumer perception

Consumer awareness of their consumption choices is a key factor influencing the effects of greenwashing (de Jong et al., 2019; Szabo & Webster, 2021; Torelli et al., 2020; Zaidi et al., 2019). Early research highlighted the need for managers to be aware of environmental issues when designing advertising and marketing campaigns (Shahrin et al., 2017). While green marketing can effectively

attract consumers, greenwashing practices negatively affect consumer perceptions and reduce their likelihood of adopting environmentally friendly products and services (Delmas & Burbano, 2011; Shahrin et al., 2017). This phenomenon affects various stakeholders, influencing consumers' attitudes and purchase behaviors, as well as B2B relationships (Santos et al., 2024).

Du (2014) argued that greenwashing erodes public trust in green communication. Majláth (2017) showed that greenwashing significantly reduces consumer confidence in corporate green advertising, using the H&M company as a case study. Lim et al. (2013) similarly found that perceived greenwashing leads to more cautious purchasing behavior and increased consumer skepticism, often spread through word-of-mouth (WOM) communication. Chen et al. (2019) and Gil-Cordero et al. (2021) further supported this, demonstrating that WOM mediates the relationship between greenwashing and behavioral intentions.

Zhang et al. (2018) demonstrated the direct and indirect negative impact of perceived greenwashing on consumer purchasing intentions. Analyzing the Volkswagen emissions scandal, Topal et al. (2020) highlighted the negative effect of this event on consumer desire for online green purchases, particularly in Turkey and the UK. Martinez et al. (2020) similarly found that greenwashing negatively impacts consumer confidence in environmentally friendly retail products. Chen et al. (2019) reported increased skepticism among hotel guests following misleading environmental claims, negatively impacting their intention to participate in hotel green initiatives and reducing the likelihood of repeat visits. More (2019), using an Indian context, found that a lack of credibility in environmental claims reduces customer loyalty to corporate brands.

2.2.3. Corporate reputation

Addressing environmental concerns can enhance a company's green image and provide a significant competitive advantage (Parguel et al., 2015). Green disclosure, communicating eco-friendly activities, contributes to building legitimacy and improving reputation among various stakeholders (Lyon & Montgomery, 2015; Testa et al., 2018). Growing awareness of the negative consequences of greenwashing has led companies to recognize the detrimental impact of unsubstantiated green initiatives on their reputation, revenues, and market share (Pattanayak & Padhy, 2020). However, not all environmental initiatives effectively enhance a company's green reputation or improve social acceptance. Zhang (2022a) highlighted that under strict financial regulations, firms may be more inclined to engage in greenwashing, leading to decreased environmental product quality, reputational damage, and reduced access to financing for renewable energy innovation. Huang et al. (2022) found that greenwashing practices fail to significantly improve corporate operating performance or environmental image.

The review concludes by examining key strategies for mitigating greenwashing.

2.3. Greenwashing mitigation strategies

While a universal solution to curb greenwashing remains elusive (Free et al., 2024), various individual, political, and legal efforts can effectively deter this growing phenomenon.

2.3.1. Demand-side strategies

Nishitani et al. (2021) findings demonstrated that the implementation of stringent environmental governmental policies mitigates greenwashing practices. In turn, Nemes et al. (2022) devoted their study to develop a framework that constitutes an important reference for analyzing the quality of environmental disclosure and presenting several strategies to curb greenwashing propagation. Moreover, de Silva Lokuwaduge and De Silva (2022) believed that the implementation of a global regulatory framework is useful to enhance the authenticity and comparability of environmental disclosure. In turn, Verma and Bharti (2023) considered that the implementation of a robust legislative framework can hold companies accountable for false claims.

Further, Li et al. (2023) argued that the reduction of information asymmetry through the development of environmental regulation and negative media coverage could be effective in the short run in identifying greenwashing practices. By contrast, Zhang (2022b) considered that environmental regulations can improve the quality of products only for low-pollution firms. In turn, Sun and Zhang (2019) found that government regulations, specifically government punishment, contribute to deterring greenwashing in heterogeneous companies. In addition, Arouri et al. (2021) introduced the level of environmental costs, which affect product market competition, as a new element able to curb greenwashing. More recently, far from developing greenwashing issues, Awdeh (2022) demonstrated the notable role of government effectiveness and strong regulation in enhancing environmental quality. Moreover, Kim and Lyon (2015) argued that the extent of greenwashing is controlled by non-profit organizations' supervision. Hence, a collaboration is needed between the government and stakeholders to develop a new regulatory instrument capable of mitigating the greenwashing propagation. In contrast, Lee et al. (2018) ignored the role of governmental environmental policies and believed that greenwashing practices may constitute real incentives for firms to move toward authentic green behavior.

2.3.2. Supply-side strategies

This section examines organizational behavior's role in mitigating greenwashing. Research suggests that leadership style influences a firm's propensity to greenwash, with ethical leadership discouraging such practices (Blome et al., 2017). Positive brand attitudes can also encourage environmentally responsible consumer behavior by increasing awareness of authentic and credible green products, thereby reducing the impact of greenwashing (Wang et al., 2020). Senyapar (2024) stipulated that enhancing awareness about greenwashing helps consumers make informed choices. Kurpierz and Smith (2020) found that sustainability ratings and CSR reporting are effective tools for combating greenwashing by incentivizing reputable companies to adopt ethical and sustainable behaviors.

Integrating and communicating "sense-making" and "sense-giving" approaches within corporate strategy may effectively mitigate third-party skepticism toward corporate green claims (Vollero

et al., 2016). Furthermore, activist pressure, particularly independent audits and certifications (Verma & Bharti, 2023), robust environmental management systems, and effective internal control systems (Abdo & Feghali, 2017) are factors that enhance corporate reputation and deter greenwashing.

While these strategies can mitigate greenwashing, the challenge remains in ensuring that organizations genuinely commit to sustainable practices rather than merely adopting superficial measures to enhance their image.

2.4. Theoretical framework

The literature on greenwashing encompasses several key theories that help explain the phenomenon and its implications for organizations. These theories provide a framework for understanding the motivations behind greenwashing and the impact it has on stakeholders. The following section outlines the main theoretical approaches applied in greenwashing research.

Attribution theory, as proposed by Nyilasi et al. (2013), is frequently employed to understand how individuals within organizations attribute causes to different behaviors. They highlight its prominence in marketing and advertising, particularly in explaining consumer skepticism toward corporate green claims. However, de Jong et al. (2017) argue that attribution theory provides only a partial explanation, noting that consumers may perceive greenwashing as environmentally friendly while simultaneously questioning its authenticity. This theory examines how stakeholders attribute responsibility for environmental actions or failures to organizations. It suggests that organizations may manipulate their image through greenwashing to deflect negative perceptions (Vollero, 2022).

In the context of greenwashing, legitimacy theory explains how companies use environmental claims to gain social license to operate (Gatti et al., 2019; Pizzetti et al., 2021). It posits that organizations engage in greenwashing to maintain their legitimacy in the eyes of stakeholders. Companies may adopt environmentally friendly rhetoric while failing to implement substantive practices, thus creating a gap between perception and reality (Vollero, 2022).

Institutional theory highlights how institutional pressures and norms encourage greenwashing (Testa et al., 2018; Marquis et al., 2016). It highlights how organizations conform to societal norms and expectations regarding environmental practices. Hence, greenwashing can be seen as a response to institutional pressures, where firms adopt superficial measures to appear compliant (Vollero, 2022; Bernini & La Rosa, 2023).

Signaling theory views greenwashing as a signal to differentiate environmental strategies (de Freitas Netto et al., 2020; Szabo & Webster, 2021). This perspective focuses on how organizations communicate their environmental efforts to signal quality and commitment to stakeholders. Greenwashing can serve as a signal, albeit misleading, of a company's environmental responsibility (Vollero, 2022).

While these theories provide valuable insights into greenwashing, it is essential to consider the potential for regulatory frameworks to mitigate such practices. Stronger regulations could reduce the prevalence of greenwashing by enforcing transparency and accountability in corporate environmental claims (Bernini & La Rosa, 2023).

3. RESEARCH METHODOLOGY

This study's literature review adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) model. While not a quality assessment method per se, as noted by de Freitas Netto et al. (2020), PRISMA provides a framework for critically evaluating the review process itself. Our review meticulously follows PRISMA's guidelines for identifying, selecting, appraising, and synthesizing relevant documents focused on the research topic. This approach integrates the methodologies of de Freitas Netto et al. (2020) and Gatti et al. (2019).

3.1. Information sources and search orientation

To identify relevant research on greenwashing, we consulted the following electronic databases: Springer, Scopus, Web of Science, ProQuest, Emerald Insight, ScienceDirect (Elsevier), and Wiley Online Library. Our inclusion criteria encompassed peer-reviewed journal articles focusing on greenwashing across all industries and regions. This included empirical studies, theoretical papers, and review articles offering qualitative and quantitative insights. Exclusion criteria comprised non-peer-reviewed articles, conference papers, editorials, opinion pieces, studies not explicitly addressing greenwashing, those outside the defined timeframe, and articles not published in English (without available translations).

A comprehensive search strategy employed the following keyword combinations: ("greenwashing" OR "greenwash" OR "green marketing" OR "environmental deception" OR "false sustainability claims" OR "symbolic green conformity" OR "CSR washing" OR "green skepticism" OR "green advertising" OR "false green marketing") AND ("consumer perception" OR "consumer trust" OR "corporate performance" OR "corporate reputation" OR "regulations and policies" OR "mitigation strategies").
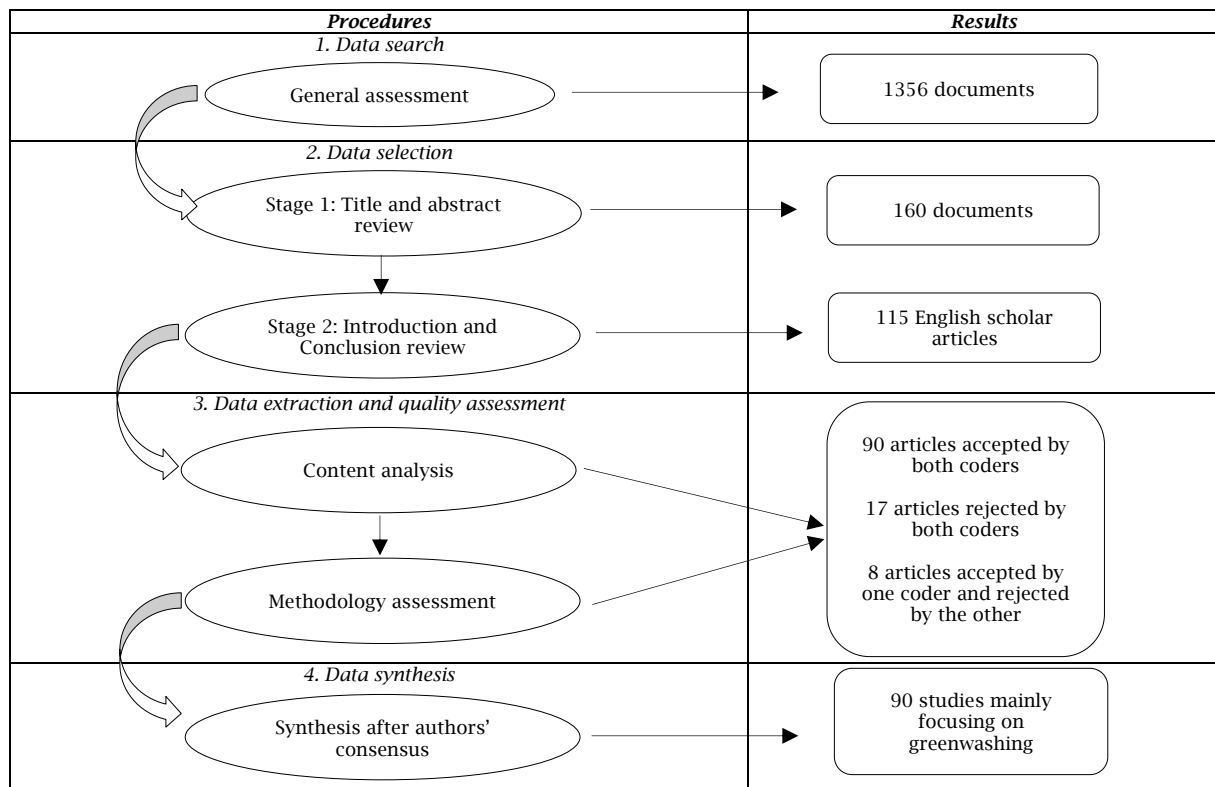
3.2. Data screening

Following de Freitas Netto et al. (2020), a two-stage screening process was employed. The first stage involved screening titles and abstracts; the second involved reviewing introductions and conclusions. To ensure replicability and validity, and minimize bias, this process was conducted by pairs of authors. To exclude weakly contributing articles, the initial search focused on scholarly journal articles explicitly mentioning "greenwashing", "greenwash", "CSR washing", "environmental deception", "false sustainability claims", "false green marketing", "green advertising", or "symbolic green conformity" in their titles or abstracts. However, to confirm that greenwashing was the central research focus, the same keywords were applied to the introduction and conclusion sections. The final selection comprised articles meeting all selection criteria based on this two-stage screening process.

3.3. Data extraction and quality assessment

Our data extraction process commenced with a thorough examination of titles, abstracts, full texts, and the specified keywords. Through this initial search spanning from 1995 to 2024, we identified a total of 1356 studies. In order to zero in on articles that directly tackled the issue of greenwashing, we refined our search to include only those with the main keywords prominently featured in their titles and abstracts, resulting in a selection of 160 articles. However, upon closer inspection, it became apparent that some of these articles, despite mentioning the keywords, did not delve deeply into the topic of greenwashing. Additionally, a significant number of articles, while having English abstracts, were not written in English. As a result, we revisited the introductions and conclusions of the articles, employing the keywords once more, which led us to a more focused pool of 115 research papers.

To uphold transparency and methodological rigor, two independent coders (the authors) evaluated the methodological quality of the 115 articles. The agreement between the coders revealed that 90 articles were mutually accepted, while 17 were unanimously rejected. Furthermore, four articles were accepted by one coder but rejected by the other, and vice versa for four additional articles. In order to ensure consistency and reliability, only the 90 articles that received approval from both coders and fully adhered to the established criteria throughout the process were included in the final dataset for content analysis. These 90 papers specifically delved into the topic of greenwashing. The references section of the paper cited the 90 papers related to greenwashing, along with six other papers that focused on methodology and other relevant aspects.

Figure 1. PRISMA protocol

Procedures	Results
1. Data search	
General assessment	1356 documents
2. Data selection	
Stage 1: Title and abstract review	160 documents
Stage 2: Introduction and Conclusion review	115 English scholar articles
3. Data extraction and quality assessment	
Content analysis	90 articles accepted by both coders
Methodology assessment	17 articles rejected by both coders 8 articles accepted by one coder and rejected by the other
4. Data synthesis	
Synthesis after authors' consensus	90 studies mainly focusing on greenwashing

The PRISMA flow diagram (Figure 1) clarifies our research methodology. This allows for a more detailed description of the review's key findings, which encompass several areas: the primary publishers of greenwashing literature; the publication timeframe; a thematic categorization of identified articles; and an analysis of key documents used to detect greenwashing. A concluding graph visually summarizes these findings, enhancing their overall impact and accessibility.

dimensions: the identity of prominent publishers in the field; the temporal distribution of publications (identifying peak publication years); the types of documents analyzed to detect greenwashing practices; and the dominant categories and themes explored within the body of greenwashing research. This multifaceted analysis provides a comprehensive understanding of the current state of scholarship on greenwashing. The publishers of the 90 papers, directly related to greenwashing, are reported in Table 1.

4. RESULTS

The results of our greenwashing literature review yielded rich and significant findings. These findings are multifaceted, varying across several key

Table 1. Journal name and number of articles

Journal name	Number of peer-reviewed papers
Journal of Business Ethics	13
Journal of Cleaner Production	11
Business Strategy and the Environment	5
Sustainability	4
Organization & Environment	3
Journal of Business and Technical Communication	2
Marketing Intelligence & Planning	2
Organization Science	2
Others (one article per journal)	48
Total	**90**

The 1995–2024 timeframe is justified by considering the historical context and evolution of greenwashing research. While the term "greenwashing" emerged in the 1980s, a notable increase in academic research is evident from the mid-1990s. Beginning the review in 1995 allows us to capture the evolution of greenwashing definitions and practices. The significant increase in publications after the 2010s, driven by heightened environmental initiatives and public awareness, necessitates a focus on more recent scholarship. This approach ensures the inclusion of current methodologies, findings, and insights. Furthermore, the emergence of environmental regulations and international agreements from the 1990s onward significantly influences corporate behavior and greenwashing practices. The growth in greenwashing publications is illustrated in Figure 2.

Figure 2. Evolution of greenwashing published papers
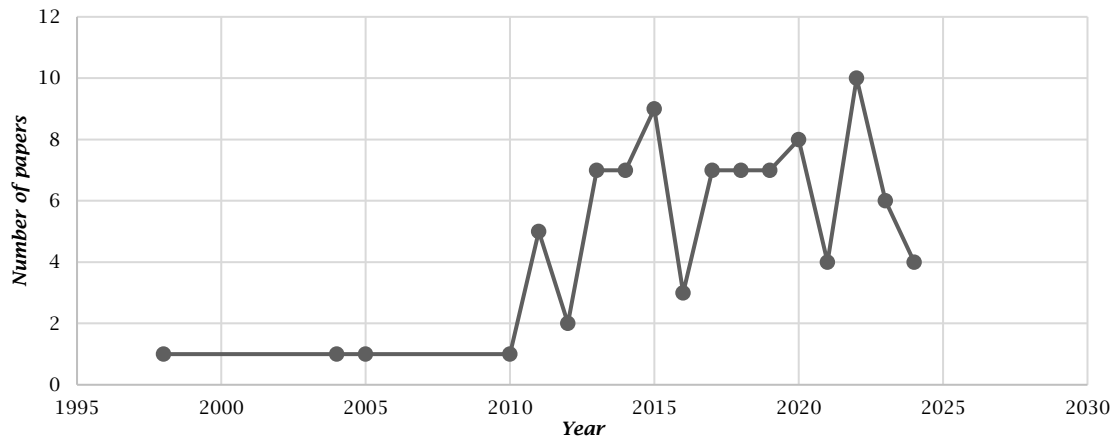
To address the specified objectives and questions we define a qualitative analysis to identify common themes and patterns and we summarize findings in Table A.1 in Appendix.

This review reveals greenwashing as a complex and constantly evolving phenomenon, presenting ongoing challenges for researchers, practitioners, and regulators. The manifestation of greenwashing tactics is deeply intertwined with socio-cultural and geopolitical contexts. Additionally, a socio-historical perspective is crucial, recognizing how language itself can both facilitate and undermine greenwashing, particularly given the growing critiques of neoliberalism. The negative impacts of greenwashing on consumer trust and corporate performance vary significantly across sectors and institutional contexts. A substantial body of research now focuses on mitigation strategies.

This review also clarifies the types of documents commonly analyzed to detect greenwashing, as shown in Table 2.

Table 2. Main documents for greenwashing detection

| Documents	References
Corporate sustainability reports (CSR)	Torelli et al. (2020)
Annual reports	Uyar et al. (2020)
Corporate websites	Pizzetti et al. (2021); Yu et al. (2020)
Press releases	Marquis et al. (2016)
Marketing advertisements, product labels and packaging	Gosselt et al. (2019); Guo et al. (2018); Schmuck et al. (2018); Nyilasi et al. (2013)
Social media posts	Johnson and Greenwell (2022); Saxton et al. (2019); Etter et al. (2016); Lyon and Montgomery (2015)

This systematic literature review comprehensively synthesizes the evolution and core components of greenwashing research across diverse disciplines and time periods. Through rigorous analysis, we have mapped the transformation of scholarly understanding and conceptualization of greenwashing from its initial emergence to its current multifaceted forms. This longitudinal examination reveals not only the theoretical development of the concept but also the dynamic interplay between corporate environmental communication, stakeholder responses, and evolving regulatory landscapes. The major thematic clusters of greenwashing research is illustrated in Figure 3.

Figure 3. Themes and patterns of previous greenwashing literature
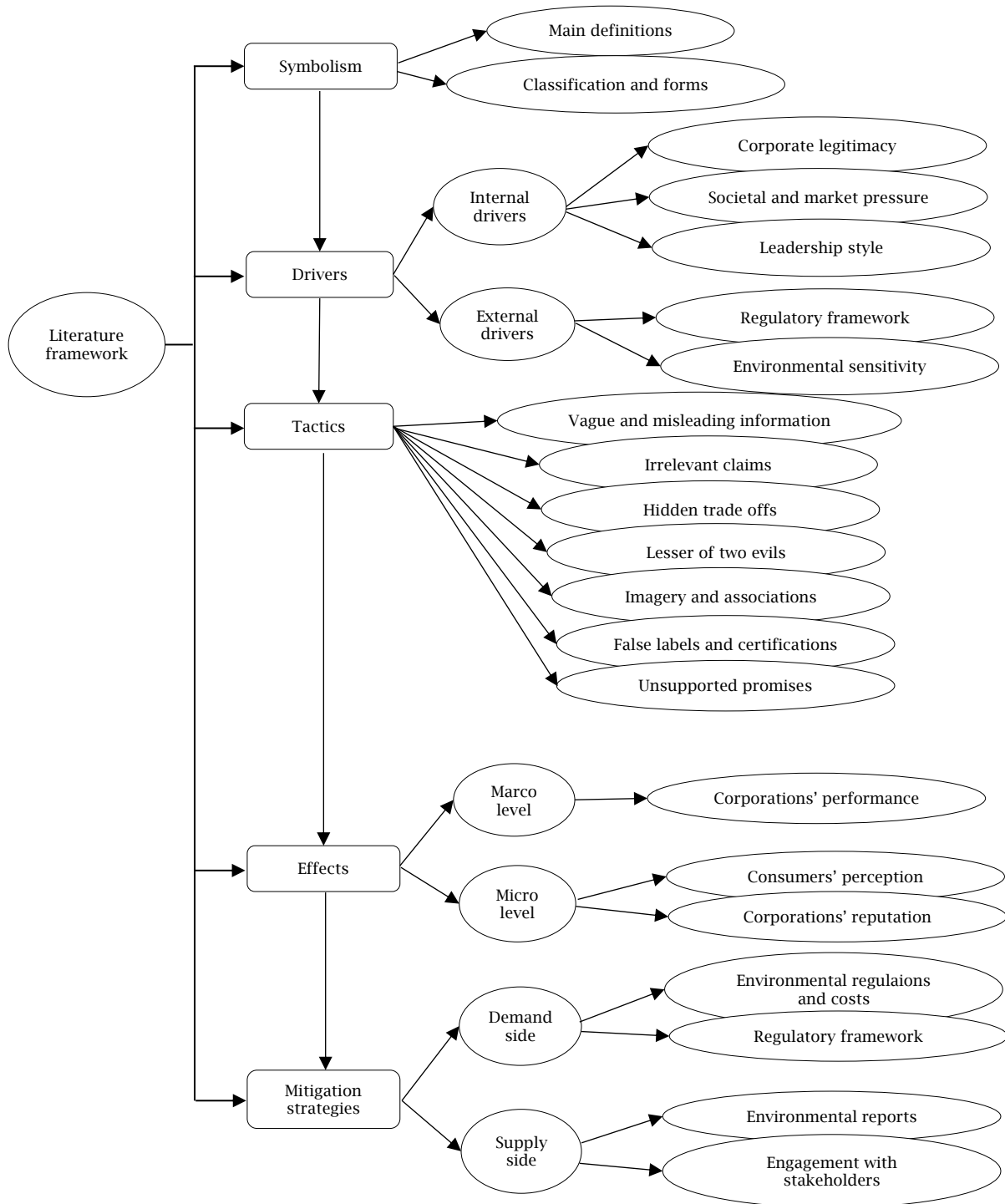
The preceding framework highlights the key themes and dynamics of greenwashing and its theoretical evolution. The breadth of a greenwashing conceptualization significantly influences the identification of its drivers, tactics, and effects. We argue that the desire to project an eco-friendly image (driven by various factors) motivates companies to employ deceptive tactics and symbolism, resulting in negative consequences that necessitate mitigation efforts. This creates a cyclical relationship: the pursuit of a positive environmental image leads to greenwashing, which in turn generates negative impacts, prompting the development of countermeasures, and potentially leading to further iterations of the cycle. This cyclical model (illustrated in Figure 4) underscores the dynamic and iterative nature of greenwashing, highlighting the need for continuous adaptation and innovation in both, its perpetration and its counteraction. Future research should focus on understanding the specific mechanisms within this cycle, including the effectiveness of various mitigation strategies and the evolving tactics employed by organizations engaged in greenwashing.

Figure 4. Greenwashing themes: A cyclical relationship
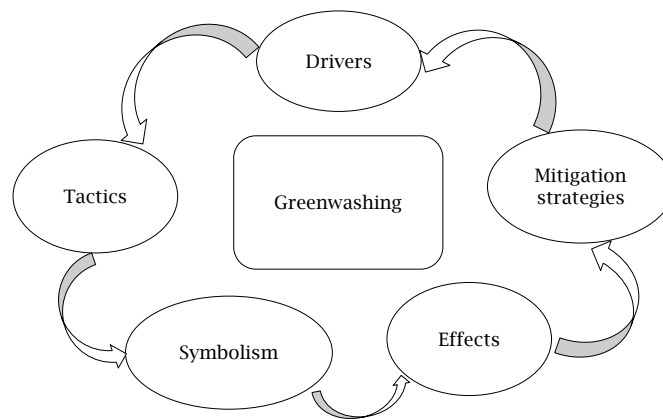
This circular flow can intensify over time and effective mitigation strategies can undermine this cycle by targeting different elements. Tackling any theme could help disrupt the cycle and mitigate greenwashing as a whole (Gosselt et al., 2019). But our systematic approach suggests that the consideration of all themes mainly, reducing motivations, limiting misleading tactics, minimizing empty symbolism, addressing adverse effects and strengthening mitigation strategies, will likely have the greatest impact in curbing greenwashing issue. Several key insights, emerging trends and future perspectives are revealed in the review. The multifaced theoretical background suggests that the field is still evolving and offers a clear overview of the convergence and divergence in greenwashing discourse. The socio-cultural and geo-political context of sustainable development is making firms aware of the intersection of human and environmental priorities and corporations are engaging in the adoption of sustainable initiatives that represents their values, but this is building on a foundation of a greenwashing subjectivity and logic.

5. DISCUSSION

The existing framework highlights key aspects of the greenwashing literature. However, the dynamic nature of this phenomenon necessitates continuous monitoring of emerging trends to inform future research. Integrating concepts such as CSR strategy, the SDGs, legislative changes, and Human Resource challenges is crucial for a comprehensive understanding. As previously noted regarding sustainability issues, the analysis must consider socio-cultural and geo-political contexts.

The rising awareness of environmental issues motivates some consumers to purchase green brands to alleviate anxiety and project a sustainable self-image, creating opportunities for companies to exploit these motivations through exaggerated claims. Furthermore, consumer lack of environmental literacy and knowledge regarding the verification of sustainability claims remains a significant driver of greenwashing. The proliferation of social media and influencer marketing has exacerbated this issue, facilitating the spread of greenwashing messages through various channels, including sponsored content and native advertising (Gosselt et al., 2019), an area requiring further research.

A common greenwashing tactic involves emphasizing minor green attributes while ignoring significant environmental impacts. For example, highlighting recyclable packaging while neglecting the product's overall environmental footprint. Similarly, cause-related marketing — associating products with environmental issues — can be a form of greenwashing.

Despite its deceptive nature, greenwashing may have some unintended positive consequences. It can raise public environmental awareness, potentially leading to more authentic green behaviors. Furthermore, the pressure to substantiate initial claims may drive incremental environmental improvements within companies. Greenwashing might also expand the market for sustainable products by broadening their appeal to mainstream consumers. Finally, it may prompt stronger regulatory action and increased scrutiny of corporate claims (Montgomery et al., 2023).

Mitigating greenwashing requires innovative solutions. Blockchain technology can create transparent and verifiable records of sustainability data. Hence, artificial intelligence, leveraging machine learning and natural language processing (NLP), can analyze corporate communications to detect potential greenwashing (Shahi et al., 2021). Financial incentives linked to environmental performance, such as tax breaks or grants, can reward genuine sustainability efforts. Governmental intervention should include mandatory independent third-party audits of sustainability claims (Boiral et al., 2017; Verma & Bharti, 2023), alongside responsible media reporting that emphasizes fact-checking and transparency.

6. CONCLUSION

This systematic literature review contributes to the field by proposing a novel model of greenwashing that integrates theorization, effects, and resistance strategies to challenge its ideology and practices. Understanding the underlying drivers of greenwashing is crucial to addressing its societal impacts.

The study offers critical insights into challenging the greenwashing narrative and the need for environmental governance at both macro and micro levels. This transnational perspective emphasizes the importance of global governance frameworks and national legislation, while also recognizing the significant role of civil society in addressing the direct impacts of pollution on communities.

This review enhances understanding of the greenwashing debate within the global political economy, but it has limitations that suggest avenues for future research. The selection of documents was influenced by keyword searches, and the review focused on peer-reviewed English-language articles, limiting its geographical scope.

Further research is needed to explore the geographical variations in greenwashing. The United Nations annual sustainable development goal reports provide valuable insights into the evolution and challenges of greenwashing, highlighting the central role of corporations in shaping the environmental landscape and the need for corporate accountability. The linkage between corporate performance and sustainability is particularly significant. While greenwashing has often been viewed as an isolated corporate practice, the SDGs represent a relational ethic of care, offering a framework for collectively addressing global economic and environmental challenges.

Future studies should investigate geopolitical variations in the interpretation and implementation of sustainability within corporate strategies. Arab states, for example, offer a unique perspective due to their more interventionist economic governance models aimed at improving citizens' lives (Syed & Metcalfe, 2014; Metcalfe, 2021).

To broaden future research, we recommend integrating greenwashing with global governance studies. Further investigation is needed into how corporations utilize and appropriate the concept of sustainability. Including non-English language publications and expanding the scope to encompass working papers and conference proceedings would enrich the analysis, capturing diverse cultural perspectives and mitigating publication bias.

In conclusion, this review provides a current snapshot of greenwashing research. However, given the dynamic nature of the issue, ongoing research and periodic reviews are essential to track emerging trends and challenges.

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APPENDIX

Table A.1. The categorization of selected articles

Greenwashing conceptualization			Greenwashing effects			Greenwashing mitigation strategies	
Symbolism	*Drivers*	*Tactics*	*Corporate performance*	*Customer perception*	*Corporate reputation*	*Demand side*	*Supply side*
Brazillier and Vauday (2009), Bowen (2014), Chen and Chang (2013), Delmas and Burbano (2011), Hora and Subramaniam (2018), Khan et al. (2020), Lyon and Montgomery (2015), Spaniol et al. (2024), Savić and Furfulanovic (2024), Khorsand et al. (2023)	Aggarwal and Kadyan (2014), Blome et al. (2017), Delmas and Burbano (2011), Du (2014), Ruiz-Blanco et al. (2021), Roulet and Touboul (2015), Testa et al. (2018), Uyar et al. (2020), Verma and Bharti (2023), Spaniol et al. (2024), Wedari et al. (2021)	Bowen (2014), Bowen and Aragon-Correa (2014), Huang et al. (2022), Kim and Lyon (2015), Kopnina (2019), Lyon and Montgomery (2015), Majláth (2017), Marquis et al. (2016), Montgomery et al., (2023), Ruiz-Blanco et al. (2021), Seele and Gatti (2015), Senyapar (2024), Walker and Wan (2012)	Aguilera-Caracuel and Ortiz-de-Mandojana (2013), Cao et al. (2022), Du (2014), Hora and Subramanian (2018), Johnson and Greenwell (2022), Li et al. (2017), Li et al. (2023), Martín-de Castro et al. (2017), Testa et al. (2018), Walker and Wan (2012), Wu and Shen (2013)	Akturan (2018), Chen and Chang (2013), Chen et al. (2019), de Jong et al. (2017), de Jong et al. (2019), Du (2014), Gil-Cordero et al. (2021), Goh and Balai (2016), Leonidou and Skarmeas (2017), Lim et al. (2013), Lyon and Montgomery (2015), Majláth (2017), Martínez et al. (2020), More (2019), Newell et al. (1998), Nyilasi et al. (2013), Pattanayak and Padhy (2020), Pushpanathan and Mathushan (2020), Shahrin et al. (2017), Skarmeas and Leonidou (2013), Szabo and Webster (2021), Topal et al. (2020), Torelli et al. (2019), Wang et al. (2020), Zaidi et al. (2019), Zhang et al. (2018)	Huang et al. (2022), Parguel et al. (2015), Testa et al. (2018), Yildrim (2023), Zhang (2022a)	Arouri et al. (2021), de Silva Lokuwaduge and De Silva (2022), Huang et al. (2022), Kim and Lyon (2015), Lee et al. (2018), Li et al. (2023), Marquis et al. (2016), Mateo-Marquez et al. (2022), Nemes et al. (2022), Nishitani et al. (2021), Ruiz-Blanco et al. (2021), Sun and Zhang (2019), Verma and Bharti (2023), Zhang (2022b)	Blome et al. (2017), Delmas and Burbano (2011), Glavas et al. (2023), Kurpierz and Smith (2020), Lyon and Montgomery (2015), Parguel et al. (2015), Senyapar (2024), Verma and Bharti (2023), Vollero et al. (2016), Wang et al. (2020)
10 Papers	11 Papers	13 Papers	12 Papers	27 Papers	5 Papers	14 Papers	10 Papers