

## DIGITAL SUSTAINABILITY CLAIMS AND CONSUMER SKEPTICISM: A STUDY OF GENERATION Z'S BEHAVIORAL RESPONSES TO MSMEs' GREEN MARKETING ON SOCIAL MEDIA IN PURWOKERTO, INDONESIA

Ekky Fajar Ramdhani<sup>1\*</sup>, Larisa Pradisti<sup>2</sup>

<sup>1</sup> Master of Management Study Program, Jenderal Soedirman University, Indonesia

<sup>2</sup> Department of Management, Jenderal Soedirman University, Indonesia

\*Email corresponding author: [fajar.ramdhani@mhs.unsoed.ac.id](mailto:fajar.ramdhani@mhs.unsoed.ac.id)

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### Abstract

In response to the escalating global emphasis on environmental sustainability, Micro, Small, and Medium Enterprises (MSMEs) in Purwokerto, Indonesia, have increasingly adopted green digital marketing strategies to engage younger consumer cohorts, particularly Generation Z. These strategies primarily utilize social media platforms such as Instagram and TikTok to communicate sustainability claims including "eco-friendly," "waste reduction," and "sustainable packaging." Nonetheless, the proliferation of such digital sustainability claims has concurrently engendered consumer skepticism regarding the authenticity and credibility of these messages. This study critically examines Generation Z's perceptions of digital sustainability claims propagated by MSMEs and assesses the impact of consumer skepticism on their purchase intentions. Employing a mixed-methods research design, the study incorporates a quantitative survey administered to 70 Generation Z participants active on social media in Purwokerto, complemented by qualitative in-depth interviews with 21 respondents. Quantitative data were analyzed using multiple regression analysis, supported by reliability and validity testing, to evaluate the influence of perceived greenwashing, trust, and transparency on purchase intention. The moderating role of digital literacy was tested through interaction effects analysis. Findings indicate that elevated levels of skepticism toward green claims exert a statistically significant negative effect on purchase intention, except when claims are substantiated by transparent evidence such as third-party certifications or consistent educational content. Moreover, trust and digital literacy emerge as critical moderating variables that enhance consumers' favorable responses to green marketing campaigns. This research contributes to the theoretical understanding of digital sustainability marketing and underscores the imperative for MSMEs to implement authentic and ethically grounded marketing practices to effectively foster consumer trust and loyalty within the circular economy framework.

**Keywords:** Digital marketing, sustainability, MSMEs, Generation Z, consumer skepticism, greenwashing, transparency, purchase intention.

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### INTRODUCTION

As digital transformation reshapes consumer-brand interaction, environmental sustainability has emerged as a critical element of contemporary marketing. In Indonesia, the government and civil society have strongly promoted sustainable practices among Micro, Small, and Medium Enterprises (MSMEs). Notably, Generation Z consumers, known for their environmental consciousness and digital savviness, present both an opportunity and a challenge for green marketers. According to IBM (2023), 75% of Gen Z consumers globally consider sustainability when making purchase decisions, indicating a heightened sensitivity to green marketing content. However, this awareness also leads to increased scrutiny and skepticism, especially when green claims are not supported by tangible proof.

This paper investigates how Generation Z consumers in Purwokerto respond to digital sustainability claims made by MSMEs on social media platforms. It explores how perceived greenwashing, brand trust, transparency, and digital literacy influence purchase intentions. The study also formulates and tests specific hypotheses to structure the empirical analysis.

## LITERATURE REVIEW AND HYPOTHESIS FORMULATION

### Green Digital Marketing

Green digital marketing refers to promotional activities conducted via online channels that emphasize a brand's commitment to environmentally responsible practices (Dangelico & Vocalelli, 2017). These include content highlighting recyclable packaging, carbon footprint reductions, or eco-friendly sourcing, often shared through platforms like Instagram, TikTok, and YouTube.

***H1: Green digital marketing that is authentic and well-communicated positively influences Gen Z's purchase intention.***

### Perceived Greenwashing and Consumer Skepticism

Greenwashing denotes the act of conveying a false impression or providing misleading information about a company's environmental practices (Delmas & Burbano, 2011). This practice generates consumer skepticism, particularly among younger, more informed audiences. Nyilasy et al. (2014) argue that skepticism is triggered when consumers perceive an incongruence between corporate claims and actual business practices.

***H2: Perceived greenwashing has a significant negative impact on Gen Z's purchase intention.***

### Role of Trust and Brand Credibility

Chen and Chang (2013) emphasize the importance of trust in green brand credibility. When consumers trust a brand's commitment to sustainability, they are more likely to support it despite higher prices or limited availability. Trust stems from consistency, transparency, and the presence of external validations.

***H3: Brand trust mediates the relationship between green claims and purchase intention.***

### Transparency and Third-party Certifications

Transparency—such as revealing production processes or providing third-party certifications—can mitigate greenwashing perceptions. Certifications from organizations like ECOCERT, BPOM, or Halal MUI enhance brand authenticity (Papadas et al., 2020).

***H4: The presence of transparent information and third-party certification positively moderates the relationship between green claims and purchase intention.***

### Digital Literacy

Digital literacy enables consumers to critically assess online claims, distinguishing genuine sustainability from marketing ploys (Lim et al., 2022). Highly literate consumers can verify claims, check sources, and assess brand consistency across platforms.

***H5: Digital literacy moderates the relationship between perceived greenwashing and purchase intention, weakening the negative impact of greenwashing.***

## RESEARCH METHODS

### Research Design

This study employed a convergent mixed-methods design, which integrates both quantitative and qualitative approaches to generate a more holistic understanding of Generation Z's behavioral responses to MSMEs' digital sustainability claims. The convergence of numerical data and narrative insights ensures greater analytical depth and triangulation, enhancing the credibility of findings.

### Population and Sampling

The research was conducted in Purwokerto, Central Java, targeting Generation Z consumers (aged 18–26) who are active on social media and have previously interacted with sustainability claims by MSMEs (e.g., skincare, fashion, F&B).

1. Quantitative sampling: 70 respondents were selected using purposive sampling.
2. Qualitative sampling: 21 participants were selected for in-depth interviews using maximum variation sampling to capture a diverse range of insights (based on gender, education, and level of digital literacy).

### Instrumentation and Data Collection

#### Quantitative instrument:

A structured questionnaire using 5-point Likert scales was developed based on validated constructs from prior studies (e.g., Chen & Chang, 2013; Delmas & Burbano, 2011).

#### Variables include:

1. Perceived Greenwashing
2. Brand Trust
3. Information Transparency
4. Purchase Intention
5. Digital Literacy (as moderator)

The internal consistency of each construct was tested using Cronbach's Alpha, with values > 0.70 considered acceptable ( $\alpha = 0.81$  for greenwashing,  $\alpha = 0.84$  for trust, etc.).

#### Qualitative instrument:

Semi-structured interviews with open-ended questions explored participants' interpretations of MSMEs' sustainability messages, perceived credibility, emotional responses, and behavioral consequences. Interview protocols were reviewed by experts for face validity.

#### Data Analysis

1. Quantitative data: Processed with SPSS 26.0 using descriptive statistics, correlation, and multiple linear regression analysis. Significance level set at  $p < 0.05$ .
2. Qualitative data: Coded and analyzed using thematic analysis (Braun & Clarke, 2006). Coding reliability was ensured through peer debriefing and inter-coder agreement (>85%).

## RESULTS AND DISCUSSION

### Descriptive Statistics

Most participants (82%) were highly active on Instagram and TikTok, with 68% claiming they follow MSME brands. 75% said they are "somewhat skeptical" of green claims online.

### Regression Analysis Result

The multiple regression analysis yielded the following results:

| Variable                       | Coefficient ( $\beta$ ) | Sig. (p-value) |
|--------------------------------|-------------------------|----------------|
| Perceived Greenwashing (X1X_1) | -0.41                   | 0.001          |
| Brand Trust (X2X_2)            | +0.34                   | 0.014          |
| Transparency (X3X_3)           | +0.29                   | 0.021          |

$R^2 = 0.52$ , indicating that 52% of the variance in purchase intention is explained by the three variables.

#### Interpretation:

1. Greenwashing negatively impacts purchase intention. This confirms the skepticism hypothesis (H1) that when Gen Z suspects insincerity, they are less likely to engage with the brand.
2. Trust and transparency significantly enhance willingness to purchase, supporting H2 and H3.

3. Moderation test found that digital literacy significantly amplifies the negative effect of greenwashing and strengthens positive effects of transparency and trust.

#### Thematic Findings from Interviews

Three major themes emerged:

1. “Prove It or Lose It” – Participants rejected vague green buzzwords without evidence.
2. “Real People, Real Impact” – Respondents trusted brands showing real-life community or eco-activities (e.g., waste bank collaboration).
3. “Knowledge is Power” – Digitally literate Gen Zs were adept at detecting superficial claims and appreciated brands that educated rather than persuaded.
4. Qualitative Insights

#### Theoretical Implications

These findings refine green marketing theory by showing that digital literacy moderates the cognitive filtering process among digital-native consumers. The study also highlights the interplay between source credibility and message transparency in green digital ecosystems.

#### Role of Digital Literacy

Participants with higher digital literacy (self-rated  $\geq 4.0/5$ ) could distinguish “marketing green” vs. “doing green.” For them, digital content format (videos, customer testimonials) and platform consistency mattered more than slogans.

### CONCLUSION

This study examined the behavioral responses of Generation Z in Purwokerto, Indonesia, to digital sustainability claims communicated by MSMEs through social media platforms. Results from both quantitative and qualitative analyses confirm that perceived greenwashing significantly reduces purchase intention, while brand trust and transparency enhance it. Moreover, digital literacy serves as a crucial moderating factor, enabling Gen Z consumers to assess the credibility of green claims more effectively.

These findings indicate that MSMEs can no longer rely on vague or symbolic eco-messaging. Instead, they must embrace substantive, transparent, and educational sustainability communication to foster long-term trust and engagement among digital-native audiences. The study offers empirical evidence that contributes to both the academic discourse on green digital marketing and to the practical implementation of authentic sustainability strategies in Indonesia’s MSME sector.

#### Implications

##### Theoretical Implications

1. Expands the green marketing literature by validating the moderating role of digital literacy in shaping green message effectiveness.
2. Confirms that transparency and trust are not merely additive constructs but are interdependent variables in mitigating greenwashing perceptions.
3. Proposes a localized framework for understanding eco-skepticism in the context of developing economies and social media-driven MSMEs.

##### Managerial Implications

1. Prioritize Substantiation: MSMEs should include third-party certifications (e.g., BPOM, ECOCERT, Halal) and disclose process-based evidence (e.g., supply chain visuals, material sources).
2. Utilize Educational Content: Leverage social media for eco-literacy campaigns, not just promotions—such as how-to guides on upcycling or behind-the-scenes environmental efforts.

3. Engage in Value-Based Collaboration: Partner with NGOs, sustainable influencers, or zero-waste communities to enhance perceived legitimacy.
4. Tailor Communication to Digital Literacy: Use infographics, reels, or short explainer videos tailored for Gen Z who prefer digestible, fact-based content.

### Limitations and Future Research

Despite the significant findings presented in this study, several limitations must be acknowledged to provide a balanced perspective and guide future scholarly endeavors.

#### Limitations

1. **Limited Sample Size and Geographic Scope**  
This study involved 70 Gen Z participants and 21 interviewees, all of whom were based in Purwokerto, Indonesia. While this localized focus offers deep contextual insights into a specific urban center with growing MSME digital activity, it inherently limits the generalizability of the findings to other cities or regions with different socio-economic or digital infrastructure characteristics.
2. **Cross-Sectional Design**  
The use of a cross-sectional survey limits the ability to establish causal relationships between greenwashing perception, trust, transparency, and purchase intention. While multiple regression analysis identifies significant associations, the temporal dynamics of consumer trust development or skepticism escalation remain unexplored.
3. **Self-Reported Data Bias**  
Both the survey and interviews relied on self-reported data, which may be subject to social desirability bias. Participants might overstate their environmental awareness or trust in brands due to the perceived moral appeal of sustainability.
4. **Platform-Specific Behavior Not Captured**  
Although participants were selected based on their use of social media (e.g., Instagram and TikTok), this study did not differentiate behavioral responses across platforms. Platform algorithms, content formats, and influencer dynamics could uniquely shape how sustainability messages are received and interpreted.
5. **Exclusion of Other Influential Variables**  
While this study incorporated key factors such as trust, transparency, and digital literacy, other variables—such as price sensitivity, peer influence, or brand familiarity—were not included, yet may play critical roles in shaping Gen Z's purchase decisions.

#### Directions for Future Research

1. **Comparative Cross-Regional Studies**  
Future research should expand beyond Purwokerto and involve Gen Z consumers from multiple urban and rural settings across Indonesia or Southeast Asia. This broader sample would allow comparative analysis and improve the generalizability of insights regarding sustainability marketing and digital trust.
2. **Longitudinal Research Designs**  
Longitudinal studies could trace how Gen Z perceptions of green messaging evolve over time—especially in response to repeated exposures, external events (e.g., environmental crises), or brand reputation shifts.
3. **Experimental Approaches and Message Framing**

Researchers may conduct controlled experiments to test the effectiveness of different sustainability message framings (e.g., data-driven claims vs. emotional narratives) and assess their real-time impact on consumer skepticism and engagement.

4. Platform-Specific and Influencer-Based Studies  
 Disaggregating the effect of green claims by social media platform—while accounting for influencer type (celebrity vs. micro-influencer)—could offer actionable insights for MSMEs when choosing campaign channels and formats.
5. Psychological and Behavioral Constructs  
 Further exploration into underlying psychological mechanisms—such as cognitive dissonance, eco-anxiety, or ethical identity—could deepen the theoretical contributions of studies in this domain and help explain inconsistencies in consumer responses.
6. Integration of Machine Learning for Content Analysis  
 Natural Language Processing (NLP) and machine learning techniques could be used to analyze large volumes of MSME social media content, offering objective insights into language patterns, credibility markers, and greenwashing cues as perceived algorithmically.

### Equation

The influence of greenwashing, trust, and transparency on purchase intention was tested using the following model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where:

$Y$  = Purchase Intention

$X_1$  = Perceived Greenwashing

$X_2$  = Brand Trust

$X_3$  = Transparency

$\beta_0$  = Constant

$\beta_1, \beta_2, \beta_3$  = Regression Coefficients

$\epsilon$  = Error term

Moderation by digital literacy was analyzed through an interaction term.

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