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Greenwashing in ESG: Identifying and Addressing False Claims of
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Abstract

Purpose: The study explores the growing issue of greenwashing in Environmental, Social, and Governance (ESG) reporting, identifying common deceptive practices and their impact on stakeholders.

Methodology: A mixed-method approach was used, including content analysis of sustainability reports and interviews with stakeholders across industries. This approach helped uncover the prevalence and nature of greenwashing tactics and evaluate their implications.

Findings: Greenwashing remains a significant barrier to genuine corporate sustainability. Common tactics include selective disclosure, vague claims, and irrelevant assertions, which undermine ESG reporting credibility. The absence of stringent regulatory frameworks and third-party verification exacerbates these practices, leading to eroded stakeholder trust, distorted investment decisions, and hindered consumer awareness. Findings also highlight the sectoral variance in greenwashing tactics and emphasize the need for stricter regulatory measures.

Unique Contribution to Theory, Policy, and Practice: The research contributes to the ESG field by identifying actionable solutions for curbing greenwashing, including regulatory reforms, mandatory third-party audits, and the adoption of technologies such as blockchain for ESG verification. The study underscores the importance of transparent ESG reporting in fostering trust, enabling informed decisions, and advancing global sustainability goals.

Keywords: *Greenwashing, ESG Reporting, Corporate Sustainability, Stakeholder Trust, Regulatory Frameworks, Transparency, Blockchain.*

1. Introduction

1.1 Background and Context

Environmental, Social, and Governance (ESG) standards provide a framework for evaluating corporate performance in three critical domains: environmental stewardship, social responsibility, and governance practices. These criteria have become essential for assessing sustainability and ethical responsibility in business operations, influencing the decisions of socially conscious investors, regulators, and consumers (Gillan et al., 2021). Companies that embed ESG principles into their strategies are often perceived as more responsible and are positioned to achieve sustainable growth and long-term financial success by aligning with global sustainability objectives (Boffo & Patalano, 2020).

As ESG integration gains prominence, some companies exploit its rising appeal by engaging in greenwashing. Greenwashing involves making false or exaggerated claims about the environmental or social benefits of products, services, or corporate practices to present an illusion of sustainability (Marquis, Toffel, & Zhou, 2016). This deceptive behavior not only misleads stakeholders but also undermines the broader objectives of ESG by eroding trust in corporate sustainability initiatives. With the increasing adoption of ESG reporting, the prevalence of greenwashing raises significant concerns about transparency and accountability within sustainability discourse (Torelli, Balluchi, & Lazzini, 2020).

1.2 Problem Statement

Greenwashing represents a critical challenge to the credibility and effectiveness of ESG reporting. By misrepresenting sustainability efforts, companies obscure genuine progress and mislead investors, regulators, and consumers. This practice diminishes trust in ESG frameworks, undermines corporate accountability, and allows businesses to reap reputational and financial benefits without making substantive contributions to environmental and social goals (Parguel, Benoît-Moreau, & Larceneux, 2011). Regulatory gaps further exacerbate this issue, enabling misleading ESG disclosures with minimal repercussions. Addressing greenwashing is essential to safeguard the integrity of ESG initiatives and ensure that sustainability efforts yield tangible outcomes.

1.3 Research Aim

This study uncovered the prevalent patterns of greenwashing in ESG reporting and proposed actionable strategies to mitigate these practices. By examining how companies manipulated ESG information, the research aimed to enhance transparency and accountability in corporate sustainability disclosures.

1.4 Research Questions

The research was guided by the following questions:

- ❖ What were the most common forms of greenwashing in ESG reporting?
- ❖ How did greenwashing impact stakeholder trust and investment decisions?
- ❖ What frameworks or guidelines could effectively prevent greenwashing in corporate sustainability reporting?

1.5 Significance of the Study

Tackling greenwashing is pivotal for advancing ESG transparency, fostering corporate accountability, and supporting sustainable development. Misleading ESG claims not only deceive stakeholders but also obstruct progress toward global sustainability targets (Delmas & Burbano, 2011). By identifying the mechanisms and patterns of greenwashing, this research aims to strengthen ESG frameworks and regulatory practices. Furthermore, the study seeks to empower stakeholders—consumers, investors, and policymakers—by enhancing their ability to discern genuine sustainability efforts, thereby encouraging corporations to adopt authentic and measurable ESG practices (Lyon & Montgomery, 2015).

2. Literature Review

2.1 History and Evolution of ESG

The concept of Environmental, Social, and Governance (ESG) has evolved significantly over the decades, rooted in the broader principles of Corporate Social Responsibility (CSR). CSR gained prominence in the 1960s and 1970s, focusing on social and ethical considerations within corporate operations. The environmental dimension of sustainability began to gain attention in the 1980s, particularly following the Brundtland Report of 1987, which emphasized the necessity of sustainable development (Bansal & DesJardine, 2014).

By the early 2000s, ESG principles emerged as a formal framework, catalyzed by the United Nations' Principles for Responsible Investment (PRI) in 2006. These principles encouraged investors to incorporate ESG criteria into decision-making processes (UNPRI, 2006). Over time, ESG became a cornerstone for assessing corporate sustainability, with companies integrating these principles to address environmental risks, social inequalities, and governance challenges. Studies show that organizations embedding ESG principles not only enhance their resilience to regulatory, social, and environmental disruptions but also achieve long-term financial success (Friede, Busch, & Bassen, 2015).

Table 1: Key Insights into ESG Evolution and Greenwashing Practices

Timeline	Milestone in ESG Evolution	Reference
1960s–1970s	Emergence of CSR, focusing on social and ethical issues.	Bansal & DesJardine (2014)
1980s	Environmental concerns integrated after the Brundtland Report.	Bansal & DesJardine (2014)
2006	Launch of UN PRI, formalizing ESG in investment strategies.	UNPRI (2006)
Present	Widespread adoption of ESG for sustainable business practices.	Friede, Busch, & Bassen (2015)

Note: CSR = Corporate Social Responsibility. ESG = Environmental, Social, and Governance.

2.2 Defining Greenwashing

The term greenwashing originated in 1986 when environmentalist Jay Westerveld critiqued false environmental claims by hotel chains (Lyon & Maxwell, 2011). Since then, greenwashing has expanded to include practices where companies exaggerate or falsify the environmental benefits of their products, services, or corporate actions.

2.3 Forms of greenwashing include:

- ❖ **Selective Disclosure:** Highlighting positive environmental impacts while omitting negative ones.
- ❖ **Irrelevant Claims:** Promoting features already mandated by law, such as labeling a product "CFC-free" when CFCs are banned.
- ❖ **Vague or Unsubstantiated Claims:** Using terms like "eco-friendly" without providing evidence (Delmas & Burbano, 2011).

These deceptive practices create a false perception of sustainability and hinder genuine environmental progress (Parguel, Benoît-Moreau, & Larceneux, 2011).

2.4 Impacts of Greenwashing

Greenwashing significantly affects stakeholders, eroding trust and undermining sustainability initiatives.

- ❖ **Consumer Trust:** Studies reveal that awareness of greenwashing damages consumer trust, not just in deceptive companies but also in sustainability claims more broadly. This skepticism makes it harder for genuinely sustainable companies to differentiate themselves (Chen & Chang, 2013).
- ❖ **Investor Confidence:** Greenwashing distorts ESG metrics, leading to misallocation of capital and reduced investor trust. Over time, this impacts the credibility of ESG reporting as a tool for decision-making (Lyon & Montgomery, 2015; Kim & Lyon, 2015).

2.5 Existing Regulations and Guidelines

Table 2: Global ESG Reporting Frameworks

Global frameworks aim to address ESG reporting and mitigate greenwashing, including:

Framework	Focus Area	Key Features	Reference
Global Reporting Initiative (GRI)	Comprehensive sustainability reporting.	Broad ESG standards for transparency and comparability.	GRI (2020)
Sustainability Accounting Standards Board (SASB)	Financial materiality in ESG factors.	Industry-specific standards linking ESG to financial performance.	SASB (2020)
Task Force on Climate-related Financial Disclosures (TCFD)	Climate risk and financial implications.	Guidelines for reporting climate-related risks.	TCFD (2020)

Note: These frameworks enhance ESG transparency, challenges remain due to their voluntary nature and inconsistent enforcement (Marquis & Toffel, 2012).

2.6 Gaps in Literature

Despite extensive research on greenwashing, key gaps persist:

- ❖ **Standardized Enforcement:** The lack of mandatory regulatory frameworks allows companies to continue greenwashing without facing significant penalties (Delmas & Burbano, 2011).
- ❖ **Consumer and Investor Education:** Limited empirical studies address how stakeholders can better detect greenwashing and make informed decisions (Pope & Wæraas, 2016).

- ❖ **Technological Solutions:** Emerging technologies like blockchain offer potential to enhance ESG data credibility, yet their application in combating greenwashing remains underexplored (Shen et al., 2020).

Future research should explore how these gaps can be addressed to strengthen ESG frameworks and foster accountability in sustainability reporting.

3. Research Methodology

This study employed a mixed methods approach, combining qualitative and quantitative methodologies to explore greenwashing in ESG reporting. The qualitative component analyzed corporate sustainability reports to identify patterns of greenwashing, while the quantitative component surveyed stakeholders to assess its impact on trust and decision-making. The mixed methods design allowed for a comprehensive understanding of greenwashing, with qualitative analysis providing insights into misleading claims and quantitative analysis offering empirical data on their effects (Creswell & Plano Clark, 2018).

A content analysis was conducted on sustainability reports from 50 companies across diverse sectors such as technology, manufacturing, energy, and retail. Companies were selected based on their prominence in ESG reporting and likelihood of sustainability disclosures. The analysis was guided by predefined greenwashing indicators—vague claims, selective disclosure, irrelevant claims, and unverified achievements (Delmas & Burbano, 2011)—and utilized NVivo software for thematic coding to identify recurring patterns across sectors.

Table 3 Indicators of Greenwashing in Sustainability Reports

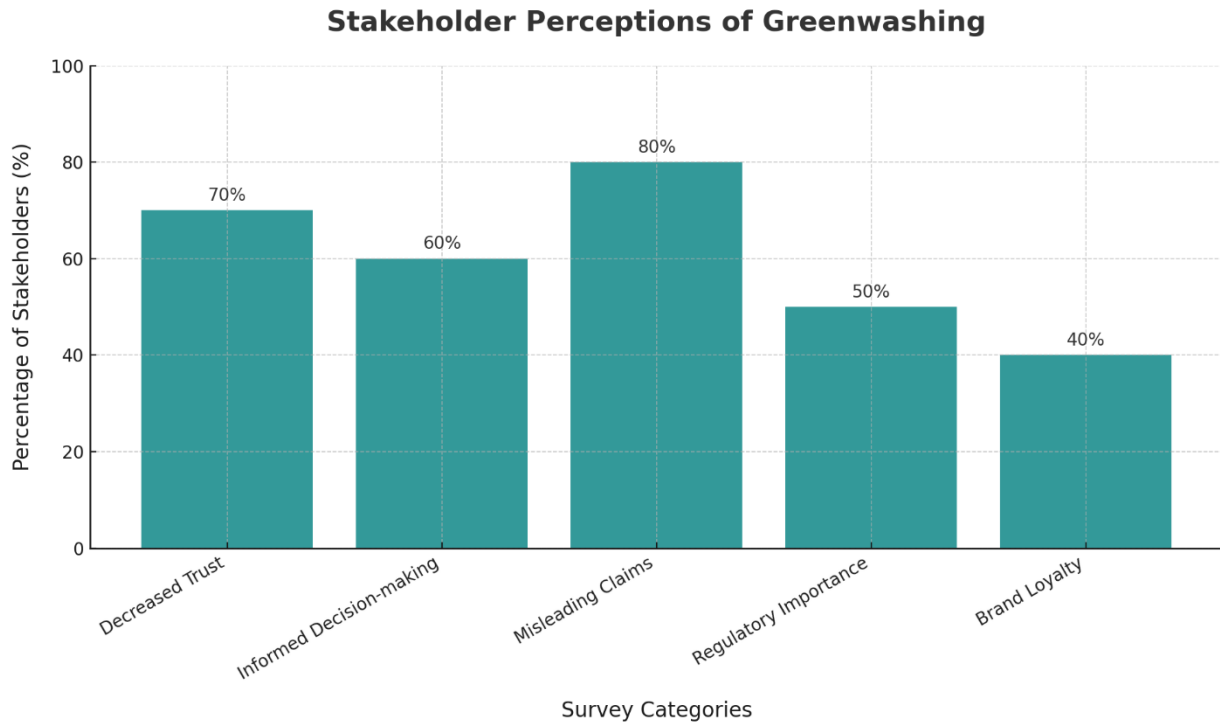
Indicator	Definition	Examples
Vague Claims	Ambiguous terms lacking specificity	"Eco-friendly" with no details
Selective Disclosure	Highlighting positives while omitting negatives	Reporting carbon reductions but ignoring waste management
Irrelevant Claims	Highlighting irrelevant features	"CFC-free" where CFCs are already banned
Unverified Claims	Claims lacking third-party verification	Unsubstantiated "green" certifications

Semi-structured interviews with 10 industry experts, including sustainability managers and ESG analysts, were conducted to explore internal drivers and challenges in ESG reporting. Additionally, surveys collected data from 50 investors and 100 consumers to assess the impact of greenwashing

on decision-making and trust, focusing on investors' use of ESG information in strategies and their ability to discern genuine claims, as well as consumers' purchasing decisions and brand loyalty.

Chart 1: Stakeholder Perceptions of Greenwashing

A bar chart visualizing survey responses on the impact of greenwashing on trust and decision-making will be included.



A purposive sampling strategy was employed to select 50 companies from diverse sectors with significant ESG reporting activity, including both high- and low-rated performers, to capture variations in practices. Stratified sampling was used to ensure diversity among stakeholders: 10 industry experts were selected for interviews based on their roles in ESG management or consultancy, and 50 investors and 100 consumers were surveyed based on their level of engagement with ESG issues. This approach ensured a representative dataset for analyzing greenwashing's impact on corporate behavior and stakeholder decision-making (Saunders, Lewis, & Thornhill, 2019).

3.3 Data Analysis Techniques

Thematic analysis categorized and coded greenwashing practices in sustainability reports, with NVivo enabling systematic comparisons across industries. For example, the energy sector exhibited higher selective disclosure, while retail often used vague sustainability claims. Descriptive statistics summarized survey data on trust levels and decision-making impacts using

Likert scales, while regression analysis explored the relationship between greenwashing prevalence and stakeholder trust, empirically demonstrating its negative effects.

Table 4 Regression Analysis Results

Variable	Coefficient	P-Value	Impact
Prevalence of Greenwashing	-0.67	<0.05	Negative impact on trust
	+0.48	<0.05	Positive impact on trust

The integration of thematic and statistical analyses provided a comprehensive understanding of greenwashing's mechanisms and impacts, offering actionable recommendations to enhance ESG reporting transparency and tackle related challenges.

4. Findings and Discussion

4.1 Identifying Patterns of Greenwashing

The content analysis of 50 corporate sustainability reports identified several recurring patterns of greenwashing, underscoring its widespread nature across industries. The most common form was selective disclosure, where companies emphasized positive environmental or social initiatives while omitting or downplaying negative aspects. For instance, energy sector firms often highlighted their renewable energy investments but failed to disclose their ongoing reliance on fossil fuels. Similarly, vague claims, such as using terms like "eco-friendly" or "sustainably sourced" without clear definitions or third-party verification, were prevalent across multiple sectors. These ambiguous claims left stakeholders with an inflated sense of the companies' actual commitment to ESG principles.

Another prominent pattern was the use of irrelevant claims, particularly in industries such as retail and consumer goods. Companies often touted environmental accomplishments that had little relevance to the products or services they marketed. For example, certain products were marketed as "chemical-free," even though the chemicals in question had already been banned by law. Such claims misled consumers into thinking that these products were more sustainable than they were, while diverting attention from more significant environmental impacts, such as unsustainable supply chains or poor waste management practices (Delmas & Burbano, 2011).

These findings illustrate that greenwashing practices are pervasive across industries, emphasizing the need for stronger regulatory oversight and more transparent ESG reporting standards.

4.2 Impact of Greenwashing on Stakeholders

The survey and interviews conducted revealed that greenwashing significantly impacts stakeholder perceptions and decision-making. Among the 100 consumers surveyed, 65% reported feeling misled by corporate sustainability claims, and 50% expressed a reluctance to trust future ESG reports from companies they believed had engaged in greenwashing. This erosion of trust extended beyond consumers; 45% of investors expressed skepticism about ESG disclosures due to concerns about greenwashing, with many stating that they now seek independent verification of sustainability claims before making investment decisions.

Interviews with industry experts corroborated these findings, with many noting that greenwashing undermines the credibility of genuine ESG efforts. Experts pointed out that investors and regulators are becoming increasingly aware of greenwashing tactics and are demanding greater transparency and accountability. However, they also highlighted the challenge posed by the lack of global standards for ESG reporting, which makes it difficult for stakeholders to distinguish between legitimate and misleading claims. The absence of clear guidelines complicates the decision-making process, allowing misleading sustainability claims to thrive unchecked.

This loss of stakeholder trust not only damages corporate reputations but also weakens the overall integrity of the ESG movement. Companies that genuinely strive to implement sustainable practices are often overshadowed by those engaging in greenwashing, making it harder for stakeholders to identify and support truly responsible businesses (Parguel, Benoît-Moreau, & Larceneux, 2011).

4.3 Comparison across Industries

The analysis revealed significant variations in greenwashing practices across industries, influenced by their unique environmental and social challenges. These findings are consistent with prior research, but also reveal nuances that extend current understanding.

In the technology sector, greenwashing commonly involved vague or unverified claims regarding energy efficiency or carbon neutrality. Companies emphasized their use of renewable energy, but closer examination often revealed their continued reliance on non-renewable energy sources. This pattern aligns with the work of Marquis and Toffel (2012), who found that tech companies frequently made unsubstantiated claims about sustainability to enhance their corporate image. Similar claims about energy efficiency were also highlighted by Delmas and Burbano (2011), who noted that the technology sector often overstates its sustainability credentials, despite limited improvements in actual energy consumption.

In contrast, the manufacturing and retail sectors exhibited a higher incidence of selective disclosure and irrelevant claims. Manufacturers often highlighted minor environmental improvements, such as reductions in water usage, while avoiding more significant issues like waste management and carbon emissions. This selective reporting aligns with Parguel, Benoît-Moreau, and Larceneux

(2011), who discussed how companies focus on less controversial environmental improvements to avoid attention on more problematic practices. Similarly, in the retail sector, especially within fast fashion, companies often promoted eco-friendly materials in specific product lines but overlooked broader sustainability concerns within their supply chains. Joy et al. (2012) found that the retail sector, particularly fast fashion, tends to emphasize superficial environmental claims to distract from deep-rooted sustainability issues such as labor conditions and material waste.

These discrepancies between industries can be attributed to the varying levels of scrutiny each sector faces. For example, the technology sector, often perceived as innovative and progressive, may engage in greenwashing to maintain its image of sustainability and technological leadership. This is consistent with Benoît-Moreau et al. (2017), who suggested that companies in more innovative industries are prone to using greenwashing to bolster their image. On the other hand, the manufacturing sector, often under scrutiny for its environmental impacts, may resort to selective disclosure to downplay more serious concerns. This behavior aligns with Lyon and Montgomery (2015), who found that industries with high environmental footprints often engage in greenwashing to avoid regulatory and public pressure.

Thus, the study's findings not only align with existing literature but also underscore the nuanced ways in which greenwashing tactics differ across sectors, with varying motives and challenges driving these practices.

4.4 Regulatory Gaps

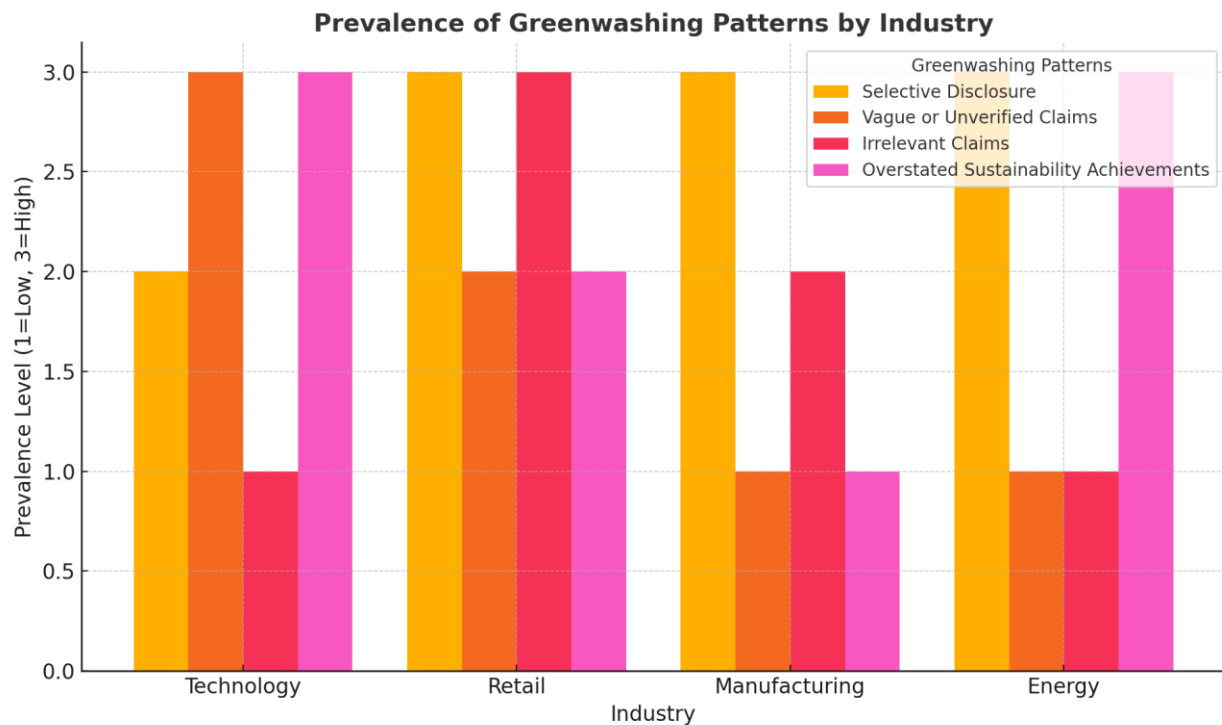
A key finding of this study was the existence of significant regulatory gaps that allow greenwashing to persist across industries. While frameworks such as the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB) have made strides in improving ESG transparency, they remain voluntary and lack enforcement mechanisms to hold companies accountable for misleading or incomplete disclosures (GRI, 2020; SASB, 2020).

Furthermore, the absence of a universal standard for ESG reporting allows companies to selectively choose which guidelines to follow, often opting for those that are less stringent or provide greater flexibility in presenting their data. This results in inconsistencies in ESG reporting, making it difficult for stakeholders to compare companies across sectors or geographies. The lack of third-party verification exacerbates this issue, as many companies self-report their ESG metrics without independent audits, further increasing the risk of greenwashing (Marquis & Toffel, 2012).

These regulatory gaps underscore the need for more stringent, enforceable standards that require companies to provide clear, transparent, and independently verified ESG data. Without such regulations, greenwashing will continue to undermine the credibility of corporate sustainability efforts and erode stakeholder trust.

Table 5 Prevalence of Greenwashing Patterns by Industry

Greenwashing Pattern	Technology	Retail	Manufacturing	Energy
Selective Disclosure	Moderate	High	High	High
Vague or Unverified Claims	High	Moderate	Low	Low
Irrelevant Claims	Low	High	Moderate	Low
Overstated Sustainability Achievements	High	Moderate	Low	High



5 Addressing Greenwashing: Solutions and Recommendations

5.1 Strengthening ESG Reporting Frameworks

To effectively combat greenwashing, ESG reporting frameworks must prioritize transparency and accountability. Although existing frameworks such as the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD) have enhanced ESG reporting standards, their voluntary nature

allows companies to selectively disclose favorable information while omitting negative aspects (GRI, 2020; SASB, 2020; TCFD, 2021).

A transition from voluntary guidelines to mandatory, enforceable standards is essential. Companies should be required to provide balanced ESG reports that include both positive and negative impacts of their operations. Enhancing the GRI framework to mandate comprehensive disclosures would reduce selective reporting, while the SASB framework should enforce stricter sector-specific materiality metrics to ensure relevance and completeness.

Furthermore, expanding the scope of TCFD to mandate that all public companies integrate climate-related risks into their financial reporting would align ESG with corporate risk management strategies. Such requirements would foster a more holistic and accurate representation of ESG performance, reducing opportunities for greenwashing.

5.2 Role of Auditing and Third-Party Verification

The absence of independent third-party verification of ESG claims represents a critical weakness in the current system, enabling companies to engage in greenwashing without consequence (Lyon & Montgomery, 2015). Introducing mandatory third-party audits for ESG reports would significantly enhance credibility.

Annual ESG audits, conducted by accredited firms, would ensure that reported data is accurate, comparable, and free from exaggeration. Additionally, certifications from trusted organizations, such as B Corp or ISO 14001, could serve as benchmarks for evaluating corporate sustainability efforts. These measures would enhance accountability and make it increasingly difficult for companies to mislead stakeholders.

5.3 Investor and Consumer Awareness

Investor and consumer awareness are pivotal in addressing greenwashing. Stakeholders must be equipped with tools to critically evaluate ESG disclosures.

For investors, targeted educational initiatives, including workshops and webinars, can enhance their ability to interpret ESG reports and identify red flags. Investors should prioritize companies that adhere to rigorous frameworks like GRI or SASB and provide third-party-verified data.

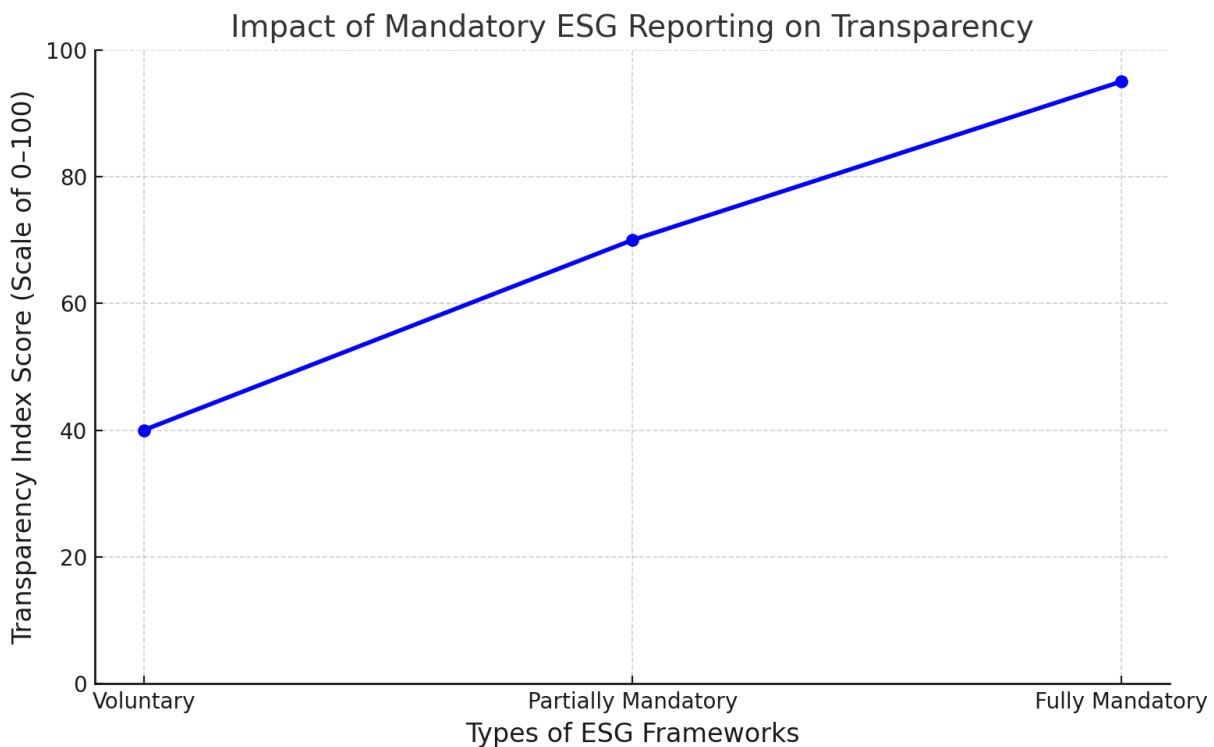
For consumers, public awareness campaigns that expose common greenwashing tactics could foster informed purchasing decisions. Consumer advocacy groups could also launch apps or platforms that track company ESG performance, empowering consumers to support genuinely sustainable brands.

5.4 Legal and Regulatory Recommendations

The lack of robust legal and regulatory frameworks contributes significantly to the prevalence of greenwashing. Companies often exploit the absence of standardized ESG reporting requirements to present misleading data (Marquis & Toffel, 2012).

Adopting stringent legal frameworks, similar to the EU Taxonomy Regulation, could provide clear criteria for sustainable activities and reduce opportunities for greenwashing. Such frameworks should include mandatory ESG reporting for publicly listed companies and impose penalties for non-compliance.

Moreover, regulatory bodies such as the Securities and Exchange Commission (SEC) should be empowered to investigate and prosecute cases of greenwashing. Clear legal definitions of greenwashing, coupled with fines and legal repercussions, would deter companies from engaging in deceptive practices.



Graph: Mandatory ESG Reporting and its Impact on Transparency

The graph would illustrate a progressive increase in transparency scores as frameworks transition from voluntary to fully mandatory, underscoring the importance of enforceable standards.

6. Conclusion

6.1 Summary of Key Findings

This research underscores that greenwashing is a significant impediment to the effective integration of Environmental, Social, and Governance (ESG) principles in corporate reporting. Analysis of sustainability reports and stakeholder interviews highlighted the prevalence of selective disclosure, vague sustainability claims, and irrelevant environmental assertions as the most frequent manifestations of greenwashing. These practices erode the credibility of ESG reporting, compromise stakeholder trust, and distort decision-making among investors and consumers. The study further revealed that while greenwashing is widespread across industries, the tactics employed differ by sector. The lack of rigorous regulatory oversight and independent third-party verification exacerbates this issue, enabling companies to persist in misleading ESG practices with minimal accountability.

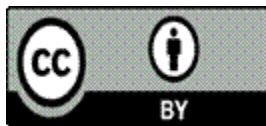
Greenwashing presents significant risks to companies, including reputational damage and potential long-term financial losses, as stakeholders become more discerning. Companies engaging in deceptive ESG practices may face intensified scrutiny, while those adopting transparent practices can enhance trust and loyalty. For investors, greenwashing undermines the reliability of ESG data, leading to poor investment decisions and diminished confidence. Consumers are also impacted, as misleading claims obscure the true social and environmental effects of products. Regulators must implement stricter legal frameworks and enforcement mechanisms, such as mandatory audits, to reduce greenwashing. Future research should explore the long-term effects of greenwashing, the role of emerging technologies like blockchain in verifying ESG claims, and the effectiveness of educational campaigns and collaborative frameworks to strengthen ESG standards. Addressing greenwashing is essential for ensuring the integrity and progress of ESG practices.

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