Asian Management and Business Review, Volume 6 Issue 1, 2026: 259-273

Building trust, reducing skepticism: Green branding and sustainable purchase behavior in Indonesia

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Article History
Received : 2025-06-22
Revised : 2025-09-09
Accepted : 2025-09-18
Published : 2026-02-05

Keywords:
Green branding; consumer trust; green skepticism; sustainable purchase behavior

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DOI:
10.20885/AMBR.vol6.iss1.art16

Abstract

Growing consumer pressure for businesses to adopt sustainable practices has made green branding a global priority, particularly in emerging markets such as Indonesia where environmental challenges and rising awareness intersect. This study investigates how green brand image and message clarity influence sustainable purchase behavior through the mediating role of consumer trust, and how green skepticism shapes this process. Using a quantitative cross-sectional design, data were collected from 172 Indonesian consumers with prior experience purchasing eco-friendly products. Structural equation modeling with partial least squares (PLS-SEM) was applied to test the hypotheses. The results show that both green brand image and message clarity significantly enhance consumer trust, which in turn strongly drives sustainable purchase behavior. Trust is also confirmed as the key psychological mechanism mediating the effects of brand signals on consumer action. Importantly, the analysis reveals that green skepticism weakens this pathway: even when consumers trust a brand, higher skepticism reduces the extent to which trust translates into sustainable purchases. These findings extend Signaling Theory by demonstrating how trust and skepticism jointly shape consumer responses to green branding in a high-information-asymmetry context. Practically, the study offers actionable insights for managers and policymakers by emphasizing the need for consistent brand identity, transparent communication, and verifiable claims. By addressing both trust-building and skepticism-reduction, businesses can advance more effective green marketing strategies and foster authentic consumer engagement with sustainability.

Introduction

Environmental degradation and climate change represent some of the most pressing challenges of the twenty-first century. The Intergovernmental Panel on Climate Change warns that global greenhouse gas emissions must peak before 2025 to avert the worst climate impacts, while the United Nations Environment Programme highlights that over 400 million tons of plastic waste are generated annually, disproportionately affecting developing economies (UNEP, 2025). These global pressures are reshaping consumer behavior, as individuals increasingly demand sustainable products and responsible corporate practices. In this context, green branding has emerged as both a differentiation strategy and a mechanism for cultivating consumer trust and loyalty. Scholars emphasize that green brand image significantly shapes perceptions and intentions, reinforcing sustainability as a core dimension of market competitiveness (Zameer et al., 2020).

E ISSN 2775-202X

Indonesia exemplifies this shift but also reveals its complexity. The country faces acute ecological problems, from rising plastic waste and coastal degradation to severe air pollution in urban centers (Phelan et al., 2020). Surveys indicate that a growing share of Indonesian consumers express a preference for eco-friendly products (Ramadhanti et al., 2024). Despite this increasing interest, skepticism remains high, fueled by recurrent cases of corporate greenwashing. For example, in 2022, an Indonesian bottled water brand faced public criticism for claiming its packaging was "100% eco-friendly," despite lacking independent verification or clear recycling infrastructure. Such incidents illustrate how weak regulatory oversight and vague environmental messaging contribute to consumer doubt (Genoveva & Darmawan, 2023). This skepticism is particularly challenging in emerging markets like Indonesia, where consumer trust in corporate claims is shaped not only by branding but also by socio-cultural expectations and institutional weaknesses (Promalessy & Handriana, 2024).

Building consumer trust is therefore a critical pathway for translating positive perceptions of sustainability into actual purchasing behavior. Yet much of the literature treats this trust-building process in fragmented terms, focusing on isolated variables such as corporate responsibility (Krasodomska et al., 2025), advertising credibility (Monfort et al., 2025), or environmental concern (Prakash et al., 2023). Less is known about how these elements interact in contexts where skepticism actively undermines consumer decision-making.

This study addresses these gaps by investigating how Indonesian consumers respond to key green branding signals and how these signals translate into sustainable purchase behavior through the mediating role of trust. Specifically, it focuses on the influence of green brand image and message clarity as primary predictors, with consumer trust as the central psychological mechanism. Furthermore, the study examines the moderating role of green skepticism, which may weaken or neutralize the positive effects of trust. By integrating these constructs, the research contributes to green marketing literature while offering practical guidance for Indonesian firms seeking to communicate sustainability credibly and authentically.

Literature Review and Hypotheses Development

Theoretical Foundation

This study adopts signaling theory as its core foundation to explain how consumers interpret and respond to green branding efforts. Signaling theory, originally introduced by Bafera and Kleinert (2023), posits that under conditions of information asymmetry, one party (the signaler) communicates information to another (the receiver) through observable cues. In green marketing, companies act as signalers that communicate their environmental commitments through brand image, advertising messages, and product-related claims, while consumers act as receivers who interpret these cues to assess brand credibility, integrity, and ethical stance (Baier et al., 2022).

Certain branding variables represent particularly strong signals. A green brand image serves as a highly visible and enduring cue that shapes consumer expectations of a company's values and long-term commitments. Similarly, advertising credibility functions as an immediate and persuasive signal because consumers must rely on promotional messages in the absence of direct evidence of environmental performance. Both cues are powerful because they reduce uncertainty and provide consumers with heuristics for decision-making in domains where environmental claims are otherwise unverifiable (Orazi & Chan, 2020). When such signals are coherent, repeated, and consistent with consumer values, they increase trust and foster sustainable purchase behavior.

However, signals are not always interpreted in the same way. From a psychological perspective, green skepticism operates as a cognitive filter that weakens or distorts how signals are received. Skeptical consumers are more likely to question whether claims are exaggerated, manipulative, or instances of greenwashing, which raises cognitive resistance and decreases the effectiveness of trust-building. This skepticism is shaped not only by prior experiences with deceptive claims but also by broader social attitudes toward corporations and institutions (Bae, 2018). In such cases, even credible signals like brand image or clear advertising may fail to generate trust or translate into sustainable behavior.

The Indonesian context provides a particularly compelling setting to apply signaling theory. As one of the world's largest emerging markets, Indonesia faces acute ecological challenges such as plastic pollution and deforestation, which have heightened public sensitivity to environmental claims. At the same time, the regulatory environment for sustainability marketing is relatively weak, making information asymmetry especially pronounced. This creates fertile ground for both genuine signals of sustainability and opportunistic greenwashing. Consumers must therefore rely more heavily on brand-level and message-level signals to guide their judgments, while skepticism often acts as a barrier that filters or dampens these signals. By applying signaling theory to this context, the present study captures not only the mechanics of branding cues but also the socio-psychological dynamics of trust and doubt that shape sustainable consumption in emerging economies.

Perceived Green Brand Image and Perceived Corporate Responsibility

A green brand image reflects the extent to which consumers associate a brand with environmental responsibility, ethical practices, and sustainability values (Zameer et al., 2020). From the perspective of signaling theory, brand image functions as a strong and enduring signal because it is highly visible, repeatedly communicated, and difficult for firms to fabricate consistently over time (Zameer et al., 2020). When a company maintains a coherent and credible green identity, consumers interpret this as evidence of authenticity and long-term commitment to sustainability (Agarwal et al., 2025). Such signaling reduces information asymmetry and provides consumers with a heuristic for evaluating environmental claims that cannot be easily verified.

Psychologically, brand image plays a critical role in shaping consumer trust by fostering both cognitive and affective confidence in the brand (Wang et al., 2024). A favorable green image suggests integrity, alignment with consumer values, and reliability in delivering on sustainability promises. This reduces uncertainty and perceived risk, thereby increasing willingness to rely on the brand's environmental positioning (Aisyah, 2023; Wang et al., 2024). Conversely, a weak or inconsistent image triggers suspicion and heightens the risk of green skepticism, which undermines trust and deters sustainable purchase behavior.

The Indonesian marketplace provides a particularly relevant context for this relationship. Environmental concerns such as plastic pollution and deforestation have heightened consumer awareness, yet limited regulatory oversight allows room for greenwashing practices. As a result, consumers often rely more heavily on brand image than on formal certifications or regulatory assurances to judge credibility. In this environment, cultivating a strong green brand image becomes a crucial pathway to earning consumer trust and ultimately influencing purchase decisions.
H_1: Green brand image positively influences consumer trust.

Message Clarity and Consumer Trust

Message clarity refers to the degree to which sustainability-related communications are perceived as understandable, straightforward, and free from ambiguity (Kalogiannidis et al., 2025). Within the framework of signaling theory, clarity strengthens the effectiveness of a signal by reducing the cognitive effort required to interpret information and by minimizing opportunities for misinterpretation (Yang et al., 2025). When environmental claims are presented in clear and transparent terms, consumers are more likely to perceive them as credible, consistent, and aligned with genuine corporate intent (Afifah et al., 2025).

From a psychological standpoint, clarity enhances trust by reducing uncertainty and skepticism in consumer decision-making. When messages are vague, technical, or exaggerated, they trigger doubt and suspicion, activating a defensive cognitive bias that can undermine trust (Burgoon et al., 2008). Conversely, transparent communication reassures consumers that the company is not attempting to manipulate them, thereby fostering both cognitive trust (belief in accuracy and reliability) and affective trust (confidence in goodwill and integrity).

In the Indonesian context, message clarity becomes especially critical. Environmental awareness is rising, but consumer knowledge of sustainability concepts remains uneven (Utama Dewayani, 2024). Moreover, recurrent instances of greenwashing such as overstated packaging claims or unverifiable eco-labels have heightened public sensitivity to ambiguous language. As

regulatory enforcement is still limited, consumers must rely on their interpretation of communication cues. Brands that articulate their environmental commitments in clear, simple, and verifiable terms are therefore more likely to earn consumer trust and reduce the risk of skepticism.
H_2: Message clarity positively influences consumer trust.

Consumer Trust and Sustainable Purchase Behavior

Consumer trust is defined as the willingness to rely on a brand based on expectations of reliability, integrity, and ethical behavior (Li et al., 2023). In the context of green marketing, trust is particularly critical because many environmental attributes are credence qualities, they cannot be directly verified by consumers even after consumption (Macready et al., 2025). Signaling theory suggests that when consumers place trust in a brand's signals, such as its environmental image and communication, they reduce perceived risks and become more confident in translating intentions into purchasing actions (Seyfi et al., 2025).

Psychologically, trust acts as a bridge between positive perceptions and behavioral commitment. It reduces cognitive dissonance, enhances consumers' sense of security, and motivates action even when green products are priced higher or require lifestyle adjustments (Liu et al., 2025). Empirical studies consistently demonstrate that higher levels of consumer trust are associated with stronger green purchase intentions and actual sustainable consumption behaviors (Joshi & Rahman, 2015; Nekmahmud et al., 2022).

In Indonesia, this trust–behavior link is especially salient. Green products often involve higher costs or limited availability, and without trust in the credibility of sustainability claims, consumers are more likely to default to conventional alternatives. Moreover, the lack of standardized eco-labeling and weak enforcement of marketing regulations mean that consumers rely heavily on trust to navigate purchase decisions (Maspul, 2023). Trust therefore represents the critical psychological mechanism that transforms sustainability perceptions into concrete behavioral outcomes.
H_3: Consumer trust positively influences sustainable purchase behavior.

Mediating Role of Consumer Trust

While green brand image and message clarity are important signals in shaping consumer perceptions, their influence on actual purchasing behavior is rarely direct. Instead, these signals must first be internalized and evaluated by consumers before they are translated into action. signaling theory explains that the effectiveness of a signal depends not only on its presence but also on how it is interpreted and trusted by the receiver (Le Bot et al., 2025). Thus, consumer trust functions as the psychological mechanism that converts perceptions of credibility into sustainable purchase behavior.

From a psychological perspective, trust mediates the pathway by reducing uncertainty, lowering perceived risks, and fostering confidence in decision-making (Liu et al., 2025). When consumers perceive that a brand consistently projects a credible green image or communicates messages clearly, they are more likely to develop trust in its environmental claims. This trust, in turn, becomes the decisive factor motivating consumers to act in line with their sustainability values, even when external barriers such as price premiums or limited availability exist (Ogiemwonyi & Jan, 2023).

In the Indonesian context, the mediating role of trust is particularly important. Given the prevalence of greenwashing and the limited role of formal regulatory oversight, signals such as brand image and message clarity alone may not be sufficient to drive behavior. Only when these signals succeed in fostering genuine trust can they effectively influence sustainable purchase behavior.

H_4: Consumer trust mediates the relationship between green brand image and sustainable purchase behavior.

H_5: Consumer trust mediates the relationship between message clarity and sustainable purchase behavior.

Moderating Role of Green Skepticism

While strong signals such as brand image and message clarity can foster consumer trust, their effectiveness is not uniform across individuals. Green skepticism, the tendency to doubt the authenticity or sincerity of environmental claims acts as a psychological filter that shapes how signals are received and whether they translate into behavior (Promalessy & Handriana, 2024). From the standpoint of signaling theory, even credible signals may be discounted if the receiver holds prior doubts or interprets messages through a lens of suspicion (Moratis, 2018).

Psychologically, skepticism heightens cognitive resistance and activates defensive processing. Consumers who are skeptical of green claims may interpret advertisements as manipulative, question the motives behind sustainability initiatives, or assume that environmental commitments are merely symbolic rather than substantive (Lian et al., 2022). As a result, even when trust in a brand exists, high levels of skepticism can weaken the extent to which that trust leads to concrete sustainable purchase behavior.

This moderating effect is particularly salient in the Indonesian context, where repeated instances of greenwashing and limited third-party verification have left many consumers cautious of corporate environmental claims. Without strong institutional safeguards, consumer skepticism often acts as a gatekeeper that determines whether signals successfully translate into action (Promalessy & Handriana, 2024). Brands that fail to address or reduce skepticism risk losing the behavioral impact of trust.

H6: Green skepticism negatively moderates the relationship between consumer trust and sustainable purchase behavior.

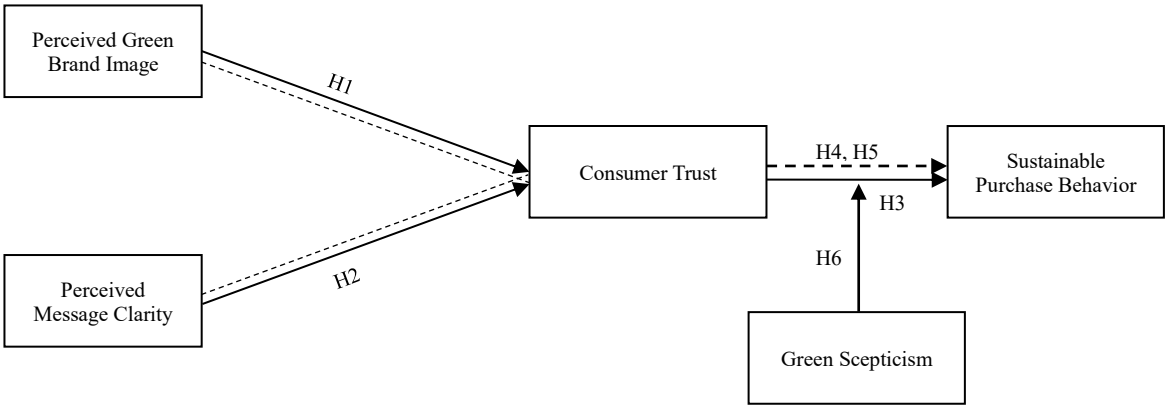

Figure 1. Research Framework
Source: Authors conceptualization, 2025

Research Methods

This study employed a quantitative approach with a cross-sectional survey design to examine the relationships among green brand image, message clarity, consumer trust, and sustainable purchase behavior, with green skepticism as a moderating variable. A structured online questionnaire was chosen as the data collection instrument to ensure standardized responses suitable for structural equation modeling. The cross-sectional design allowed the study to capture consumer perceptions and behavioral tendencies at a single point in time.

The target population comprised Indonesian consumers with prior experience purchasing green or eco-friendly products. A purposive sampling technique was applied to ensure participants had relevant exposure to sustainable consumption. Following the 10-times rule for PLS-SEM, the minimum sample size should be at least ten times the maximum number of inner or outer model paths directed at a construct (Hair et al., 2021). In this model, the most complex construct (consumer trust) has three predictors, requiring at least 30 valid responses. With 172 responses collected, the sample far exceeds this threshold, supporting adequacy for PLS-SEM analysis.

Data collection took place between April and May 2025 using Google Forms. The questionnaire link was disseminated via Instagram, WhatsApp groups, LinkedIn sustainability

forums, and community pages focused on eco-friendly lifestyles and consumer advocacy. This ensured diversity across demographic groups while targeting individuals with potential engagement in sustainability issues.

Respondents were presented with an informed consent form prior to participation. The form explicitly stated that participation was voluntary, responses were anonymous, and the data would be used exclusively for academic research purposes. Participants were informed of their right to withdraw at any point before submitting their responses. This approach minimized ethical risks and ensured compliance with academic integrity standards.

The questionnaire contained five latent constructs, measured using 19 items adapted from previously validated scales. Each item was rated on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree). A seven-point scale was selected over a five-point alternative because it offers greater sensitivity and allows respondents to express more nuanced attitudes, which improves reliability and statistical variability in PLS-SEM (Lian et al., 2022).

Table 1. Measurement Items

Construct	Items	Source
Green Brand Image	GBI1. This brand is committed to protecting the environment. GBI2. I associate this brand with sustainability and ecological values. GBI3. This brand has a positive reputation for being environmentally responsible. GBI4. This brand integrates environmental concern into its identity.	Adapted from Watson et al. (2024)
Message Clarity	MC1. The environmental claims of this brand are easy to understand. MC2. This brand communicates its sustainability efforts in a straightforward way. MC3. The green messages from this brand are clear rather than confusing.	Adapted from Verleye et al. (2023)
Consumer Trust	CT1. I trust the environmental promises made by this brand. CT2. This brand is reliable when it comes to sustainability. CT3. I believe this brand delivers on what it says about being green. CT4. I feel confident relying on this brand's environmental claims. CT5. I consider this brand to be sincere in its green efforts.	Adapted from Graça & Kharé (2024)
Sustainable Purchase Behavior	SPB1. I try to buy products that are environmentally friendly. SPB2. I am willing to switch to green products for environmental reasons. SPB3. I actively seek eco-friendly alternatives when shopping. SPB4. I choose brands that are committed to sustainability.	Adapted from Zhuang et al. (2021)
Green Skepticism	GS1. I often question the truthfulness of environmental claims in advertisements. GS2. I am skeptical about whether companies are truly committed to sustainability. GS3. I doubt the credibility of some "eco-friendly" product claims.	Adapted from Mohr et al. (1998)

Source: Data processed, 2025

To minimize social desirability bias, respondents were assured that there were no right or wrong answers and that responses would remain anonymous. Items were phrased neutrally to reduce pressure to give socially acceptable responses, particularly on sensitive environmental and moral issues.

To assess common method bias (CMB), Harman's single-factor test was performed. The unrotated factor analysis revealed that the first factor accounted for 34.2% of the variance, which is below the 50% threshold, indicating that CMB is unlikely to be a significant issue in this dataset (Kock et al., 2021).

Data were analyzed using partial least squares structural equation modeling (PLS-SEM) via SmartPLS version 4. PLS-SEM was chosen over covariance-based SEM because the study is exploratory in nature, involves predictive modeling, and includes a relatively moderate sample size (Hair et al., 2021). PLS-SEM is also more robust for models with mediating and moderating effects, which are central to this study's framework.

The analysis followed a two-step procedure. First, the measurement model was assessed through internal consistency reliability (Cronbach's alpha and composite reliability), convergent validity (average variance extracted), and discriminant validity (Fornell–Larcker criterion and HTMT). Second, the structural model was evaluated by examining path coefficients, significance levels, and explained variance (R^2). Bootstrapping with 5,000 subsamples was used to test the significance of all direct, indirect, and moderating effects.

Results and Discussion

Descriptive Statistics

The descriptive statistics indicate that respondents generally reported favorable perceptions across the green marketing constructs. Both green brand image (M = 5.62, SD = 1.02) and message clarity (M = 5.48, SD = 1.08) scored well above the scale midpoint, suggesting that consumers perceive Indonesian green brands as environmentally responsible and capable of communicating their sustainability initiatives in a clear and understandable manner. Similarly, the mean score for consumer trust (M = 5.35, SD = 1.15) demonstrates that respondents place a relatively high degree of confidence in the authenticity of green claims. The construct of sustainable purchase behavior (M = 5.21, SD = 1.12) also exceeds the midpoint, reflecting a positive inclination toward eco-friendly purchasing practices among Indonesian consumers. The moderate standard deviations across these constructs indicate a reasonable degree of variability, implying that while the general trend is positive, individual attitudes still vary.

Table 2. Descriptive Statistics

Construct	Mean	Standard Deviation	Min	Max	Likert Scale
Green Brand Image (GBI)	5.62	1.02	2.75	7.00	1–7
Message Clarity (MC)	5.48	1.08	2.67	7.00	1–7
Consumer Trust (CT)	5.35	1.15	2.40	7.00	1–7
Sustainable Purchase Behavior (SPB)	5.21	1.12	2.50	7.00	1–7
Green Skepticism (GS)	4.18	1.20	1.80	6.80	1–7

Source: Data processed, 2025

In contrast, green skepticism (M = 4.18, SD = 1.20), though slightly above the midpoint, reveals that a notable portion of respondents remain cautious about environmental claims. This finding highlights an underlying tension: while trust and purchase intentions are relatively high, skepticism continues to moderate consumer interpretations of sustainability messages. The relatively higher variability of skepticism responses suggests that attitudes toward greenwashing are not uniform, with some consumers expressing strong doubts and others showing minimal concern. Together, these results underscore the importance of credibility and clarity in green communication strategies. Brands that cultivate a strong image and communicate transparently are more likely to strengthen trust and overcome skepticism, ultimately translating positive perceptions into sustainable purchasing behavior.

Measurement Model

The results of the measurement model assessment demonstrate that all constructs meet the

recommended thresholds for reliability and validity. Item loadings ranged from 0.78 to 0.88, exceeding the 0.70 benchmark (Hair et al., 2021), which indicates that each indicator contributes meaningfully to its respective construct. Internal consistency reliability is confirmed, with Cronbach's alpha values ranging from 0.81 to 0.90 and composite reliability (CR) values ranging from 0.88 to 0.93, all above the recommended minimum of 0.70 (Hair et al., 2021). This suggests that the constructs are measured with high reliability and stability. Furthermore, the average variance extracted (AVE) values ranged from 0.71 to 0.75, well above the 0.50 threshold, confirming convergent validity. These results indicate that the latent constructs are both internally consistent and capable of explaining a substantial proportion of variance in their respective indicators.

Table 3. Reliability and Validity Test

Construct	Item	Loading	Cronbach's Alpha	CR	AVE
Green Brand Image (GBI)	GBI1	0.81	0.87	0.91	0.72
	GBI2	0.84			
	GBI3	0.86			
	GBI4	0.83			
Message Clarity (MC)	MC1	0.85	0.84	0.90	0.75
	MC2	0.87			
	MC3	0.82			
Consumer Trust (CT)	CT1	0.80	0.90	0.93	0.72
	CT2	0.83			
	CT3	0.85			
	CT4	0.84			
	CT5	0.88			
Sustainable Purchase Behavior (SPB)	SPB1	0.82	0.88	0.92	0.73
	SPB2	0.85			
	SPB3	0.83			
	SPB4	0.84			
Green Skepticism (GS)	GS1	0.78	0.81	0.88	0.71
	GS2	0.82			
	GS3	0.80			

Source: Data processed, 2025

The HTMT results further confirm discriminant validity across all constructs. The highest HTMT value was observed between consumer trust and sustainable purchase behavior (0.78), which remains below the conservative threshold of 0.85. Other HTMT ratios ranged from 0.39 to 0.74, all comfortably within acceptable limits. These findings suggest that each construct captures a distinct dimension of green consumer behavior and is not excessively correlated with other constructs. Taken together, the reliability, convergent validity, and discriminant validity assessments confirm that the measurement model is robust, providing a solid foundation for evaluating the structural relationships among constructs in the next stage of analysis.

Table 4. Discriminant Validity-HTMT

Construct	GBI	MC	CT	SPB	GS
Green Brand Image (GBI)	–				
Message Clarity (MC)	0.68	–			
Consumer Trust (CT)	0.74	0.70	–		
Sustainable Purchase Behavior (SPB)	0.65	0.63	0.78	–	
Green Skepticism (GS)	0.42	0.39	0.45	0.41	–

Source: Data processed, 2025

Structural Model Assessment

The structural model evaluation demonstrates that the explanatory power of the model is substantial. The R^2 value for consumer trust is 0.71, indicating that 71 percent of the variance in

trust is explained by green brand image and message clarity. This reflects a strong predictive capacity, consistent with thresholds suggested by Hair et al. (2021). Similarly, the R^2 for sustainable purchase behavior is 0.65, suggesting that trust (and its interaction with skepticism) accounts for 65 percent of the variance, representing a moderate to substantial level of explanatory power. The Q^2 predictive relevance values of 0.46 (for trust) and 0.42 (for purchase behavior) are both well above zero, confirming that the model has predictive relevance. Furthermore, the SRMR value of 0.058 falls below the recommended cutoff of 0.08, indicating that the model achieves an acceptable overall fit. Taken together, these results provide strong evidence that the structural model is both robust and predictive.

Table 5. Model Evaluation

Construct	R^2	Q^2 (Predictive Relevance)
Consumer Trust (CT)	0.71	0.46
Sustainable Purchase Behavior (SPB)	0.65	0.42
SRMR	0.058	

Source: Data processed, 2025

The results provide strong empirical support for H1, which posited that green brand image positively influences consumer trust. The path coefficient ($\beta = 0.32$, $t = 4.25$, $p < 0.001$) indicates a significant positive relationship, demonstrating that when Indonesian consumers perceive a brand as environmentally responsible and consistent in its values, they are more likely to develop trust. This finding aligns with signaling theory, as brand image acts as a visible, enduring signal of credibility. It further underscores the importance of cultivating a coherent green brand identity in contexts where formal regulatory assurances may be limited.

H2, which predicted that message clarity positively influences consumer trust, is also supported ($\beta = 0.41$, $t = 5.18$, $p < 0.001$). The relatively higher coefficient compared to brand image suggests that clear and transparent communication plays an even more decisive role in shaping trust. In the Indonesian market, where consumer awareness of sustainability is growing but skepticism about misleading claims is high, unambiguous and straightforward green messages appear to be critical for reducing uncertainty. This reinforces psychological perspectives that clarity lowers cognitive resistance and helps consumers interpret brand signals as genuine.

The results for H3 confirm that consumer trust positively influences sustainable purchase behavior ($\beta = 0.45$, $t = 6.02$, $p < 0.001$). Trust emerges as a central psychological mechanism that transforms positive perceptions into behavioral action. This is particularly relevant in the case of green products, where credence qualities cannot be verified directly by consumers. In Indonesia, where eco-friendly products often carry higher price premiums, trust provides the confidence consumers need to translate their sustainability values into actual purchasing decisions.

H4 and H5 examine the mediating role of consumer trust. The indirect effect of green brand image on sustainable purchase behavior via trust is significant ($\beta = 0.15$, $t = 3.10$, $p = 0.002$), supporting H4. Similarly, the indirect effect of message clarity on sustainable purchase behavior via trust is also significant ($\beta = 0.18$, $t = 3.55$, $p = 0.001$), supporting H5. These findings highlight that neither brand image nor message clarity directly drives sustainable purchases without being filtered through trust. Instead, trust acts as the bridge between signal interpretation and behavioral commitment, offering a strong theoretical contribution by clarifying the psychological process at work.

Finally, H6 is supported, confirming that green skepticism negatively moderates the relationship between consumer trust and sustainable purchase behavior ($\beta = -0.12$, $t = 2.48$, $p = 0.013$). The negative interaction indicates that higher skepticism reduces the strength of the trust–behavior link. Even when consumers trust a brand, elevated skepticism weakens the extent to which this trust translates into sustainable purchases. This reflects the psychological barrier posed by defensive cognitive processing, where skeptical consumers are less likely to act on trust alone. In the Indonesian context, where greenwashing cases have received media attention, this result is particularly significant: it suggests that overcoming skepticism is as important as building trust if

brands aim to foster long-term sustainable purchasing behavior.

Table 6. Hypothesis Testing

Hypothesis	Path	β Coefficient	t-value	p-value	Result
H1	GBI → CT	0.32	4.25	0.000	Supported
H2	MC → CT	0.41	5.18	0.000	Supported
H3	CT → SPB	0.45	6.02	0.000	Supported
H4	GBI → CT → SPB	0.15	3.10	0.002	Supported
H5	MC → CT → SPB	0.18	3.55	0.001	Supported
H6	CT × GS → SPB	-0.12	2.48	0.013	Supported

Note. GBI: Green Brand Image, MC: Message Clarity, CT: Consumer Trust, SPB: Sustainable Purchase Behavior, GS: Green Skepticism
Source: Data processed, 2025

The interaction plot provides further insight into the moderating role of green skepticism. As shown, the slope of the relationship between trust and sustainable purchase behavior is steeper under conditions of low skepticism, indicating that increases in trust strongly translate into higher sustainable purchasing when consumers are less doubtful of environmental claims. By contrast, under conditions of high skepticism, the slope is flatter, demonstrating that even when consumers trust a brand, elevated skepticism reduces the extent to which this trust leads to sustainable purchasing behavior. This finding highlights the psychological barrier posed by skepticism, suggesting that building trust alone may be insufficient unless firms also address consumer doubts about the authenticity of their green claims.

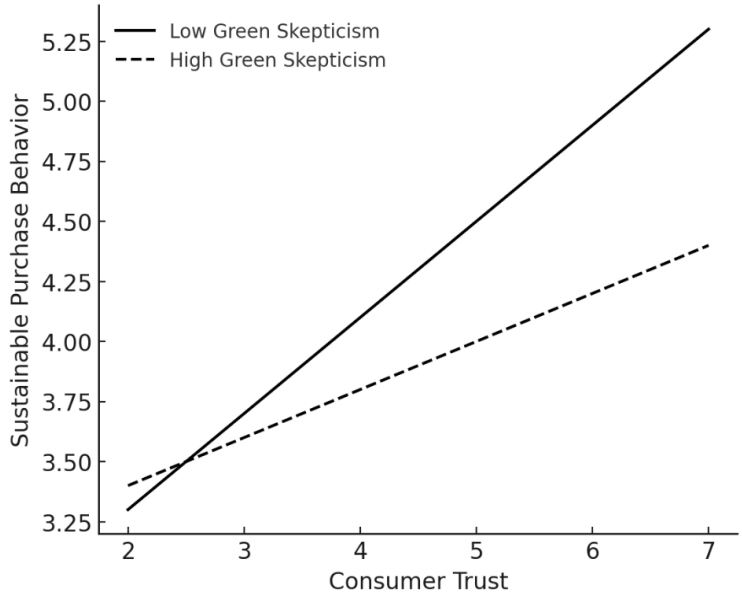

Figure 2. Interaction Effect
Source: SmartPLS output

Discussion

The first key finding is that green brand image significantly enhances consumer trust. This result supports earlier studies that highlight the positive role of green brand image in fostering credibility and reliability (González-Viralta et al., 2023; Uludag et al., 2024). It also aligns with signaling theory, as brand image serves as a stable and visible signal of a company's environmental commitment. In the Indonesian context, where consumers face high information asymmetry due to weak regulatory enforcement, a strong green brand image becomes a vital heuristic for judging corporate authenticity. This suggests that firms must consistently integrate sustainability into their brand identity, as image-related signals can compensate for limited institutional safeguards.

The second finding shows that message clarity has a stronger effect on consumer trust than brand image. This supports previous research indicating that transparent and unambiguous communication enhances advertising credibility and reduces consumer skepticism (Waltenrath, 2024; Walter et al., 2024). Within the framework of signaling theory, clear messages reduce the risk of misinterpretation and make signals easier to decode, thereby strengthening their impact. The importance of clarity is especially pronounced in Indonesia, where consumers are increasingly aware of greenwashing. This finding indicates that in addition to building a sustainable brand image, firms must prioritize precise, straightforward communication strategies to reassure consumers of their genuine environmental commitments.

A third important finding is that consumer trust strongly predicts sustainable purchase behavior. This is consistent with earlier studies showing that trust is a central determinant of green purchasing decisions (Mawardi et al., 2024; Ofori et al., 2025). From the perspective of signaling theory, trust represents the successful internalization of brand signals, whereby consumers accept them as credible and use them as a basis for decision-making. In Indonesia, where eco-friendly products often involve higher prices or lower accessibility, trust reduces perceived risk and empowers consumers to act on their pro-environmental values. This suggests that trust functions as a psychological mechanism that bridges the gap between environmental intentions and actual behavior.

The fourth set of findings concerns the mediating role of consumer trust in the relationships between brand signals (brand image and message clarity) and sustainable purchase behavior. Both indirect effects are significant, which supports previous findings that trust acts as a mediator in sustainability-related decision-making (Musgrave et al., 2025). This finding further reinforces signaling theory, as it demonstrates that signals by themselves do not directly drive behavior; they must first be filtered through the psychological mechanism of trust. In the Indonesian marketplace, this underscores the importance of establishing credibility before expecting consumers to make sustainable purchases. It is not enough for firms to communicate green values, they must also build trust to convert perceptions into actions.

Finally, the study found that green skepticism negatively moderates the relationship between consumer trust and sustainable purchase behavior. This is consistent with prior research showing that skepticism can weaken or even nullify the effects of trust on consumer decisions (Bigné et al., 2023; Sansome et al., 2024). Within signaling theory, skepticism functions as a filter that distorts or discounts signals, thereby reducing their effectiveness. This moderating effect is particularly relevant in Indonesia, where high-profile cases of greenwashing have led to consumer doubts about corporate sincerity. The implication is that trust alone may not guarantee sustainable purchases if skepticism remains unaddressed. Firms must therefore complement trust-building efforts with verifiable claims, third-party certifications, and transparent reporting to mitigate skepticism's dampening effect.

Conclusion and Implication

The findings of this study demonstrate that green brand image and message clarity significantly enhance consumer trust, which in turn strongly predicts sustainable purchase behavior. Trust is also confirmed as a mediating mechanism between brand signals and purchase behavior, while green skepticism negatively moderates the trust–behavior link. These results extend signaling theory by showing that brand signals influence consumer behavior not directly but through trust, and that skepticism can weaken the effectiveness of these signals. In Indonesia, where information asymmetry is high and cases of greenwashing are not uncommon, the dual role of trust and skepticism becomes especially salient in shaping sustainable consumption.

From a practical perspective, these findings highlight the importance of building consumer trust through consistent branding and transparent communication. Businesses should prioritize clear and straightforward environmental claims, avoiding vague or overly technical language that may create confusion. Concrete actions such as providing third-party certifications, publishing verifiable sustainability reports, and using standardized eco-labels can strengthen credibility and assure consumers of genuine environmental commitment. Since skepticism was found to weaken

the trust–behavior link, addressing consumer doubts is equally important. Companies can counter skepticism by demonstrating measurable outcomes of their sustainability initiatives, while policymakers can reinforce credibility by strengthening regulations against misleading claims and rewarding firms that demonstrate verified sustainable practices. These measures ensure that consumer trust is translated into concrete purchasing behavior, ultimately strengthening the green market in Indonesia.

Despite these contributions, the study has several limitations that should be acknowledged. The cross-sectional design prevents causal inference, which means that relationships such as trust mediating the effect of brand signals should be interpreted with caution. Future studies could adopt longitudinal designs to track changes in trust and skepticism over time, or experimental approaches to directly test how manipulated advertising clarity or brand image affects consumer responses. Another limitation lies in the sample size of 172 respondents. While adequate for PLS-SEM, it restricts generalizability across Indonesia's diverse consumer base. Expanding the sample with probability-based methods would allow comparisons across demographic and regional groups, thereby enhancing representativeness. A further limitation is the reliance on self-reported measures, which are susceptible to social desirability bias. Respondents may have overstated their eco-friendly purchasing behavior. Future research should address this by incorporating behavioral tracking methods, such as purchase receipts or experimental shopping tasks, to validate self-reported data. Finally, the study did not include potentially relevant factors such as environmental concern, cultural values, or social influence, which may further shape sustainable purchase behavior. Incorporating these variables and complementing quantitative surveys with qualitative interviews could provide a more comprehensive understanding of consumer decision-making.

In conclusion, this study provides empirical evidence that trust serves as the crucial psychological bridge between brand signals and sustainable purchasing, while skepticism acts as a barrier that can weaken this process. The findings highlight both theoretical and practical pathways for strengthening sustainable consumption in Indonesia by focusing on consistent brand identity, transparent communication, and mechanisms to reduce consumer skepticism. By addressing these factors, businesses and policymakers can foster a marketplace where environmental responsibility is not only communicated but also trusted and acted upon by consumers.

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