

E-COMMERCE POLICY ANALYSIS TO PREVENT GREENWASHING IN ECO-FRIENDLY FASHION BRANDS

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Abstract

The rapid growth of sustainability narratives in the global fashion industry has increased the prevalence of greenwashing practice on e-commerce platforms. As digital intermediaries, e-commerce platform play a central role in validating green claims; however, information asymmetry remains a major obstacle for consumers in making accurate purchasing decisions. This study aims to analyze the effectiveness of current e-commerce platform policies and their influence on consumer mitigation strategies as a preventive effort against the manipulation of sustainability claims. The research methods employed is a literature review with a critical-narrative approach. Data were collected through a systematic search of reputable scientific database with a publications range of 2021 – 2026. The analysis was conducted through a synthesis of content findings regarding “green” feature policies on various major platforms such as Shopee, Tokopedia, Tiktokshop, Lazada, Zalora, and Farfetch, to evaluate the extent to which platform information standardization can mitigate the risk in information asymmetry. The results indicate a significant gap between green marketing features on platforms and the actual credibility of the products offered. Platform policies that are merely administrative—such as self-claim keywords without a rigorous third-party verification system—increase the burden of independent mitigation on consumers. The study concludes that strengthening platform policies through the integration of automated vetting systems and real-time verified international certifications is a crucial preventive instrument. These findings recommend a transformation of platform policies from being mere transaction facilitators to becoming credibility validators to create a more transparent and accountable fashion consumption ecosystem

Keyword: E-commerce Policy, Mitigation Strategy, Purchase Decision, Greenwashing, Sustainable Fashion

Introduction

The fashion industry is one of the largest contributors to environmental degradation due to excessive resource consumption, textile waste, and, greenhouse gas emissions. In response to these challenges, the concept of sustainable fashion has emerged as an approach that integrates environmental responsibility, ethical production, and social sustainability throughout the product life cycle. As environmental awareness continues to increase, consumers are becoming more likely to consider sustainability attributes when making purchasing decisions, encouraging companies to promote environmentally friendly products. (HUR, 2026; Lady & Vikhri Septama, 2025)

However, the increasing demand for sustainable fashion has also encouraged companies to intensify the use of environmental claims as a marketing strategy. Terms such as eco-friendly, green, and sustainable are frequently used to attract environmental information that is inconsistent with their actual business practices. (Delmas & Burbano, 2011; Sinaga, 2025)

The rapid growth of e-commerce has further amplified this issue. Marketplace platforms enable sellers to communicate environmental claims through product descriptions, digital labels, promotional content, and live shopping features. Because consumers rely heavily on the information provided by sellers, misleading

environmental claims become increasingly difficult to verify, creating information asymmetry and reducing consumer trust in sustainable products. (Jannah et al., 2025; Wongkar & Apsari, 2021).

Based on the existing literature, previous studies have primarily examined greenwashing from three perspectives. First, the consumer behavior perspective, focusing on green trust, green purchase intention, green brand image, and consumer perceptions of greenwashing. Second, the sustainability and organizational perspective, emphasizing Environmental, Social, and Governance (ESG) principles, sustainability communication, and supply chain transparency. Third, the legal perspective, which discusses consumer protection and national regulatory frameworks, including the Competition and Markets Authority (CMA) Green Claims Code and the Federal Trade Commission (FTC) Green Guides.

Although previous studies consistently acknowledge that greenwashing creates information asymmetry, reduces consumer trust, and highlights the need for stronger regulations, limited attention has been given to how these regulations can be operationalized at the marketplace level. Existing studies generally focus on government regulation and corporate responsibility, while the role of marketplace platforms in implementing preventive operational policies remains underexplored.

Therefore, the novelty of this study lies in the development of an e-commerce policy that positions the marketplace not merely as a transaction intermediary, but also as a governance actor responsible for preventing greenwashing practices. This study proposes that marketplaces can function as gatekeepers through seller verification and environmental claim verification mechanisms. Under this approach, only sellers who successfully complete the verification process are permitted to use environmental claims, while non-verified sellers may continue selling their products but are prohibited from using sustainability-related claims until the verification process is completed.

Therefore, this study aims to analyze the role of marketplace operational policies in preventing greenwashing and to develop a Marketplace Green Governance framework that integrates consumer protection principles with platform governance mechanisms to improve the credibility of environmental claims in digital marketplaces.

Literature Review

Sustainable Fashion and Greenwashing Phenomenon. Sustainable fashion seeks to minimize environmental harm while addressing social and economic factors throughout the product lifecycle (Hur, 2026). It emphasizes eco-friendly raw materials, energy efficiency, waste management, and ethical labor practices (Hur, 2026; Trbovsek, 2025). Consumer environmental awareness enhances Green Product Knowledge and Perceived Green Value, positively influencing sustainable purchase intentions (Lady & Septama, 2025).

However, rising green demand has been exploited through greenwashing—environmental claims misaligned with actual practices (Delmas & Burbano, 2011). Zara's "Join Life" campaign exemplifies this, as its sustainability narrative contradicts its fast fashion business model (Trbovsek, 2025). In digital spaces, greenwashing appears through unsubstantiated terms like *eco-friendly* and *sustainable*, alongside digital symbols and live shopping narratives (Jannah et al., 2025; Sinaga, 2025). Such practices erode brand trust, intensify skepticism, and diminish repurchase intentions (Cholifah et al., 2025; Jannah et al., 2025). Studies estimate that 42% of environmental claims on e-commerce sites indicate greenwashing, with 55% lacking factual verification (Wongkar & Apsari, 2021; Raharjo & Kossay, 2025).

Information Asymmetry and Signaling Theory. Greenwashing in digital commerce stems from information asymmetry, where sellers possess superior knowledge of product ecological impacts relative to consumers (Akerlof, 1970; Fatchurrohman et al., 2026). This disparity leads to market failure, as consumers cannot distinguish genuinely sustainable products before purchase (Akerlof, 1970; Sinaga, 2025).

According to Signaling Theory (Spence, 1973), sustainability claims and eco-labels serve as quality signals intended to reduce information asymmetry. Yet, without verified evidence, these signals lose credibility and enable misleading marketing (Fatchurrohman et al., 2026; Spence, 1973). Given consumers' reliance on digital descriptions and visuals, the absence of monitoring mechanisms renders marketplaces susceptible to unsubstantiated claims (Hur, 2026; Wongkar & Apsari, 2021).

Consumer Protection and Digital Legal Frameworks. Trust erosion from greenwashing underscores the need for consumer protection frameworks ensuring accurate, clear, and honest information (Law No.

8 of 1999; Gultom & Sakti, 2023). Internationally, the FTC Green Guides (US) and CMA Green Claims Code (UK) promote transparency and accountability in environmental claims (CMA, 2021; FTC, 2024).

In Indonesia, consumer protection is supported by Law No. 8/1999, the ITE Law, and Government Regulation No. 80/2019 on PMSE (Gultom & Sakti, 2023). However, national regulations remain macro-level and lack technical verification mechanisms for sustainability claims in e-commerce (Andriani & Siripipatthanakul, 2025; Gultom & Sakti, 2023). Operationalizing consumer protection into platform-specific policies is therefore urgent (Wongkar & Apsari, 2021).). As gatekeepers, platforms possess technical authority to verify and filter information before consumer dissemination (Gillespie, 2018)

Marketplace Policy and Marketplace Green Governance. Marketplace policies serve as platform governance instruments regulating user activities, content moderation, and rule enforcement (Gillespie, 2018; Gorwa 2019). As gatekeepers, platforms possess technical authority to verify and filter information before consumer dissemination (Gillespie, 2018).

Nevertheless, most marketplaces lack specific operational policies for verifying environmental claims such as eco-friendly or sustainable (Andriani & Siripipatthanakul, 2025; Hur, 2026). Prior research has largely focused on macro-regulation or consumer behavior, leaving platform operational roles underexplored (Gorwa, 2019; Wongkar & Apsari, 2021). To fill this gap, this study introduces Marketplace Green Governance, with an advice solution rrrSaQW1212a platform governance approach integrating environmental claim verification, keyword restrictions absent certification, and consumer protection into marketplace policies to preemptively prevent greenwashing.

Methodology

This study employs a qualitative approach combining a Systematic Literature Review (SLR) with policy analysis. The SLR method is utilized to identify, evaluate, and synthesize prior research pertaining to greenwashing, sustainable fashion, marketplace policy, consumer protection, and marketplace green governance. This approach was selected for its capacity to provide comprehensive insight into the development of research in the field while simultaneously identifying existing research gaps (Cakra Dewa et al., 2022).

In addition to the literature synthesis, this study undertakes a policy analysis of several digital marketplaces to identify how platforms regulate seller activities and the use of environmental claims. The objects of analysis encompass Indonesian marketplaces such as Shopee, Tokopedia, TikTok Shop, and Lazada, as well as international platforms such as Zalora and Farfetch. The analysis focuses on seller policies, product information requirements, and rules governing content or claims with the potential to mislead consumers

The literature search was conducted using several keywords, including "greenwashing," "marketplace policy," "marketplace governance," "consumer protection," "green trust," and "sustainable fashion," along with other relevant terms. All retrieved articles were subsequently organized using a literature matrix to facilitate identification, comparison, and synthesis of research findings.

In the initial stage, the literature search yielded approximately 50 relevant articles. Subsequent screening was performed based on inclusion criteria, namely articles published between 2021 and 2026, peer-reviewed journal articles, and those bearing relevance to the research topic. Articles failing to meet these criteria, such as proceedings, books, or non-journal publications were excluded from the analysis.

Following the identification, screening, and evaluation process with respect to research topic, abstracts, and full-text content, 15 articles met the criteria and were employed as the primary sources for this study. These 15 articles were then analyzed using a literature matrix to identify key themes, research gaps, and policy implications serving as the foundation for the development of the Marketplace Green Governance framework. The overall research process is illustrated in Figure 1. below.



Figure 1. Research Flow Market Green Governance

The selection of articles for this study was guided by a predefined set of eligibility criteria. These criteria were systematically applied throughout the identification, screening, and inclusion phases to ensure the rigor, relevance, and quality of the reviewed literature. The complete criteria are presented in Table 1 below.

Table 1. Inclusion Research

Criteria	Inclusion Criteria	Exclusion Criteria
Research	Articles discussing greenwashing, sustainable fashion, information	Articles that do not address greenwashing practices, sustainability claims, or digital
Topic	Asymmetry, consumer protection, or e-commerce/marketplace regulations/policies	Platform policies/governance
Domain/Sector	E-commerce sector, marketplace platforms, fashion/fast fashion industry, and digital consumer behavior	Studies conducted outside the digital ecosystem context or within conventional sectors irrelevant to e-commerce transactions.
Publication Year	Articles published within the period of 2021 to 2026	Articles published prior to 2021 (with the exception of foundational theoretical references such as Akerlof, 1970, or Delmas & Burbano, 2011)
Document Type	Peer-reviewed journal articles, indexed in Scopus or Sinta, and public policy studies (policy reviews)	Opinion pieces, personal blogs, mass media news articles lacking academic analysis, popular books, and unpublished working papers
Language	Articles published in either Indonesian or English	Articles written in languages other than Indonesian or English
Accessibility	Articles with full-text manuscripts available for analysis of methodology and findings.	Articles available as abstract-only or those with inaccessible full-text manuscripts (paywall or otherwise unavailable).

Result

Literature Synthesis. Based on the literature matrix, the selected studies can be classified into several major themes, namely (1) Sustainable Fashion, (2) Greenwashing, (3) Information Asymmetry, (4) Consumer Protection, (5) Marketplace Policy, and (6) Marketplace green Governance, as summarized in Table 2

Table 2. Main Findings from the Selected Literature

Theme	Main Findings	Representative Studies
Sustainable Fashion	Sustainable fashion has become an important strategy to reduce environmental impacts and respond to increasing consumer awareness of sustainability.	Hur (2026); Lady & Vikhri Septama (2025); Andriani & Siripipathanakul (2025)
Greenwashing	Greenwashing occurs when environmental claims are exaggerated, misleading, or unsupported by evidence, reducing consumer trust and purchase intention.	Delmas & Burbano (2011); Sinaga (2025); Jannah et al. (2025)
Information Asymmetry	Consumers often face difficulties verifying environmental claims in online marketplaces, resulting in information asymmetry and uncertainty in purchasing decisions.	Akerlof (1970); Spence (1973); Jannah et al. (2025)
Consumer Protection	Existing consumer protection regulations require truthful environmental claims but primarily focus on legal principles rather than operational implementation within e-commerce platforms.	Gultom & Sakti (2023); FTC Green Guides (2024); CMA Green Claims Code (2023); Cholifah et al. (2025)
Marketplace Policy	Marketplace platforms generally prohibit misleading information through seller policies, but few provide specific mechanisms for verifying environmental claims before publication.	Gillespie (2018); Gorwa (2019); Wongkar & Apsari (2021); Shopee Seller Policy; Tokopedia Seller Policy
Marketplace Green Governance	Previous studies highlight the importance of platform governance, yet operational frameworks for environmental claim verification remain limited. This indicates the need for governance mechanisms that integrate seller verification with sustainability claim verification.	Gillespie (2018); Gorwa (2019); Hur (2026); Andriani & Siripipathanakul (2025)

The literature synthesis indicates that previous studies consistently recognize greenwashing as a major challenge in sustainable fashion e-commerce. Most studies emphasize consumer behavior, legal protection, and sustainability communication. However, only a limited number of studies discuss the operational role of marketplace platforms in verifying environmental claims.

Policy Analysis of Existing Marketplace Platform. The comparison demonstrates that all selected marketplaces prohibit misleading product information. However, none provides a comprehensive mechanism to verify environmental claims before sellers are allowed to use sustainability-related labels or marketing statements.

Table 3. Verification Sustainability Claim From Each Platform

Marketplace	Seller Policy	Misleading Claims	Environmental Claim Verification
Shopee	✓	✓	✗
Tokopedia	✓	✓	✗
TikTok Shop	✓	✓	✗
Lazada	✓	✓	✗
Zalora	✓	✓	Partial
Farfetch	✓	✓	Partial

Gap Analysis. The findings from the literature synthesis and marketplace policy analysis reveal a significant gap between existing regulations and their operational implementation within e-commerce platforms. Previous studies consistently demonstrate that greenwashing undermines consumer trust, creates information asymmetry, and highlights the importance of consumer protection through regulatory frameworks. Similarly, current regulations, including consumer protection laws and environmental claim guidelines, emphasize the need for truthful and verifiable sustainability claims. However, the analysis of marketplace policies indicates that although major e-commerce platforms generally prohibit misleading product information, they do not provide a specific mechanism to verify environmental claims before such claims are displayed to consumers.

This finding suggests that the primary research gap does not lie in the absence of regulations, but rather in the lack of operational governance at the marketplace level. Existing studies predominantly focus on consumer behavior, corporate sustainability practices, and government regulations, while limited attention has been given to the role of marketplace platforms as governance actors responsible for verifying environmental claims. As a result, sellers can still publish sustainability-related claims without undergoing a standardized verification process, allowing information asymmetry and potential greenwashing practices to persist within digital marketplaces.

Based on these findings, this study argues that marketplace platforms should play a more proactive governance role by integrating environmental claim verification into their operational policies. Therefore, this research proposes a Marketplace Green Governance framework that combines seller verification with environmental claim verification, enabling marketplaces to enhance transparency, strengthen consumer protection, and reduce the risk of greenwashing in sustainable fashion e-commerce.

Proposed Marketplace Green Governance Framework. Based literature synthesis and policy analysis, this study proposes a Marketplace Green Governance framework as an operational policy model to prevent greenwashing in sustainable fashion e-commerce. The framework positions platforms as governance actors responsible for ensuring environmental claim credibility.

The framework operates as follows: when sellers register products, those without environmental claims proceed through standard listing. Sellers using environmental claims must submit supporting evidence (e.g., eco-certifications, environmental management certificates). The marketplace then verifies submitted documents. If evidence suffices, the platform approves verification and authorizes claim display with a

verification badge. If evidence is insufficient, sellers may continue selling but are prohibited from using environmental claims until verification is successfully completed. This approach maintains marketplace openness while preventing misleading sustainability communication.

The framework is expected to reduce information asymmetry, improve consumer trust, strengthen consumer protection, and enhance sustainability communication transparency. Additionally, it complements existing consumer protection regulations by translating legal principles into practical operational policies implementable by marketplace platforms.

Figure 2. Marketplace Governance Framework



Figure 2 illustrates the proposed Marketplace Green Governance framework. The framework introduces a two-stage decision process. First, sellers determine whether they intend to make environmental claims for their products. Second, environmental claims are subject to a verification process conducted by the marketplace. Only verified claims are permitted to display sustainability-related information, while unverified sellers may continue selling products without environmental claims. This mechanism is intended to balance marketplace accessibility with consumer protection and environmental claim credibility.

Discussion

Marketplace as a Governance Actor. Marketplace policies currently address prohibited content and fraud but overlook environmental claims, which remain self-declared and unverified despite consumer protection mandates. This challenges the intermediary-only view of platforms. Drawing on Gillespie (2018) and Gorwa (2019), platforms should adopt governance roles by verifying environmental claims pre-consumer exposure. In sustainable fashion e-commerce, governance must encompass sustainability claim verification beyond content moderation.

Reducing Information Asymmetry and Strengthening Consumer Protection. The framework mitigates information asymmetry by institutionalizing claim verification. Consumers face difficulties assessing claim credibility due to limited reliable information, fostering uncertainty and greenwashing. Evidence-based verification replaces seller declarations, ensuring claims are substantiated before influencing purchases. This enables informed consumer choices while curbing misleading communication.

Implication for Sustainable Fashion and Marketplace Policy. The framework promotes accountability: genuine businesses gain credibility through verified claims, while sellers lacking evidence may continue selling but cannot use sustainability claims until verification succeeds. This regulates claim usage rather than excluding sellers, balancing accessibility with protection, supporting fair competition, and complementing existing laws through operational procedures.

Theoretical and Practical Contributions. Theoretically, the study shifts greenwashing scholarship from consumer behavior and legal regulation toward operational marketplace governance, demonstrating platforms as active governance actors. Practically, the framework provides an operational model for e-

commerce platforms to enhance transparency, strengthen trust, and reduce greenwashing without restricting legitimate commerce, offering guidance for operators and policymakers.

Conclusion

This study analyzed the role of marketplace operational policies in preventing greenwashing practices within sustainable fashion e-commerce through a systematic literature review and policy analysis. The findings demonstrate that although existing regulations and marketplace policies generally prohibit misleading information, they do not provide a specific operational mechanism for verifying environmental claims before such claims are communicated to consumers. Consequently, environmental claims remain susceptible to greenwashing practices, contributing to information asymmetry and reducing consumer trust in sustainable products.

To address this gap, this study proposes the Marketplace Green Governance framework, which positions marketplace platforms as governance actors responsible for verifying environmental claims through an evidence-based verification process. Under the proposed framework, sellers intending to use sustainability-related claims are required to submit supporting documentation, while only verified claims are authorized for publication. This approach enables marketplaces to strengthen consumer protection, improve transparency, and reduce the risk of misleading environmental communication without limiting sellers' participation in digital commerce.

Theoretically, this research extends the greenwashing literature by shifting the analytical perspective from consumer behavior and legal regulation toward operational platform governance. Practically, the proposed framework provides a policy model that may assist marketplace operators in implementing environmental claim verification as part of their governance responsibilities, while also supporting policymakers in translating consumer protection principles into operational marketplace practices.

Despite these contributions, this study is limited by its reliance on secondary data obtained through a systematic literature review and policy analysis. The proposed framework has not yet been empirically implemented or evaluated in real marketplace environments. Therefore, future research is encouraged to validate the framework through case studies, stakeholder interviews, or pilot implementation within e-commerce platforms to assess its effectiveness in reducing greenwashing and enhancing consumer trust.

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