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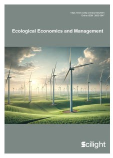

Article

Green Economy and Greenwashing: A Critical Literature Review on the Paradoxes of Sustainable Transition

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Abstract: This article provides a critical literature review of the green economy and greenwashing, examining their conceptual foundations, evolution, and inherent tensions within the contemporary sustainability transition. Drawing on interdisciplinary academic sources from economics, management, environmental studies, and public policy, the article synthesizes theoretical, empirical, and normative contributions to clarify how the green economy has been framed as a pathway toward sustainable development. At the same time, it highlights greenwashing as a structural challenge that undermines the credibility and effectiveness of this transition. The analysis shows that conceptual ambiguity, weak regulatory frameworks, and fragmented reporting standards have facilitated the proliferation of symbolic sustainability practices that do not correspond to substantive environmental performance. The article also identifies key research gaps, including the need for greater conceptual standardization, longitudinal empirical evidence, and deeper analysis of organizational and institutional drivers of greenwashing. Finally, emerging research lines related to digital technologies, ESG governance, regulation, and sustainable finance are discussed, offering directions for advancing more credible and transformative green economy practices.

Keywords: green economy; greenwashing; sustainable development; ESG reporting; environmental governance

1. Introduction

Over the last few decades, increasing environmental degradation, accelerated depletion of natural resources, and worsening climate change have called into question traditional economic models based on unlimited growth. Phenomena such as increased greenhouse gas emissions, loss of biodiversity, soil and ocean pollution, and growing social inequalities have highlighted the structural limitations of the conventional economic paradigm. In this context, the concept of the green economy has emerged strongly as a proposal aimed at reconciling economic growth with environmental sustainability and social well-being [1].

The green economy is presented not only as a technical approach to economic policy, but also as a regulatory and strategic framework that seeks to transform production, energy, and consumption systems [2]. Since the beginning of the 21st century, international organizations such as the World Bank and the Organization for Economic Cooperation and Development (OECD) have actively promoted this concept, linking it to poverty eradication, green job creation, and resilience to environmental and economic crises. In particular, the United Nations Environment Programme (UNEP) report Towards a Green Economy [3] marked a turning point by establishing the green economy as a central theme in the global debate on sustainable development.

However, the rise of the green economy has been accompanied by a growing instrumentalization of environmental discourse, especially in the business world [4,5]. In an environment characterized by greater social sensitivity to ecological issues and by consumers who are increasingly concerned about the environmental impact of the products and services they consume, many organizations have adopted "green" communication strategies as a mechanism for competitive differentiation. This phenomenon has led to the emergence and expansion of greenwashing, understood as the misleading, exaggerated, or ambiguous use of environmental claims that do not correspond to actual or verifiable environmental performance [6].

Greenwashing represents one of the main threats to the credibility and effectiveness of the green economy. Far from being a marginal problem, various studies indicate that these practices can distort markets, weaken consumer confidence, create competitive disadvantages for companies truly committed to sustainability, and ultimately slow down the transition to more sustainable economic models. In this sense, greenwashing is not only an ethical or communication problem, but also a systemic failure that affects the functioning of market mechanisms and the formulation of public policies.

From an academic point of view, both the green economy and greenwashing have experienced significant growth in scientific production in recent years. The existing literature covers multiple disciplines, including economics, business management, marketing, law, environmental sciences, and consumer studies. However, this disciplinary diversity has generated a fragmented theoretical body, with heterogeneous definitions, disparate methodological approaches, and sometimes contradictory empirical results. In particular, while the green economy is usually approached from a macroeconomic and public policy perspective, greenwashing is more often analyzed from a micro perspective, focusing on business strategies and stakeholder perceptions.

In this scenario, it is necessary to conduct a comprehensive and critical review of the literature that allows us to:

(1) Clarify the conceptual foundations and evolution of the green economy.
(2) Systematize the main definitions, types, and mechanisms of greenwashing.
(3) Analyze the interrelationships between both concepts, identifying tensions, contradictions, and possible synergies.
(4) Evaluate the economic, social, and environmental impacts associated with greenwashing within the framework of the green economy.
(5) Identify research gaps and emerging lines of inquiry for future studies.

The main objective of this article is to synthesize and analyze the state of the art on the green economy and greenwashing, providing a coherent theoretical framework that allows us to understand how both phenomena interact in practice. This work aims to contribute to a more comprehensive and critical scholarly discussion on economic sustainability in the modern setting by analyzing theoretical studies, systematic reviews, empirical research, and normative contributions.

This article is structured as follows: after this introduction, a conceptual and evolutionary review of the green economy is presented; subsequently, the phenomenon of greenwashing is analyzed in depth; next, the relationship between both concepts and their implications for companies, consumers, and regulators is examined; then, current and future trends in research and practice are discussed; and, finally, the general conclusions of the study are presented.

2. Green Economy: Conceptualization and Evolution

2.1. Historical Evolution and Terminological Convergence

The concept of green economy is the result of a progressive evolution in economic and environmental thinking that dates back to the debates on the limits to growth that arose in the second half of the 20th century. A foundational milestone was the report *The Limits to Growth* [7], which highlighted the incompatibility between exponential growth and the finite availability of natural resources. This work helped lay the foundations for a structural critique of the dominant economic paradigm.

Subsequently, during the 1980s and 1990s, the concept of sustainable development took center stage on the international agenda following the publication of the Brundtland Report (World Commission on Environment and Development [8]). This report defined sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs, integrating economic, social, and environmental dimensions. However, several authors have pointed out that this definition, although normatively powerful, proved difficult to operationalize in concrete economic policies [9].

Faced with this operational vacuum, the green economy emerged as a pragmatic and action-oriented approach, consolidating itself after the 2008 financial crisis. At that time, organizations such as UNEP and the OECD promoted it as a strategy capable of synchronizing economic recovery with environmental protection and job creation [3,10].

However, the consolidation of the term has generated debate about how it differs from green growth and sustainable development itself. Although they are often used interchangeably, academic literature highlights substantial differences [11]:

- Green growth: Defined as a technical subset focused on decoupling through technological innovation and energy efficiency, seeking to maintain economic dynamism without depleting natural capital [10].
- The green economy: This proposes a more holistic and transformative vision, incorporating objectives of social equity, poverty reduction, and human well-being as inseparable pillars of environmental sustainability [3].
- Sustainable development: This functions as the umbrella framework or normative horizon. While sustainable development defines the "what" (the ultimate goal), the green economy and green growth attempt to articulate the "how" (the economic and instrumental means).

This conceptual overlap has led to ambiguity that complicates both academic research and the effectiveness of public policies [12]. It is precisely this lack of technical definition that allows the discourse of the green economy to be exploited for purely communicational purposes on occasion.

2.2. Theoretical Approaches and Policy Instruments

Academic literature reveals a considerable diversity of definitions of the concept of green economy. One of the most cited is that proposed by UNEP, which defines green economy as one that improves human well-being and social equity, while significantly reducing environmental risks and ecological scarcities [3]. This definition highlights the need to integrate economic, social, and environmental objectives into a single public policy framework.

From a perspective closer to environmental economics, some authors conceive of the green economy as a set of mechanisms aimed at correcting market failures by internalizing environmental externalities [13]. Under this approach, instruments such as carbon taxes, emissions markets, and green subsidies make it possible to reconcile economic growth with reducing environmental impact without questioning the fundamentals of the current economic system [14].

In contrast, ecological economics takes a more critical stance, arguing that the green economy should involve profound structural transformations, including the redefinition of growth, the recognition of biophysical limits, and the redistribution of resources [15,16]. From this perspective, there is a risk that the green economy will be used as an ambiguous concept that legitimizes unsustainable practices under environmental rhetoric, a phenomenon known as greenwashing.

This dichotomy has led to a proliferation of interpretations that prevents a consensus definition of the green economy. In recent years, the concept has evolved towards more specific and operational approaches. On the one hand, it has been closely linked to the circular economy, which seeks to close material and energy cycles [12,17]. On the other hand, following the Paris Agreement and the 2030 Agenda, the green economy has been operationalized through deep decarbonization strategies, where the goal is no longer just to "mitigate" environmental damage, but to transform the productive matrix towards climate neutrality [18].

However, this conceptual and methodological diversification has not resolved the fundamental dilemma at the heart of the academic and political debate: is the green economy a cosmetic reform of current capitalism or a structural break towards a model of prosperity without growth [19,20]? This question is not merely theoretical, but has direct implications for public policy design, resource allocation, and the evaluation of the effectiveness of initiatives labeled as "green". The lack of conceptual clarity around this issue is precisely one of the factors that facilitates the emergence of greenwashing, a topic that will be addressed in depth in Section 3.

To implement these approaches, the green economy relies on a wide variety of economic and environmental policy instruments. Among the most relevant are market-based instruments, such as environmental taxes and emissions trading systems, which have been widely analyzed in the literature for their ability to encourage behavioral change at a lower social cost [21].

Green economy policies also include fiscal and financial incentives, such as subsidies for renewable energy, green bonds, and sustainable financing mechanisms, which seek to mobilize private investment toward strategic sectors [22]. Complementarily, environmental regulation establishes minimum performance standards, while innovation policies promote the development and dissemination of clean technologies.

However, several authors warn that the effectiveness of these instruments depends largely on institutional quality, regulatory coherence, and transparency in monitoring and evaluation systems [23].

2.3. Critical Tensions: From the Growth Dilemma to the Risk of Greenwashing

Despite its growing acceptance, the green economy has been the subject of significant criticism. One of the most recurrent criticisms is that this approach may encourage the commodification of nature, reducing ecosystems to economic assets subject to market logic [24]. From this perspective, the green economy could reproduce the same dynamics that have led to the current environmental crisis.

Another relevant criticism concerns global inequalities. Authors such as Hickel and Kallis [19] argue that the green economy, as currently implemented, may disproportionately benefit developed countries, while shifting environmental and social costs to developing countries.

Furthermore, the absence of standardized and verifiable indicators makes it difficult to measure the actual performance of green economy initiatives, increasing reliance on corporate narratives and reports. This methodological weakness creates an environment conducive to greenwashing practices, especially in contexts of low regulatory oversight [25].

The literature agrees that the green economy constitutes the structural environment within which greenwashing emerges. Growing institutional, regulatory, and social pressure to adopt sustainable practices has encouraged companies and organizations to project an environmentally responsible image, even when their actual practices do not correspond to this discourse [26].

When the green economy is implemented without robust verification, auditing, and accountability mechanisms, it can encourage symbolic and superficial sustainability strategies. In this sense, the green economy has an ambivalent nature: it can act as an engine of real transformation or as a discursive framework that legitimizes deceptive practices. This tension means that greenwashing is not an anomaly of the system, but a byproduct of the lack of standardized metrics in the green transition.

3. Greenwashing as a Multidimensional Phenomenon

3.1. Conceptualization, Evolution and Typologies

The term greenwashing was first introduced by environmentalist Jay Westerveld in the 1980s to describe hotel practices that appealed to environmental responsibility, such as towel reuse, without any real commitment to sustainability. Since then, the concept has evolved and established itself as a relevant subject of study in multiple academic disciplines, particularly in the fields of business management, marketing, economics, and environmental sciences.

In the context of the contemporary sustainability transition, greenwashing has evolved from a marginal marketing issue into a structural challenge that threatens the credibility of the green economy. It is formally defined as a set of strategic practices where an organization communicates environmental information that is misleading, incomplete, or false. This creates a significant "decoupling" between the image perceived by stakeholders, such as consumers and investors, and the entity's actual environmental performance. These practices can manifest as the "seven sins of greenwashing," which include vagueness, lack of proof, and the use of irrelevant claims to gain a competitive advantage without making substantive ecological improvements. Contrasting this is the emerging phenomenon of greenhushing, which represents a different but equally complex communication strategy. While greenwashing involves overstating environmental credentials, greenhushing occurs when organizations deliberately choose to under-report or remain silent about their legitimate, verifiable sustainability achievements. This behavior is often a defensive response to a hyper-critical regulatory and social environment. Organizations may fear that by publicizing their green initiatives, they will invite intense scrutiny, be held to impossible standards, or be unfairly accused of greenwashing if they do not achieve perfection across all ESG (Environmental, Social, and Governance) dimensions.

The relationship between these two concepts illustrates the ambivalent nature of environmental discourse in today's markets. While greenwashing distorts market mechanisms by rewarding symbolic actions over real ones, greenhushing creates a different type of information vacuum that prevents the dissemination of best practices. Both phenomena are exacerbated by a lack of standardized metrics and unified reporting frameworks. As the transition toward a green economy intensifies, the tension between the risk of being deceptive (greenwashing) and the risk of being overly cautious (greenhushing) remains a central dilemma for corporate governance and responsible communication.

In contemporary literature, greenwashing is defined as the set of practices through which an organization communicates positive environmental information that is misleading, incomplete, or false, creating a gap between actual environmental performance and that perceived by stakeholders [25]. This definition emphasizes the strategic and communicational nature of the phenomenon, as well as its ability to distort the decision-making of consumers, investors, and regulators.

Other authors expand this definition by pointing out that greenwashing does not necessarily involve explicitly false claims, but can manifest itself through omissions, vagueness, the use of ambiguous technical language, or disproportionate emphasis on marginal environmental initiatives [26]. In this sense, greenwashing can take subtle and difficult-to-detect forms, which complicates its regulation and empirical evaluation.

The literature has proposed various classifications of greenwashing with the aim of categorizing its most common manifestations. One of the most influential frameworks is that proposed by TerraChoice [27], which identifies the so-called "seven sins of greenwashing," including lack of evidence, vagueness, irrelevance, and false labeling.

From an academic perspective, Lyon and Montgomery [26] distinguish between symbolic greenwashing and substantive greenwashing. The former refers to actions focused exclusively on communication and corporate image, while the latter involves the adoption of minimal or irrelevant environmental practices that are presented as significant transformations. This distinction is particularly useful for analyzing how companies can formally comply with certain requirements without generating real environmental improvements.

Other studies have identified specific mechanisms through which greenwashing materializes, such as the selective use of environmental indicators in sustainability reports, voluntary certification without independent auditing, or the exploitation of regulatory loopholes in advertising regulations [28]. These mechanisms tend to intensify in highly polluting sectors, where social and regulatory pressure is greater.

3.2. Determinants, Impacts, and ESG Dimension of Greenwashing

Various authors have analyzed the factors that drive greenwashing, highlighting both internal and external determinants within organizations. At the organizational level, empirical studies suggest that companies with greater media exposure, high reputational risk, or poor environmental performance are more likely to resort to greenwashing as a defensive strategy [25].

At the institutional level, the literature highlights the role of regulatory weakness, the lack of uniform reporting standards, and regulatory fragmentation between countries as key elements that facilitate the proliferation of deceptive practices [29]. Likewise, the growing demand for “green” products and services by consumers and investors generates economic incentives that can encourage opportunistic behavior.

From an institutional theory perspective, greenwashing can be interpreted as a strategy for seeking legitimacy, whereby organizations attempt to symbolically align themselves with dominant social norms without substantially changing their internal practices [30]. This perspective is particularly relevant in the field of the green economy, where sustainability has become a widely accepted social value.

The literature agrees that greenwashing has significant negative effects at multiple levels. In the field of consumption, various experimental studies have shown that repeated exposure to misleading messages increases consumer skepticism, reduces trust in environmental claims, and weakens the effectiveness of genuine green marketing [31].

At the market level, greenwashing can create competitive distortions, as companies that engage in misleading practices can reap reputational and economic benefits at a lower cost than those that make real investments in sustainability. This situation penalizes committed actors and discourages the adoption of substantive environmental practices [26].

From a macroeconomic and environmental perspective, greenwashing constitutes a structural barrier to the transition to an effective green economy, as it diverts resources, attention, and trust toward initiatives that do not contribute significantly to reducing environmental impact [32].

In recent years, the phenomenon of greenwashing has become particularly relevant in relation to sustainability reporting and ESG criteria [33–35]. Although these instruments have been designed to improve transparency and accountability, the literature points out that their largely voluntary nature and the absence of unified standards have facilitated sophisticated greenwashing practices [36]. While ESG provides the criteria and metrics for financial and governance evaluation, the Sustainable Development Goals (SDGs) function as the overarching normative framework that organizations use to signal alignment with global sustainability priorities. The Sustainable Development Goals constitute a primary transmission channel through which green economy principles are often diverted towards greenwashing practices. While the green economy provides the structural framework for transition, the SDGs offer a universally recognized “normative grammar” that organizations utilize to communicate sustainability. However, this transmission often occurs through symbolic alignment rather than substantive integration. Because the SDGs are high-level and multifaceted, they provide a broad discursive space where companies can selectively highlight contributions to specific goals (e.g., SDG 13: Climate Action) while obscuring negative impacts in other areas, a practice known as “SDG-washing”.

Several studies have revealed inconsistencies between companies’ actual environmental performance and the ESG ratings assigned by rating agencies, suggesting that greenwashing may influence the perceptions of investors and financial analysts [37]. This phenomenon poses significant challenges to the credibility of sustainable finance and reinforces the need for independent verification mechanisms.

3.3. Greenwashing as a Structural Challenge for the Green Economy

Finally, the literature converges in pointing out that greenwashing should not be understood as isolated or exceptional behavior, but rather as a structural problem associated with the incomplete implementation of the green economy. When public policies and regulatory frameworks emphasize communication results over measurable performance, an environment conducive to symbolic sustainability strategies is created.

In this sense, greenwashing represents an inherent tension in the transition to the green economy: while environmental discourse is expanding rapidly, control, evaluation, and sanction mechanisms are advancing at a slower pace. This temporal asymmetry creates a window of opportunity for deceptive practices that exploit the gap between social expectations and institutional verification capabilities. Addressing this gap is one of the main challenges in ensuring that the green economy leads to real transformations and is not limited to rhetorical change.

4. Current and Future Trends in Green Economy and Greenwashing

In recent years, research and practice surrounding the green economy and greenwashing have undergone significant evolution, marked by growing conceptual, methodological, and regulatory sophistication. One of the most notable trends is the progressive incorporation of advanced technologies, especially artificial intelligence, machine learning, and big data analysis, to improve the assessment of actual environmental performance and reduce the gap between communication and action. Recent studies indicate that these tools enable the systematic analysis of sustainability reports, ESG reports, and corporate communications, identifying linguistic patterns, inconsistencies, and biases associated with greenwashing [36,38]. This line of research points to a future in which environmental performance verification could be carried out in a more continuous, automated, and objective manner, reducing dependence on corporate self-regulation.

At the same time, there has been an intensification of the regulatory framework and the use of litigation as mechanisms to combat greenwashing. In particular, the European Union has made significant progress in establishing directives and regulations aimed at strengthening the transparency of environmental claims, harmonizing the criteria for classifying sustainable activities, and limiting the use of vague or unverifiable statements in corporate communications.

Recent literature emphasizes that this regulatory tightening responds to the realization that voluntary approaches have been insufficient to ensure the credibility of the green economy and sustainable finance [36]. In this context, it is expected that in the future there will be an increase in both legal sanctions for greenwashing and the requirement for independent audits and mandatory reporting standards.

This regulatory deployment is complemented by a substantial increase in strategic litigation. Landmark cases, such as lawsuits against energy corporations for their carbon offset programs or sanctions imposed by competition authorities on the automotive industry for misleading advertising, illustrate this change in trend. According to data from the Sabin Center for Climate Change Law, global climate litigation exceeded 2,500 cases in 2024, with a growing number of accusations of greenwashing [39]. This phenomenon consolidates the transition from voluntary self-regulation to a binding legal liability framework.

Another relevant trend is the sustained growth of bibliometric studies and systematic reviews that seek to organize an increasingly broad and fragmented field of research. These works make it possible to identify the main theoretical currents, the most influential authors and journals, as well as the gaps in the literature on green economics and greenwashing [40]. Looking ahead, greater convergence toward integrated theoretical frameworks that combine institutional economics, legitimacy theory, consumer studies, and sustainable finance is expected, overcoming overly sectoral or disciplinary approaches.

Likewise, the digitization of business communication has opened up new lines of research focused on the role of social media and digital platforms as privileged spaces for the construction of green narratives. Various studies show that environmental communication in digital environments, characterized by its immediacy and high visual impact, can amplify both genuine sustainability strategies and greenwashing practices, significantly influencing public perception and shaping consumer attitudes [31,41]. In the future, research is likely to delve deeper into the analysis of the role of algorithms, the viralization of content, and the interaction between companies and users in shaping environmental credibility.

From a broader perspective, there is a growing interdisciplinarity in the study of the green economy and greenwashing, incorporating dimensions such as environmental justice, social equity, and financial sustainability. This approach recognizes that greenwashing practices have not only environmental implications, but also social and economic ones, as they affect the distribution of benefits and costs of the ecological transition [19,24]. In this sense, future research will tend to analyze greenwashing not only as a business strategy, but as a structural phenomenon linked to the dynamics of contemporary capitalism and global inequalities.

Finally, a key trend is the gradual change in the perception and behavior of consumers and investors. Recent literature indicates an increase in skepticism toward environmental claims, accompanied by greater demand for transparency, verifiable evidence, and consistency between discourse and action [26,31]. This shift is putting pressure on companies to move from symbolic approaches to more substantive and measurable sustainability practices. In the future, this process could help strengthen the credibility of the green economy, provided it is accompanied by robust regulatory frameworks and effective accountability mechanisms.

Taken together, current and future trends suggest that the relationship between the green economy and greenwashing is undergoing a redefinition. As the green economy continues to consolidate itself as a central axis of public policy and business strategy, greenwashing emerges as a critical challenge that requires increasingly complex, integrated, and evidence-based responses. The way in which these trends evolve will be decisive in ensuring that the transition to more sustainable economic models translates into real transformations and is not limited to a change in discourse.

The future scenario presents two possible trajectories. One in which regulatory tightening, technological verification, and social scrutiny converge to effectively limit greenwashing, allowing the green economy to fulfill its transformative promises; and another in which the gap between discourse and action widens, definitively eroding the credibility of the sustainable transition and generating growing public disaffection. The way in which academic research, regulatory frameworks, and business practices evolve in the coming years will be decisive in determining which of these paths will prevail. The construction of a green economy will ultimately depend on the collective ability to translate rhetorical commitments into measurable, verifiable, and fair transformations.

Research Gaps and Emerging Lines for Future Studies

The literature on greenwashing has advanced significantly over the past decade, but it still has important gaps that open up opportunities for future research. One of the main gaps relates to the lack of conceptual and methodological consensus, as greenwashing has been approached from multiple definitions and typologies without clear standardization, making it difficult to compare studies and accumulate knowledge. In addition, much of the research has focused on developed countries and large corporations, leaving relatively unexplored cases of small and medium-sized enterprises, emerging economies, and specific sectors such as education, agribusiness, or digital ventures. There also remains limited longitudinal empirical evidence to analyze the long-term effects of greenwashing on both consumer confidence and the actual environmental performance of organizations.

Another significant gap lies in the analysis of the internal mechanisms that lead to greenwashing. Most studies focus on the external perceptions of consumers or stakeholders, while little is known about the organizational processes, institutional pressures, ethical dilemmas, and decision-making dynamics that favor these practices. There is also a lack of research that integrates the role of regulators, certifiers, and governance systems, especially in relation to the effectiveness of environmental regulations and sustainability reporting standards in preventing or mitigating greenwashing.

In terms of emerging lines of research, future studies could delve deeper into the use of digital technologies, such as artificial intelligence, big data, and blockchain, to detect, measure, and prevent greenwashing in real time. Another promising area is the analysis of greenwashing in the context of the Sustainable Development Goals, exploring how organizations use SDG discourse in a symbolic versus substantive way. Other emerging lines of research include the study of greenwashing in sustainable entrepreneurship and green startups, the role of social media and influencers in amplifying or denouncing these practices, and the relationship between greenwashing, greenhushing, and responsible communication strategies. These perspectives can contribute to a more comprehensive understanding of the phenomenon and the formulation of more effective strategies to promote authentic sustainability.

5. Conclusions

This article has thoroughly analyzed the academic literature on the green economy and greenwashing, with the aim of clarifying their conceptual foundations, their theoretical and empirical evolution, and the tensions that emerge from their interaction under the paradigm of contemporary sustainable development. Based on an examination of theoretical studies, systematic reviews, empirical analyses, and normative contributions, it has become clear that the green economy is a relevant and widely accepted framework for guiding the transition to more sustainable economic models, but that its practical implementation faces significant structural challenges.

The article has shown that the green economy is characterized by a remarkable diversity of approaches and definitions, ranging from instrumental visions focused on economic efficiency to more transformative approaches that emphasize the biophysical limits of growth and social equity. This conceptual heterogeneity, while reflecting the richness of the academic debate, has also contributed to ambiguity in the formulation of public policies and business strategies. In this sense, the lack of clear operational consensus has facilitated the adoption of green rhetoric without sufficient backing in terms of actual environmental performance.

At the same time, analysis of greenwashing has shown that this phenomenon cannot be understood as a marginal or exceptional practice, but rather as a recurring strategy that emerges in contexts where institutional and social pressure for sustainability exceeds the capacity of control, regulation, and verification systems. The literature reviewed agrees that greenwashing distorts the information available to consumers, investors, and policymakers, undermines confidence in sustainability initiatives, and creates perverse incentives that penalize actors who are truly committed to ecological transition.

One of the main contributions of this work is to highlight that the relationship between the green economy and greenwashing is intrinsically ambivalent. On the one hand, the green economy has driven significant advances in environmental policies, technological innovation, and the mobilization of financial resources toward sustainable activities. On the other hand, the rapid expansion of green discourse, without adequate accountability mechanisms, has created an environment conducive to symbolic and communicational practices that do not translate into substantive environmental improvements. This tension is one of the main challenges to the long-term credibility and effectiveness of the green economy.

The current and future trends analyzed in this article suggest that overcoming greenwashing will require more integrated and demanding approaches, combining binding regulatory frameworks, uniform reporting standards, independent audits, and the use of advanced technologies for assessing environmental performance. Likewise, the growing sophistication of consumers and investors, together with increased public scrutiny and climate litigation, points to a scenario in which purely discursive strategies will become increasingly ineffective.

From an academic perspective, this paper identifies the need to move towards more cohesive theoretical frameworks that integrate green economics, institutional theory, legitimacy studies, and sustainable finance. It also highlights the need to strengthen comparative empirical research, especially in developing countries, where the dynamics of greenwashing and the impacts of the green economy may differ significantly from those observed in advanced economies.

The current body of literature on the green economy and greenwashing faces several structural limitations that hinder a comprehensive understanding of the sustainable transition. Chief among these is the lack of standardized conceptual and methodological consensus, as heterogeneous definitions and disparate typologies make cross-study comparisons and the accumulation of knowledge difficult. Furthermore, a significant geographical and organizational bias exists; most research is concentrated on developed countries and large corporations, potentially overlooking the unique institutional drivers and dynamics of small and medium-sized enterprises and emerging economies. Finally, because much of the existing work is cross-sectional or theoretical, there remains a critical shortage of longitudinal empirical evidence required to analyze the long-term impacts of greenwashing on consumer behavior, investor trust, and actual environmental performance.

Future research on the green economy and greenwashing must move toward more integrated and technologically advanced frameworks to address current gaps in the literature. A primary line of inquiry involves the adoption of digital technologies, such as artificial intelligence, big data, and blockchain, to improve the assessment of actual environmental performance and reduce the gap between corporate communication and action. These tools allow for the systematic analysis of sustainability reports and corporate communications to identify linguistic patterns, inconsistencies, and biases associated with greenwashing, potentially leading to a future where verification is continuous, automated, and objective.

Furthermore, there is a critical need to shift focus from external stakeholder perceptions to the internal organizational mechanisms that drive these practices. Future studies should delve deeper into the decision-making dynamics, institutional pressures, and ethical dilemmas that lead firms to adopt symbolic rather than substantive sustainability strategies. This includes exploring the role of managers and internal governance systems in navigating the tension between social expectations and institutional verification capabilities.

Another promising area of research lies in the intersection of the Sustainable Development Goals and emerging business models. Future inquiry should explore how organizations utilize SDG discourse in a symbolic versus substantive way, particularly within the context of sustainable entrepreneurship, green startups, and digital ventures.

The green economy has been shown to represent a key opportunity to reorient economic development towards sustainability, but its transformative potential will depend largely on the capacity of economic, political, and social systems to limit greenwashing and promote genuine, measurable, and verifiable practices. Only through coherent coordination between discourse, action, and regulation will it be possible to ensure that the green economy contributes effectively to addressing the environmental and social challenges of the 21st century.

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