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THE ROLE OF E-WOM IN MEDIATING THE EFFECT OF DIGITAL GREEN MARKETING ON SUSTAINABLE PURCHASE DECISIONS: EVIDENCE FROM ECO-FRIENDLY TUMBLER CONSUMERS AT UBP KARAWANG

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ABSTRACT
This study aims to analyze the role of electronic word-of-mouth (E-WOM) in mediating the effect of digital green marketing on sustainable purchase decisions among consumers of eco-friendly products such as certified green tumblers at Universitas Buana Perjuangan (UBP) Karawang. The research employs a quantitative descriptive-verificative approach with a total population of 2,587 management students, from which 52 respondents were selected using a convenience sampling method. Data were collected through online questionnaires using Likert-scale measurements and analyzed using Structural Equation Modeling (SEM) with SmartPLS 3 software. The findings reveal that digital green marketing has a significant indirect effect on sustainable purchase decisions through E-WOM ($p < 0.05$*), indicating that positive digital discussions and reviews strengthen the relationship between eco-marketing messages and consumer purchasing behavior. Direct effects of green marketing on purchase decisions were weaker, suggesting that E-WOM acts as a key mediating factor in enhancing consumer trust and decision-making toward sustainable products. The study concludes that digital engagement plays a vital role in translating environmental awareness into actual consumer action. Future research is recommended to integrate artificial intelligence (AI) tools, such as social media analytics and sentiment tracking, to optimize digital green marketing strategies for broader sustainability impact.

Key words: Digital Green Marketing; Electronic Word-of-Mouth (E-WOM); Sustainable Purchase Decision; Eco-Friendly Products; AI and Digital Innovation.

INTRODUCTION

In today's digital era, environmental awareness has become one of the key factors influencing consumer purchasing behavior. As global concerns about sustainability grow, businesses are increasingly expected to adopt eco-friendly and socially responsible practices. Digital green marketing—a marketing strategy that emphasizes the environmental benefits of products while utilizing digital media—has emerged as a vital tool for firms seeking to achieve competitive advantage in a sustainable economy (Kilbourne, 1998; Mishra Pavan & Sharma Payal, 2014). This approach not only fulfills the expectations of environmentally conscious consumers but also enhances a company's image as a socially responsible entity.

This study aims to investigate the influence of digital green marketing on sustainable purchase decisions, with electronic word-of-mouth (E-WOM) acting as a mediating variable. E-WOM refers to the dissemination of product information and recommendations through digital platforms such as social media, online forums, and review websites—factors that significantly affect modern consumer behavior (Romadhany & Hakim, 2024). The integration of digital innovation and social media algorithms powered by artificial intelligence (AI) has further strengthened the role of E-WOM in shaping purchasing decisions by amplifying positive consumer experiences and expanding message reach.

In the Indonesian context, consumers are increasingly prioritizing sustainable consumption. According to a Nielsen (2023) survey, 75% of respondents stated they are more likely to purchase from companies with clear and measurable sustainability programs (SocialImpact.id, 2024). Similarly, PwC found that 86% of Indonesian consumers consciously purchase products with eco-friendly packaging—one of the highest rates in Southeast Asia (Rahman, 2021). Furthermore, GlobalWebIndex (2020) revealed that 60% of consumers are more inclined to buy products with positive online reviews, particularly those promoted as environmentally friendly. This demonstrates the growing synergy between green marketing initiatives and the persuasive power of E-WOM.

Several leading companies in Indonesia, such as Unilever, The Body Shop, and Danone-AQUA, have successfully integrated green marketing with digital communication strategies. Their campaigns—ranging from plastic reduction and recycling initiatives to influencer-based E-WOM promotions—have strengthened consumer trust and increased brand loyalty through authentic environmental engagement.

Against this backdrop, the present study explores how digital green marketing messages influence consumer perceptions and sustainable purchase decisions, particularly among young, educated consumers at UBP Karawang who are familiar with digital media and sustainability values. By examining the mediating role of E-WOM, this research contributes to a deeper understanding of how digital innovation and green marketing

interact to drive sustainable consumer behavior in the era of AI-driven marketing communication. The findings are expected to provide both theoretical and practical insights for marketers aiming to design effective and ethically responsible strategies aligned with global sustainability goals.

METHOD

This study applied a quantitative descriptive-verificative approach to analyze the effect of Digital Green Marketing on Sustainable Purchase Decisions, mediated by Electronic Word-of-Mouth (E-WOM). The research was conducted among 52 Management students of Universitas Buana Perjuangan Karawang, selected through convenience sampling, focusing on respondents who had purchased eco-friendly products such as certified green tumblers. Data were collected through an online questionnaire using a five-point Likert scale to measure three main constructs: Digital Green Marketing (green product, price, place, and promotion), E-WOM (intensity, valence, and content), and Sustainable Purchase Decisions (need and desire, product confidence, repurchase, and recommendation). Instrument validity and reliability were tested using SmartPLS 3 through outer model assessment, including Cronbach's Alpha, Composite Reliability, and AVE. The data were analyzed using Structural Equation Modeling (SEM-PLS) to test the direct and indirect effects among variables. Model evaluation included R-square (R^2) and Q-square (Q^2) values to assess explanatory power and predictive relevance, while hypothesis testing employed bootstrapping with a significance level of $\alpha = 0.05$. Mediation testing followed Hair et al. (2017) to identify the role of E-WOM in linking green marketing and sustainable purchase decisions.

RESULTS AND DISCUSSION

The majority of respondents were female (71.2%), aged ≤ 20 years (78.8%), from the 2023 cohort (63.5%), and mostly unemployed (88.5%) with monthly income below Rp1,000,000 (71.2%). This demographic indicates that the target consumers for eco-friendly products such as certified green tumblers are primarily young, digitally active students who are environmentally aware but price-sensitive.

The descriptive results show that:

- Green Marketing (X) was perceived as good (mean score 209.6), showing that eco-friendly marketing strategies are recognized positively.
- E-WOM (M) was also rated good (mean score 200), suggesting that online discussions about sustainable products are generally favorable.
- Purchase Decision (Y) was rated high (mean score 210.5), indicating that consumers demonstrate a strong intention to purchase eco-friendly products.

These findings highlight that sustainable marketing messages resonate well among digital-native consumers but need to be continuously reinforced through engaging digital channels.

All constructs in the outer model met validity and reliability standards, with loading factors > 0.7, AVE > 0.5, and composite reliability > 0.7.

The inner model shows:

- $R^2 = 0.281$ for E-WOM → green marketing explains 28.1% of its variance (weak category).
- $R^2 = 0.512$ for purchase decision → green marketing and E-WOM jointly explain 51.2% of decision variance (moderate category).

These indicate that while green marketing directly influences online engagement modestly, its combination with digital interaction significantly enhances purchase behavior.

Hypothesis Testing

Table 1. Hypothesis Testing

Hypothesis	Path	Coefficient (O)	t-Statistic	p-Value	Result
H1	Green Marketing → E-WOM	0.530	6.137	**p < 0.001****	Accepted
H2	Green Marketing → Purchase Decision	0.298	1.580	p = 0.115	Rejected
H3	E-WOM → Purchase Decision	0.511	3.024	p = 0.003*	Accepted
H4	Green Marketing → E-WOM → Purchase Decision	0.271	3.088	p = 0.002*	Accepted

(Source: Data Processing Results, 2024)

Effect of Green Marketing on E-WOM

The path coefficient ($\beta = 0.530$, $t = 6.137$, $p < 0.001$) indicates a strong and significant positive relationship between green marketing and E-WOM for eco-friendly products such as certified green tumblers. This implies that when companies emphasize environmental sustainability in their marketing—such as recyclable packaging,

biodegradable materials, and verified eco-labels—consumers are more likely to engage in online discussions and share positive feedback.

This finding aligns with Mubarok & Muhammad Sholahuddin (2023) and Romadhany & Hakim (2024), who found that transparent and credible green marketing practices increase digital advocacy and online consumer interaction. In essence, digital communication acts as a multiplier that enhances the reach of sustainable marketing messages.

Effect of Green Marketing on Purchase Decision

The analysis reveals an insignificant direct relationship between green marketing and purchase decisions ($\beta = 0.298$, $t = 1.580$, $p = 0.115$). This suggests that sustainability messages alone are insufficient to drive purchase intention among young consumers of eco-friendly tumblers.

Consistent with Arvy Ginting et al. (2023) and Hermawan et al. (2023), this result can be attributed to several behavioral factors: consumers' limited knowledge about environmental benefits, skepticism toward green claims, and a stronger focus on price and product functionality. Thus, while sustainability messaging enhances brand perception, it may not directly convert into purchase action without social proof or emotional engagement.

Effect of E-WOM on Purchase Decision

E-WOM significantly affects purchase decisions ($\beta = 0.511$, $t = 3.024$, $p = 0.003$*), confirming that online word-of-mouth plays a vital role in influencing consumers' choices. Positive reviews, online recommendations, and user-generated content increase trust and purchase likelihood.

This result corroborates findings from Fadhli Nursal et al. (2023) and Oktaviani & Estaswara (2022), emphasizing that digital peer influence can outweigh traditional marketing, especially among digitally literate consumers. For sustainable products, E-WOM enhances product credibility and bridges the gap between awareness and actual purchase.

Mediating Effect of E-WOM between Green Marketing and Purchase Decision

The mediation test demonstrates a significant indirect effect ($\beta = 0.271$, $t = 3.088$, $p = 0.002$*), indicating that E-WOM mediates the relationship between green marketing and purchase decision.

This means that eco-friendly marketing messages become more persuasive when amplified through online platforms where consumers exchange experiences and validate sustainability claims. The finding aligns with Romadhany & Hakim (2024), suggesting that digital engagement strengthens the translation of environmental communication into behavioral outcomes.

For certified green tumblers, this implies that companies should not rely solely on sustainability claims but should actively encourage and manage positive online interactions to build trust and drive purchase decisions.

Scientific Interpretation

From these results, three scientific insights emerge:

1. Indirect Digital Influence: Green marketing affects consumer decisions primarily through online communication (E-WOM), not directly.
2. Digital Mediation Mechanism: E-WOM acts as a crucial mediator that transforms awareness of sustainability into purchase intention.
3. AI-Driven Enhancement Potential: Integration of AI-based sentiment analysis and digital engagement analytics could amplify E-WOM's mediating role, providing data-driven strategies for promoting eco-friendly products more effectively.

Implications

For marketers of eco-friendly products such as certified green tumblers, the findings suggest that green marketing efforts must be synergized with AI-enhanced digital engagement. Leveraging AI-based monitoring tools (e.g., automated review tracking, social listening) can help firms identify, respond to, and amplify positive E-WOM more efficiently. This digital innovation not only enhances competitiveness but also promotes a sustainable, data-driven global economy, aligning directly with the conference theme of Artificial Intelligence (AI) and Digital Innovation for Competitive and Sustainable Global Economy.

CONCLUSION

This study concludes that digital green marketing significantly influences sustainable purchase decisions indirectly through electronic word-of-mouth (E-WOM) among consumers of eco-friendly products such as certified green tumblers at UBP Karawang. While green marketing alone does not directly drive purchasing behavior, its effectiveness increases substantially when sustainability messages are amplified through online interactions and peer recommendations. This finding highlights that E-WOM serves as a critical mediating mechanism, transforming environmental awareness into tangible purchasing action within digital ecosystems. Scientifically, the study emphasizes that the synergy between sustainability communication and digital engagement determines consumer responsiveness to green products. Future research should explore the integration of artificial intelligence (AI)—such as sentiment analysis and predictive modeling—to enhance the

precision and reach of digital green marketing strategies in fostering sustainable consumer behavior across broader markets.

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