Balancing Informativeness and Clarity in Green Marketing: Economic and Behavioural Perspectives on Consumer Decision-Making

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Abstract

This study investigates the influence of claim specificity and source credibility on consumer trust, perceived greenwashing, and purchase intention within the context of environmentally marketed products. Employing rigorous quantitative analysis, the findings reveal that clear and credible environmental claims significantly bolster consumer trust and reduce perceptions of greenwashing, thereby enhancing purchase intentions. The interaction effects between claim specificity and source credibility highlight the complexity of consumer responses to sustainability communications, suggesting a nuanced balance between informativeness and message clarity. These results provide valuable insights for marketers aiming to optimize green messaging and for policymakers focused on regulating environmental claims to protect consumers and promote sustainable consumption. The study contributes to the literature by elucidating the cognitive and behavioral mechanisms underpinning consumer reactions to green marketing and offers practical recommendations for improving communication strategies in sustainability contexts.

Keywords: Claim Specificity, Source Credibility, Consumer Trust, Greenwashing, Purchase Intention, Sustainable Consumption

1. Introduction

The growing environmental challenges facing Nigeria have prompted an urgent need for sustainable consumption patterns (Adeola & Evans, 2021). In response, green marketing has emerged as a strategic tool for firms aiming to promote eco-friendly products and encourage responsible consumer behaviour (Odugbesan et al., 2022). However, consumer skepticism toward green claims remains high, particularly in developing markets where regulatory enforcement is often inconsistent and greenwashing practices are perceived as widespread (Okpara & Idemudia, 2020). This study investigates how Nigerian consumers respond to green marketing messages by experimentally testing the effects of *claim specificity* (vague vs. specific) and *source credibility* (brand vs. third-party certifier such as NAFDAC or NESREA) on trust, perceived greenwashing, and purchase intention.

Despite the proliferation of eco-labels and environmental certifications globally, empirical research on their effectiveness within Nigeria's consumer market remains limited (Edeh et al., 2023). Existing studies predominantly focus on general attitudes toward green products without examining how the framing and source of environmental claims influence consumer perceptions and behaviours (Nwachukwu &Alajekwu, 2021). This study addresses this gap by adopting a 2×2 factorial experimental design, using mock advertisements for eco-friendly products targeted at Nigerian consumers. The first objective of this research is to *assess the extent to which the specificity of green claims (vague vs. specific) affects consumer trust and purchase intention in the Nigerian context*. Prior studies suggest that consumers are more likely to trust environmental claims that provide detailed, verifiable information (Chen & Chang, 2022); however, whether this pattern holds in markets where greenwashing is suspected to be prevalent remains underexplored.

A second research objective is to *examine how the credibility of the claim's source (brand vs. third-party certification) influences perceived greenwashing and trust*. The literature underscores the pivotal role of source credibility in shaping consumers' evaluation of green claims (Testa et al., 2023). Third-party certifications, such as those issued by regulatory agencies like the National Agency for Food and Drug Administration and Control (NAFDAC) or the National Environmental Standards and Regulations Enforcement Agency (NESREA), are expected to

mitigate consumer concerns about greenwashing by signaling external validation (Adeyanju & Salau, 2021). Yet, given the complex regulatory environment in Nigeria, where trust in public institutions varies across consumer segments (Obi & Umeh, 2020), it is essential to empirically test whether such certifications genuinely enhance consumer trust and purchase intention.

The third objective is to *explore potential interaction effects between claim specificity and source credibility on consumer responses, particularly in terms of perceived greenwashing and purchase intention*. The interaction between these variables may offer important insights into whether detailed claims only enhance consumer trust when they are externally validated, or if their effect persists even when issued by the brand itself. While international research highlights the synergistic benefits of combining specific claims with credible sources (Marques & Marques, 2022), the extent to which these findings are transferable to the Nigerian consumer market—characterised by regulatory fragmentation and varying levels of environmental awareness—has yet to be established.

By addressing these objectives, this study contributes to both theory and practice. Theoretically, it extends the literature on green marketing effectiveness by testing how message framing and source interact in an under-researched emerging market setting. From a practical perspective, the findings provide actionable insights for marketers seeking to design credible green campaigns, as well as for policymakers aiming to promote authentic environmental communication and curb greenwashing. The study's use of mock advertisements in an experimental setting enhances the internal validity of the findings while offering a controlled environment to isolate the effects of the manipulated variables.

The remainder of this article is structured as follows. The next section reviews relevant theoretical and empirical studies on green marketing, claim specificity, and source credibility. This is followed by a detailed explanation of the methodology, including the experimental design, sample characteristics, and measures. The results section presents the outcomes of the analyses, while the final sections discuss the implications, limitations, and directions for future research.

2. Empirical Review

Green marketing communication strategies and their influence on consumer perceptions and behaviour have been extensively investigated across diverse contexts, yet limited evidence exists for emerging economies like Nigeria. A growing body of empirical research underscores the significance of claim specificity in shaping consumer trust, attitudes, and behavioural intentions. For instance, Chen and Chang (2022) demonstrated in a large-scale survey experiment in Taiwan that specific, quantifiable environmental claims significantly increased perceived credibility and purchase intention, compared to vague claims. Similarly, a study by Marques and Marques (2022) across five European countries found that detailed green claims were more persuasive and reduced perceptions of greenwashing when accompanied by quantifiable data (e.g., percentage reduction in carbon footprint). These findings align with earlier meta-analyses suggesting that message specificity enhances information diagnosticity, thus reducing consumer uncertainty (Newman et al., 2020).

Within the African context, relatively few studies have rigorously tested the effects of claim specificity, but emerging evidence is instructive. Odugbesan et al. (2022) reported that Nigerian consumers exhibit a preference for detailed green claims, particularly in sectors such as food and personal care, where product safety is paramount. Edeh et al. (2023) found similar results in urban Nigeria, where specific claims about recyclability and biodegradability positively influenced purchase intention. These findings highlight the contextual relevance of claim specificity, particularly in markets characterised by weak regulatory enforcement and high consumer scepticism toward environmental messaging (Obi & Umeh, 2020).

The credibility of the source issuing green claims has also attracted substantial empirical attention. Multiple studies report that third-party certifications (e.g., by government agencies or reputable non-governmental organisations) enhance consumer trust and attenuate perceptions of greenwashing (Testa et al., 2023; Atkinson & Rosenthal, 2019). A discrete choice experiment by Testa et al. (2023) involving Italian consumers revealed that eco-labels from trusted third parties significantly outperformed self-declared green claims in driving purchase intention. In contrast, self-issued claims often failed to overcome consumer cynicism, especially in sectors with a history of misleading advertising. This pattern appears consistent across markets: Abdul-Rashid

et al. (2020) found that Malaysian consumers attached greater weight to third-party certifications, particularly for durable goods. A study of South African consumers by Agyeman and Ansong (2021) similarly confirmed the positive role of external certification in mitigating greenwashing concerns.

Evidence from Nigeria suggests a more nuanced picture. Adeyanju and Salau (2021) argue that although third-party certifications such as those from NAFDAC and NESREA positively influence trust, their impact is moderated by perceived institutional integrity. Obi and Umeh (2020) highlighted that Nigerian consumers' trust in regulatory bodies varies by socio-economic status and prior experiences with institutional failures, which in turn shapes the effectiveness of certification schemes. Edeh et al. (2023) further observed that certification enhances purchase intention primarily among more educated consumers and those with higher environmental awareness. These findings suggest that in contexts where institutional trust is variable, the credibility of the certifying body itself becomes a key determinant of the certification's persuasive power.

Beyond the independent effects of claim specificity and source credibility, several empirical studies have explored their interaction. Marques and Marques (2022) provided evidence that the positive effects of claim specificity on purchase intention were significantly stronger when paired with third-party certification. Similarly, Chen and Chang (2022) found that the combination of detailed claims and credible certification created a synergistic effect that reduced consumer scepticism and boosted trust. In contrast, vague claims, even when certified, were less effective at generating positive consumer responses. This interaction effect has been underexplored in African markets, although preliminary evidence points to its relevance. Odugbesan et al. (2022) noted that detailed green claims issued by credible third parties were particularly influential in shaping the attitudes of Nigerian consumers toward eco-friendly fast-moving consumer goods.

The role of consumer characteristics and contextual factors in moderating these effects has also been widely studied. Newman et al. (2020) highlighted that environmental concern and regulatory context shape how consumers process green marketing messages. Abdul-Rashid et al. (2020) reported that Malaysian consumers with stronger pro-environmental values were more

responsive to claim specificity and certification cues. Similarly, in Nigeria, Nwachukwu and Alajekwu (2021) found that environmental awareness moderated the relationship between claim credibility and purchase intention, with highly aware consumers more discerning of vague claims and uncertified messages. Furthermore, socio-demographic factors such as age, education, and income have been shown to influence trust in green claims and eco-labels (Agyeman & Ansong, 2021; Edeh et al., 2023).

Finally, greenwashing remains a persistent concern across global markets, and empirical studies consistently demonstrate that consumers are sensitive to cues that signal authenticity versus deception. Testa et al. (2023) and Chen and Chang (2022) showed that vague, self-issued claims often trigger perceptions of greenwashing, thereby eroding trust and diminishing purchase intention. Adeyanju and Salau (2021) similarly reported that in Nigeria, vague claims not backed by third-party validation were frequently interpreted as greenwashing attempts, particularly in sectors previously exposed to deceptive marketing practices. These insights reinforce the importance of both claim specificity and source credibility as complementary strategies for reducing greenwashing perceptions and enhancing the effectiveness of green marketing.

Hypotheses:

Building upon the established research objectives and extant literature, this study proposes three core hypotheses. First, consistent with prior empirical findings that greater claim specificity enhances consumer trust and purchase intention (Chen & Chang, 2022; Marques & Marques, 2022), it is hypothesized that *specific green marketing claims will generate higher trust and purchase intention among Nigerian consumers compared to vague claims* (H1). Second, reflecting the documented influence of third-party certifications as credible signals that reduce greenwashing perceptions and foster trust (Testa et al., 2023; Adeyanju & Salau, 2021), it is posited that *green claims backed by third-party certifiers such as NAFDAC or NESREA will be perceived as more trustworthy and elicit greater purchase intention than brand-issued claims* (H2). Third, extending the interaction effects observed in both developed and emerging markets (Marques & Marques, 2022; Chen & Chang, 2022), this study hypothesizes that *the positive effect of claim specificity on trust and purchase intention will be stronger when the claim is*

accompanied by third-party certification, indicating an interaction between claim specificity and source credibility (H3). These hypotheses collectively aim to clarify the dynamics of green marketing effectiveness in the Nigerian context, where regulatory trust and consumer scepticism coexist (Obi & Umeh, 2020; Odugbesan et al., 2022).

3. Methodology

Primary data were gathered through an experimental survey aimed at capturing Nigerian consumers' reactions to green marketing messages. The experimental setup utilized a 2x2 factorial design that manipulated two key factors: claim specificity, operationalized as vague versus specific environmental claims, and source credibility, distinguished between brand-issued claims and those certified by recognized third-party agencies such as NAFDAC or NESREA. Participants were randomly allocated to one of the four experimental conditions and presented with mock advertisements for eco-friendly products, consistent with validated experimental designs in consumer behavior studies (Kühne & Clauss, 2021; Testa et al., 2023).

The sample comprised 600 Nigerian adults, selected via stratified random sampling to ensure demographic representativeness across age, gender, education, and geographical regions. This sample size affords adequate statistical power for detecting factorial and interaction effects as recommended by Cohen (2013). Ethical approval was secured, and informed consent was obtained from all participants to guarantee voluntary involvement.

The dependent variables in this study are purchase intention (P), consumer trust (T), and perceived greenwashing (G). Purchase intention is measured on a 5-point Likert scale ranging from "very unlikely" to "very likely" to purchase the eco-friendly product, reflecting behavioral intent as commonly employed in green marketing research (Chen & Chang, 2022). Trust is operationalized as a composite index derived from multiple Likert-scale items assessing the credibility and reliability of the environmental claims, following methods established in prior consumer trust research (Testa et al., 2023). Perceived greenwashing captures consumer suspicion or skepticism regarding the authenticity of the environmental claims, also constructed from multiple items, in line with the literature emphasizing the importance of detecting deceptive marketing practices (Adeyanju & Salau, 2021).

The key independent variables are claim specificity (S), a binary indicator coded 0 for vague claims and 1 for specific claims, and source credibility (C), another binary variable coded 0 when claims originate from the brand and 1 when claims are certified by a credible third-party entity. These operationalizations reflect the core experimental manipulations designed to test their causal effects on consumer attitudes and behaviors. Control variables include demographic factors such as age (continuous in years), gender (0 = male, 1 = female), and education (ordinal scale from primary to postgraduate), consistent with previous research demonstrating their influence on environmental perceptions and purchase behavior (Adeyanju & Salau, 2021; Obi & Umeh, 2020).

The relationships among the variables are modeled through a set of regression equations where the dependent variable Y corresponds to one of the outcomes T, G, or P. The baseline specification is:

$$Y_i = \alpha + \beta_1 S_i + \beta_2 C_i + \beta_3 (S_i \times C_i) + \mathbf{X}_{i'}\boldsymbol{\gamma} + \varepsilon_i \quad (1)$$

α denotes the intercept, while β_1, β_2, andβ_3 represent the coefficients for claim specificity, source credibility, and their interaction, respectively. The vector$\mathbf{X}$ contains control variables such as age, gender, and education, with corresponding parameters $\boldsymbol{\gamma}$. The error term ε_i is assumed to be normally distributed with mean zero and constant variance.

Robust standard errors clustered by experimental condition are applied to mitigate heteroscedasticity and account for potential intra-group correlation (White, 1980; Cameron & Trivedi, 2010). Sensitivity analyses include the use of ordered logistic regression to handle purchase intention as an ordinal outcome and mediation analysis to explore indirect effects of claim specificity and source credibility through trust and perceived greenwashing (Hayes, 2018).

Ordinary Least Squares (OLS) regression serves as the principal estimation method, suitable due to the quasi-continuous nature of the trust and greenwashing indices and the Likert-scaled purchase intention (Rusbult& Martz, 2019). This allows the direct assessment of main and interaction effects critical for understanding whether combining specific claims with third-party certification strengthens consumer responses.

Mediation analyses, implemented via the PROCESS macro for SPSS or equivalent packages in R, test whether the effects of the experimental treatments on purchase intention are mediated by trust and perceived greenwashing, thereby clarifying the underlying psychological mechanisms (Hayes, 2018).

Diagnostic procedures include Variance Inflation Factor (VIF) tests to detect multicollinearity with thresholds below 5 indicating acceptable predictor independence (Hair et al., 2021). Residual diagnostics through Breusch-Pagan and Shapiro-Wilk tests evaluate heteroscedasticity and normality assumptions, respectively. Alternative modeling approaches, such as generalized linear models and ordered logistic regressions, corroborate the robustness of findings (Cameron & Trivedi, 2010).

Further analyses examine demographic subgroup effects to explore possible moderation by consumer characteristics, recognizing Nigeria's cultural and socioeconomic diversity may influence green marketing effectiveness (Adeyanju & Salau, 2021). This comprehensive methodological approach enhances the validity and generalizability of the conclusions.

4. Results

The summary statistics presented provide a foundational understanding of the sample characteristics and variable distributions used in this study. Claim specificity and source credibility, both binary variables manipulated experimentally, have means close to 0.5, reflecting an even split between vague versus specific claims and brand versus third-party certification, consistent with the 2x2 factorial design. The interaction term between these two variables has a mean of approximately 0.255, indicating that about a quarter of respondents were exposed to the combined condition of specific claims from credible third-party sources. Demographically, respondents are on average 38 years old, with an almost equal gender distribution and a moderate level of educational attainment averaging just under a bachelor's degree. The key outcome variables show high levels of trust (mean ~4.85 on a composite scale), moderate perceived greenwashing (~0.96), and relatively strong purchase intention (~4.62), suggesting generally favorable consumer attitudes toward the eco-friendly products presented. The range and

variability in these measures provide adequate dispersion for meaningful statistical analysis (Adeyanju & Salau, 2021; Kühne & Clauss, 2021).

To assess potential multicollinearity concerns among the independent variables, Variance Inflation Factors (VIF) were computed. All VIF values are below the commonly accepted threshold of 5, with the interaction term showing the highest value at just over 3. This indicates that while the interaction between claim specificity and source credibility is moderately correlated with its constituent variables, it does not present a problematic level of multicollinearity that would bias coefficient estimates or inflate standard errors (Hair et al., 2021). The control variables (age, gender, education) have VIF values near 1, confirming their independence from the main predictors and each other. These diagnostics support the suitability of the regression models applied in subsequent analyses.

The OLS regression results for consumer trust reveal significant positive effects of claim specificity and source credibility individually, as well as their interaction, on trust levels. Specifically, both claim specificity and source credibility increase trust by approximately 0.77 points on the dependent variable scale, while the interaction contributes an additional positive effect of about 0.40. This synergistic effect suggests that specific environmental claims backed by credible third-party certification notably enhance consumer trust beyond the additive impact of either factor alone. Control variables also exert significant influences: age, gender (female), and education all positively associate with trust, indicating that older, female, and more educated consumers tend to report higher trust in environmental claims. The model explains a substantial proportion of variance in trust (adjusted $R^2 = 0.669$), reflecting strong explanatory power consistent with prior research emphasizing the importance of specificity and source credibility in building consumer confidence (Chen & Chang, 2022; Testa et al., 2023).

Conversely, the regression results for perceived greenwashing demonstrate that both claim specificity and source credibility significantly reduce consumer suspicion about environmental claims, with coefficients of approximately -0.59 and -0.80, respectively. The negative and significant interaction effect (-0.47) further indicates that specific claims endorsed by credible third parties decrease greenwashing perceptions more than either factor alone. Age also negatively influences greenwashing perceptions, though the effect size is small, while education

negatively associates with suspicion, suggesting that more educated consumers are less likely to perceive claims as greenwashing. Gender does not have a statistically significant effect in this model. This pattern aligns with literature asserting that credible and precise environmental communication reduces consumer skepticism and enhances perceived legitimacy (Adeyanju & Salau, 2021; Obi & Umeh, 2020). The model accounts for nearly 59% of the variance in perceived greenwashing, underscoring its robustness.

The final OLS model examining purchase intention shows strong positive effects of claim specificity and source credibility, with coefficients of 0.70 and 0.66, respectively, indicating that both factors independently increase consumers' likelihood to purchase eco-friendly products. However, unlike the models for trust and greenwashing, the interaction term here is negative (-0.41), implying that the combined presence of specific claims and credible sources somewhat diminishes purchase intention compared to their separate effects. This counterintuitive result may reflect a ceiling effect or consumer skepticism when presented with highly specific claims coupled with third-party certifications, possibly triggering scrutiny or cognitive overload (Hayes, 2018). Age, female gender, and higher education again positively influence purchase intention, consistent with demographic patterns observed for trust. With an adjusted R^2 of 0.551, the model explains over half the variance in purchase intention, highlighting the importance of both experimental manipulations and demographics in predicting green product buying decisions (Kühne & Clauss, 2021; Chen & Chang, 2022).

Taken together, these results confirm the critical roles of claim specificity and source credibility in shaping Nigerian consumers' trust, perceived greenwashing, and purchase intentions toward eco-friendly products, with nuanced interaction effects depending on the outcome variable. The consistent significance of demographic controls further suggests that age, gender, and education modulate consumer responses in meaningful ways, underscoring the necessity of tailored green marketing strategies within diverse consumer populations (Adeyanju & Salau, 2021; Obi & Umeh, 2020). The methodological rigor, including low multicollinearity and robust model fit statistics, lends confidence to the empirical findings and their implications for theory and practice in green consumer behavior research.

Table 1: Summary Statistics

Variable	Mean	Std. Dev.	Min	25th %ile	Median	75th %ile	Max
Claim_Specificity	0.520	0.500	0.000	0.000	1.000	1.000	1.000
Source_Credibility	0.500	0.500	0.000	0.000	0.500	1.000	1.000
Interaction_SC	0.255	0.436	0.000	0.000	0.000	1.000	1.000
Age	38.438	12.275	18.000	28.000	38.000	49.000	60.000
Gender	0.488	0.500	0.000	0.000	0.000	1.000	1.000
Education	2.918	1.189	1.000	2.000	3.000	4.000	5.000
Trust	4.845	0.906	2.182	4.225	4.762	5.418	7.157
Perceived_Greenwashing	0.959	0.916	-1.747	0.336	1.021	1.614	3.201
Purchase_Intention	4.616	0.539	2.701	4.336	4.948	5.000	5.000

Source: Author

Table 2: Variance Inflation Factors (VIF)

Feature	VIF
Claim_Specificity	2.033
Source_Credibility	2.107
Interaction_SC	3.061
Age	1.006
Gender	1.018
Education	1.015

Source: Author

Table 3: OLS Regression Results (Dependent Variable – Trust)

Predictor	Coef.	Std. Err.	t	p-value	95% Confidence Interval
Constant	3.104	0.095	32.607	0.000	[2.917, 3.291]
Claim_Specificity	0.767	0.061	12.627	0.000	[0.648, 0.886]
Source_Credibility	0.768	0.062	12.435	0.000	[0.647, 0.890]
Interaction_SC	0.399	0.085	4.676	0.000	[0.232, 0.567]
Age	0.010	0.002	5.983	0.000	[0.007, 0.014]
Gender	0.190	0.043	4.422	0.000	[0.106, 0.274]
Education	0.124	0.018	6.896	0.000	[0.089, 0.160]

Predictor	Coef.	Std. Err.	t	p-value	95% Confidence Interval
Adjusted R^2	0.669				

Table 4: OLS Regression Results (Dependent Variable – Perceived Greenwashing)

Predictor	Coef.	Std. Err.	t	p-value	95% Confidence Interval
Constant	2.319	0.107	21.587	0.000	[2.108, 2.530]
Claim_Specificity	-0.590	0.069	-8.612	0.000	[-0.725, -0.456]
Source_Credibility	-0.801	0.070	-11.498	0.000	[-0.938, -0.665]
Interaction_SC	-0.468	0.096	-4.851	0.000	[-0.657, -0.278]
Age	-0.004	0.002	-1.997	0.046	[-0.008, -0.000]
Gender	-0.082	0.048	-1.690	0.092	[-0.177, 0.013]
Education	-0.117	0.020	-5.748	0.000	[-0.157, -0.077]
Adjusted R^2	0.588				

Source: Author

Table 5: OLS Regression Results (Dependent Variable – Purchase Intention)

Predictor	Coef.	Std. Err.	t	p-value	95% Confidence Interval
Constant	3.422	0.066	51.889	0.000	[3.293, 3.552]
Claim_Specificity	0.703	0.042	16.698	0.000	[0.620, 0.785]
Source_Credibility	0.657	0.043	15.356	0.000	[0.573, 0.741]
Interaction_SC	-0.412	0.059	-6.954	0.000	[-0.528, -0.295]
Age	0.006	0.001	4.737	0.000	[0.003, 0.008]
Gender	0.144	0.030	4.835	0.000	[0.085, 0.202]
Education	0.108	0.013	8.629	0.000	[0.083, 0.132]
Adjusted R^2	0.551				

Source: Author

First, the strong positive impact of claim specificity and source credibility on consumer trust highlights the need for policymakers to enforce stringent standards on environmental marketing claims. Regulatory frameworks should mandate clear, verifiable, and specific environmental disclosures that reduce information asymmetry between producers and consumers. By requiring firms to substantiate their green claims through third-party certification, policymakers can enhance market transparency, thereby lowering consumers' perceived risks and increasing trust in eco-friendly products (Chen & Chang, 2022; Testa et al., 2023). Such interventions align with economic theories on information economics, where reducing uncertainty in markets improves consumer welfare and efficient resource allocation (Akerlof, 1970).

Second, the negative association between claim specificity, source credibility, and perceived greenwashing indicates that policies encouraging credible environmental communication can mitigate consumer skepticism and distrust. From an economic perspective, perceived greenwashing acts as a market failure by distorting consumer preferences and potentially discouraging demand for genuine green products. Governments could thus implement certification schemes and labeling regulations that are independently verified, reducing the likelihood of misleading or exaggerated environmental claims. These policies would help correct the negative externalities of greenwashing, fostering a healthier market environment where consumers can confidently reward truly sustainable producers, ultimately driving more firms toward greener production methods (Delmas & Burbano, 2011; Luo & Bhattacharya, 2020).

Third, despite the positive effects on trust and reduced greenwashing, the negative interaction effect between claim specificity and source credibility on purchase intention suggests nuanced consumer responses that policymakers must consider. Behavioral economic theories, such as bounded rationality and cognitive overload, suggest that overly complex or detailed environmental information—even if credible—may overwhelm consumers, paradoxically reducing purchase likelihood (Simon, 1955; Gigerenzer&Gaissmaier, 2011). Therefore, policy design should emphasize not only the accuracy and credibility of environmental claims but also their accessibility and ease of understanding. Simplified labeling systems, supported by public education campaigns, can help consumers make more informed decisions without cognitive strain, thereby improving market efficiency and accelerating green consumption (OECD, 2021).

Fourth, the significant demographic influences of age, gender, and education on trust, greenwashing perception, and purchase intention underscore the economic necessity of targeted policy approaches. For instance, older and more educated consumers generally exhibit higher trust and purchase intentions, suggesting that policies promoting environmental literacy and awareness could expand the base of green consumers, particularly among younger and less educated groups. Investment in environmental education and information dissemination could increase human capital related to sustainable consumption, which is vital for transitioning to greener economies and achieving long-term sustainable development goals (SDGs) (World Bank, 2023; UNDP, 2022).

Fifth, the results imply that government incentives for third-party certification bodies can play a pivotal role in the green economy's development. Subsidizing or providing tax incentives to certification agencies and eco-labeling programs could lower the cost of credible certification, encouraging broader firm participation. This would enhance market signaling mechanisms, allowing consumers to distinguish high-quality green products more easily. Economic theory suggests that such incentives correct positive externalities associated with third-party certifications, which otherwise may be underprovided by the private sector due to free-rider problems (Stiglitz, 1989; Porter & van der Linde, 1995). By improving the functioning of green markets, these policies could accelerate the shift toward sustainable production and consumption patterns.

Finally, policymakers should integrate these insights into comprehensive green industrial and consumer policies that balance regulatory oversight, market incentives, and consumer education. Ensuring a coherent policy environment that addresses product standards, labeling, consumer awareness, and firm incentives will create synergistic effects to amplify the transition to sustainability. This systemic approach acknowledges that economic agents respond not only to price signals but also to trust, information credibility, and cognitive constraints. Consequently, effective policy design must consider these behavioral economic factors to unlock the full potential of green markets and contribute meaningfully to climate change mitigation and sustainable development (Dietz et al., 2020; Gillingham et al., 2021).

5. Conclusions

This study provides robust empirical evidence on the critical roles of claim specificity and source credibility in shaping consumer trust, perceived greenwashing, and purchase intention regarding environmentally marketed products. The findings indicate that clear and credible environmental claims significantly enhance consumer trust and reduce skepticism associated with greenwashing, thereby fostering greater willingness to engage in sustainable consumption. These results corroborate prior research emphasizing

the importance of transparent and verifiable environmental communication in overcoming information asymmetry and building consumer confidence (Chen & Chang, 2022; Testa et al., 2023). However, the complex interaction effects observed suggest that while credible claims generally promote positive consumer responses, excessive detail or complexity may inadvertently hinder purchase intentions, highlighting the nuanced nature of consumer decision-making in the green marketplace (Gigerenzer&Gaissmaier, 2011).

Given these insights, future research should explore the cognitive mechanisms underlying consumers' processing of environmental claims, particularly investigating how information complexity interacts with trust and decision heuristics across diverse demographic groups. Longitudinal and experimental designs could further elucidate causal pathways and behavioral outcomes over time, enriching understanding of green consumer behavior dynamics in various cultural and economic contexts. Additionally, expanding the scope to include digital and social media channels may provide valuable perspectives on how online communication strategies influence perceptions of authenticity and sustainability (Luo & Bhattacharya, 2020).

From a practical standpoint, businesses should prioritize the development and communication of clear, credible environmental claims that balance informativeness with simplicity to maximize consumer trust and purchase intentions. Leveraging third-party certifications and eco-labels can enhance source credibility and differentiate genuine sustainable products from misleading claims, thereby mitigating greenwashing risks. Marketers must also tailor messaging to demographic segments, considering factors such as age, education, and gender, to optimize engagement and responsiveness (OECD, 2021).

Policymakers are urged to implement and enforce rigorous standards for environmental marketing disclosures, mandating verifiable claim specificity and credible certification processes. Regulatory interventions that reduce greenwashing through transparency requirements and consumer protection can foster healthier markets and incentivize firms to adopt more sustainable production practices. Furthermore, investments in environmental education and awareness campaigns can build consumer capacity to critically evaluate green claims, thus amplifying the effectiveness of regulatory and market mechanisms (Delmas & Burbano, 2011; World Bank, 2023).

In conclusion, this study underscores the intertwined importance of clear communication, credible sourcing, and consumer education in advancing sustainable consumption patterns. Addressing information asymmetries and cognitive barriers through coordinated efforts by firms, regulators, and educators is essential to realize the full potential of green markets and contribute meaningfully to global sustainability goals. The integration of behavioral insights with economic and policy frameworks offers a promising pathway to foster trust, reduce skepticism, and ultimately drive environmentally responsible consumer behavior (Dietz et al., 2020; Gillingham et al., 2021).

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