



From Likes to Purchases: The Role of Social Media Marketing in Boosting Consumer Engagement with Green E-Commerce

Andi Safitri Hafida

Hasanuddin University, Makassar, Indonesia
hafidaas23a@students.unhas.ac.id

Abstract. In today's digital era, social media marketing has become one of the most effective tools for businesses to enhance consumer engagement. This study aims to analyze the role of social media marketing in driving consumer engagement with green e-commerce and how interactions on social media platforms influence the purchase decisions of environmentally friendly products. A quantitative approach was employed, involving a survey of 500 respondents who are active on social media and make transactions on green e-commerce platforms. Regression analysis was used to evaluate the relationship between social media engagement levels (likes, comments, shares) and consumers' purchase intentions. The results show that consumer engagement on social media significantly influences the decision to purchase green products. These findings demonstrate that social interaction-based marketing strategies, such as campaigns emphasizing sustainability values, can increase awareness and the intention to buy eco-friendly products. This study contributes to the literature on digital marketing and sustainability, while also providing practical insights for green e-commerce businesses on optimizing their social media campaigns.

Keywords: Social media marketing, consumer engagement, green e-commerce, sustainability, purchase decisions

1 Introduction

The rapid growth of social media platforms has significantly transformed consumer behavior, particularly in the context of online shopping. As of 2023, over 4.9 billion people worldwide use social media, making platforms such as Instagram, Facebook, and TikTok powerful tools for brand engagement [1]. Simultaneously, the global e-commerce market is projected to reach \$6.3 trillion by 2024, reflecting an increasing shift toward digital transactions [2]. At the same time, consumer awareness of environmental sustainability is at an all-time high. According to a study, 60% of global consumers prefer purchasing products that are eco-friendly or align with their personal values [3]. This growing demand for sustainable products has led to the rise of green e-commerce, where businesses focus on offering environmentally friendly products through digital platforms. Despite the potential of this market, there remains a significant challenge: how to convert consumer engagement on social media into actual purchases of eco-friendly products.

The rise of green consumerism reflects a fundamental shift in purchasing behavior, as consumers increasingly prioritize sustainability in their decision-making process. Issues such as climate change, plastic waste, and resource depletion have pushed many consumers to seek out brands that align with their environmental values [4]. Social media marketing provides businesses with a unique opportunity to tap into this trend by fostering direct interaction with consumers through likes, comments, and shares. It allows brands to create a community around sustainability, promote transparency, and highlight eco-friendly practices [5]. However, while these platforms excel at generating awareness and engagement, the question remains: Do these interactions translate into actual purchasing behavior in the context of green e-commerce?

Previous research has established the importance of social media marketing in enhancing consumer engagement and brand loyalty. For instance, one study found that social media interactions, particularly on platforms like Instagram, play a significant role in shaping brand perception and consumer loyalty [6]. Similarly, user-generated content and interactive marketing campaigns have been shown to strengthen consumer-brand relationships and drive engagement [7]. However, these studies primarily focus on general e-commerce and do not specifically address the unique challenges and opportunities present in the green e-commerce sector. Green e-commerce consumers are not only driven by traditional factors like price and quality but are also highly motivated by ethical and environmental concerns, making their engagement behaviors potentially distinct from traditional e-commerce consumers.

This gap in the literature presents a need to explore the specific role of social media marketing in driving purchases within the green e-commerce sector. While much research has been conducted on the impact of social media on general consumer behavior, there is limited understanding of how engagement metrics—such as likes, shares, and comments—affect purchasing decisions for environmentally friendly products. Furthermore, studies on green marketing tend to focus on consumer attitudes toward sustainability rather than the actual conversion of engagement into purchases (8). A deeper understanding of the conversion process from social media interaction to purchases in green e-commerce is needed to help businesses capitalize on the growing demand for sustainable products.

This study aims to address this gap by examining the effectiveness of social media marketing in converting consumer engagement into purchases within the green e-commerce context. By analyzing consumer behaviors on social media platforms and their subsequent purchase decisions, this research will provide valuable insights into the most effective marketing strategies for green e-commerce. The results of this study will contribute to the broader field of digital marketing and sustainability, offering practical recommendations for businesses seeking to optimize their social media strategies in promoting eco-friendly products.

2 Literature Review

The growth of social media platforms has transformed the way businesses interact with consumers, particularly within the context of e-commerce. Social media provides brands with direct access to their audience, enabling real-time interactions through

likes, comments, shares, and user-generated content. These platforms have proven to be effective tools in building brand awareness, enhancing consumer engagement, and ultimately driving purchase intentions [8].

Social media engagement has been shown to significantly impact consumer-brand relationships. Godey et al. (2016) found that interactions on platforms like Instagram play a pivotal role in shaping brand perception and fostering consumer loyalty [9]. Similarly, Pansari and Kumar (2017) demonstrated that social media marketing strategies that focus on engagement, such as user-generated content and interactive campaigns, can significantly enhance consumer-brand relationships and drive stronger engagement [10]. However, while these studies provide valuable insights into social media's role in enhancing engagement and loyalty, they primarily focus on general e-commerce sectors and overlook the unique characteristics of green e-commerce markets, where sustainability plays a critical role in consumer decision-making [11].

Green consumerism has introduced new dynamics into social media marketing. Environmental awareness among consumers has grown, with many now seeking brands that align with their ethical and environmental values. Leonidou and Leonidou (2011) highlighted that environmentally conscious consumers are more critical of brands, particularly in assessing their environmental impact and the transparency of their operations [12]. As sustainability becomes a core concern for these consumers, green marketing strategies on social media have emerged as crucial for engaging this demographic. Kapitan et al. (2021) argue that green marketing strategies, particularly those that emphasize transparency and the promotion of sustainability values, are particularly effective in driving engagement among eco-conscious consumers [13].

While the relationship between social media engagement and brand perception is well-established, the direct link between social media interactions and purchase intention within the context of green e-commerce remains underexplored. Studies like those by Godey et al. (2016) and Leonidou and Leonidou (2011) have examined the general effects of social media marketing on consumer engagement, but few have focused on how this engagement translates into actual purchasing behavior within green markets[2,5]. Additionally, research has shown that consumer attitudes toward sustainability play a mediating role in the relationship between social media marketing and purchase behavior. For instance, consumer engagement can drive more positive attitudes toward sustainability, which in turn can influence purchase intentions[14]. This gap in the literature necessitates further exploration into how social media interactions can be converted into tangible outcomes, such as purchase behavior, specifically in green e-commerce contexts.

This study aims to bridge these gaps by examining how social media marketing influences consumer engagement and how that engagement, in turn, affects purchase intentions in green e-commerce. The research will also assess the mediating role of consumer attitudes toward sustainability to determine whether eco-conscious consumers are more likely to convert social media engagement into purchase [15]

Based on the theoretical frameworks and empirical findings discussed, this study proposes the following hypotheses :

Hypothesis 1 (H1) posits that social media engagement has a positive and significant impact on consumer engagement with green e-commerce platforms. This means that the more consumers interact with social media content related to green e-commerce, the higher their engagement with these platforms will be.

Moving on, Hypothesis 2 (H2) suggests that consumer engagement serves as a mediator between social media marketing and purchase intention on green e-commerce platforms. In other words, consumer engagement acts as a critical bridge that links social media marketing efforts to purchase decisions.

Hypothesis 3 (H3) focuses on green marketing strategies on social media, which are expected to have a positive influence on consumer attitudes toward sustainability. This implies that marketing campaigns that highlight the environmental benefits of products or services are likely to enhance consumers' positive attitudes toward sustainability and eco-friendly practices.

Hypothesis 4 (H4) states that consumer attitudes toward sustainability play a mediating role in the relationship between social media engagement and purchase intention. In this case, social media engagement can drive consumers to develop more positive attitudes toward sustainability, which, in turn, boosts their intention to purchase sustainable products.

Finally, Hypothesis 5 (H5) proposes that social media marketing efforts have a direct positive effect on purchase intention within the green e-commerce context.

These hypotheses collectively illustrate how social media marketing can drive consumer engagement, shape positive attitudes toward sustainability, and ultimately increase purchase intention on e-commerce platforms that focus on environmentally friendly products.

3 Methodology

This study employed Structural Equation Modeling (SEM) to explore the relationships between social media marketing, consumer engagement, and purchase intentions. An online survey was conducted using a purposive sampling technique, gathering responses from 500 active social media users (age range: 18-45) who frequently purchase from green e-commerce platforms. Data were analyzed using AMOS 26.0 software, following Anderson and Gerbing's (1988) two-step approach [8].

3.1 Research design and Participants

The research adopted a quantitative approach involving an online survey administered to consumers who actively engage with social media and have experience purchasing from green e-commerce platforms. A purposive sampling technique was used to ensure that respondents had sufficient knowledge of green products and regularly interacted with social media marketing campaigns. The final sample comprised 500 respondents, with age ranges from 18 to 45, predominantly active on platforms such as Instagram, Facebook, and Twitter. According to Anderson and Gerbing (1988), a sample size greater than 200 is considered sufficient for SEM analysis, ensuring that our sample size meets the necessary conditions for model estimation and hypothesis testing.

3.2 Data Collection

The survey was designed to measure respondents' social media engagement, attitudes towards green products, and purchase intentions. It consisted of structured, Likert-scale items ranging from 1 (strongly disagree) to 5 (strongly agree). The survey instrument was adapted from validated scales in the literature. For instance, items measuring social media engagement were adapted from Godey et al. (2016), while items assessing attitudes toward green products were derived from Leonidou and Leonidou (2011). The survey also included questions on demographics (age, gender, education) and platform usage habits to control for potential covariates. The data collection was conducted over a two-month period, with the survey distributed through social media platforms and targeted online communities focused on sustainability.

3.3 Measurement Model

The SEM analysis followed a two-step approach as suggested by Anderson and Gerbing (1988). The first step involved assessing the measurement model to ensure the validity and reliability of the constructs. Confirmatory Factor Analysis (CFA) was conducted to evaluate the fit of the measurement model and the relationships between the observed variables (e.g., likes, shares, comments) and the latent variables (e.g., consumer engagement, purchase intention). Reliability was assessed using Cronbach's alpha for internal consistency, with acceptable values above 0.70 [17]. Convergent validity was evaluated using Average Variance Extracted (AVE), where values above 0.50 indicated adequate convergence. Discriminant validity was ensured by comparing the AVE values with the squared correlations between constructs [16].

3.4 Structural Model

After confirming the adequacy of the measurement model, the second step involved testing the structural model. The hypothesized relationships between social media engagement, attitudes toward green products, and purchase intentions were evaluated using path analysis within the SEM framework. Goodness-of-fit indices such as the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Chi-square were used to assess the model fit. The recommended cutoff values for these indices are $CFI \geq 0.90$, $RMSEA \leq 0.08$, and a non-significant Chi-square test [18]. Additionally, mediating effects of consumer attitudes towards green products on the relationship between social media engagement and purchase intention were tested using the bootstrapping method, which estimates the indirect effects in the SEM model (Preacher & Hayes, 2008).

3.5 Data Analysis

The data were analyzed using AMOS 26.0, a statistical software package commonly used for SEM analysis. Descriptive statistics were calculated for all variables to provide an overview of the sample characteristics. In addition to the SEM analysis, multi-group analysis was conducted to examine whether the structural relationships differed across key demographic groups, such as age and gender. This helped to identify whether specific consumer segments were more influenced by social media marketing efforts. The results of the structural model and the significance of the path coefficients provided insights into the direct and indirect effects of social media marketing on consumer engagement and purchase intentions within the green e-commerce context.

Table 1. Data Information

No .	Methodology Component	Description
1.	Research Design	Quantitative research using an online survey
2.	Sampling Technique	Purposive sampling to ensure participants have experience with green e-commerce and social media engagement
3.	Sample Size	500 respondents aged 18-45, active on social media platforms like Instagram, Facebook, and Twitter
4.	Data Collection Instrument	Likert-scale survey with structured questions, adapted from validated scales in literature
5.	Measurement Scales	Social media engagement (Godey et al., 2016), attitudes towards green products (Leonidou & Leonidou, 2011), purchase intention.
5.	Data Analysis Technique	Structural Equation Modeling (SEM) with Confirmatory Factor Analysis (CFA) and Path Analysis.
7.	Software Used	AMOS 26.0 for SEM and CFA analysis
8.	Goodness-of-Fit Indices	CFI $\geq$ 0.90, RMSEA $\leq$ 0.08, Chi-square (non-significant for good fit).

4 Population

The population to be studied consists of consumers who actively use green e-commerce platforms, which are online shopping platforms that promote and sell environmentally sustainable products. These consumers are typically motivated by environmental consciousness and prefer purchasing eco-friendly products. The study will target individuals who are both familiar with green products and actively engage with social media marketing campaigns related to sustainability.

The sample selection will involve a purposive sampling technique, ensuring that the participants are those who regularly use social media platforms like Instagram, Facebook, and Twitter, where green e-commerce brands often promote their products.

To gather data, an online survey will be distributed to these social media users. The survey will include questions related to their social media engagement, attitudes towards sustainability, and purchasing behaviors on green e-commerce platforms. This method ensures that the sample is relevant to the study's objectives, focusing on those who have experience in both green e-commerce and social media interaction.

5 **Results**

The analysis using Structural Equation Modeling (SEM) yielded several important findings regarding the relationships between social media engagement, consumer attitudes, and purchase intentions in the context of green e-commerce.

Consumer Attitudes and Purchase Intentions Furthermore, consumer attitudes toward sustainability were found to have a direct positive effect on purchase intentions ($\beta = 0.58, p < 0.05$), further reinforcing the idea that consumers' ethical and environmental considerations are strong motivators in their purchasing decisions. The results of the study indicate that social media engagement, measured through interactions such as likes, shares, and comments, has a significant positive effect on consumer engagement with green e-commerce platforms ($\beta = 0.72, p < 0.001$). This suggests that interactive and user-generated content on platforms like Instagram and Facebook effectively enhances consumer involvement with eco-friendly brands. Furthermore, consumer engagement was identified as a key mediating factor in the relationship between social media marketing and purchase intentions. The mediating effect was statistically significant ($\beta = 0.65, p < 0.01$), implying that consumers who are more engaged with a brand through social media tend to have stronger purchase intentions for green products. This finding aligns with the hypothesis that consumer engagement plays a crucial role in converting marketing efforts into actual purchasing behavior.

Additionally, the study found that green marketing strategies, particularly those promoting sustainability values and transparency, have a positive influence on consumer attitudes toward sustainability ($\beta = 0.78, p < 0.001$). This highlights the importance of effectively communicating sustainability efforts in fostering positive perceptions of eco-friendly products. Moreover, consumer attitudes toward sustainability were also found to have a direct positive effect on purchase intentions ($\beta = 0.58, p < 0.05$), reinforcing the notion that ethical and environmental considerations are strong motivators in shaping consumers' purchasing decisions. Overall, the study underscores the importance of social media engagement, consumer involvement, and green marketing strategies in influencing consumer behavior in the green e-commerce sector.

Table 2. Result

No.	Key Findings	Path Coefficient (β)	Significance (p-value)	Interpretation

1.	Social Media Engagement → Consumer Engagement	0.72	< 0.001	Social media engagement has a significant positive effect on consumer engagement with green e-commerce.
2.	Consumer Engagement → Purchase Intention	0.65	< 0.01	Consumer engagement mediates the relationship between social media marketing and purchase intentions.
3.	Green Marketing → Consumer Attitudes towards Sustainability	0.78	< 0.001	Green marketing strategies positively influence consumer attitudes towards sustainability
4.	Consumer Attitudes → Purchase Intention	0.58	< 0.05	Consumer attitudes towards sustainability positively influence purchase intentions for green products.

5.1 Discussion

This study confirms that social media marketing is an effective tool for increasing consumer engagement with eco-friendly brands, aligning with prior research (Godey et al., 2016). By focusing on the green e-commerce sector, this research highlights how sustainability messaging is key to driving consumer purchase intentions. The mediating role of consumer engagement suggests that businesses must foster deeper connections beyond surface-level interactions, which supports Pansari and Kumar's (2017) findings on engagement's impact on loyalty and purchasing behavior.

The strong link between green marketing strategies and consumer attitudes emphasizes the growing importance of ethical considerations in purchasing decisions. As noted by Leonidou and Leonidou (2011), consumers are more likely to trust and purchase from brands that authentically communicate their environmental efforts.

However, the study's reliance on self-reported data introduces potential bias, and its cross-sectional design limits the establishment of causality. Future research should employ longitudinal studies to explore how sustained social media interactions affect long-term consumer behavior.

Overall, this study demonstrates the critical role of social media in driving engagement and purchases in green e-commerce. By leveraging social media to communicate sustainability values, businesses can effectively convert consumer interest into sales, offering a competitive edge in the growing eco-friendly market.

6 Conclusion

This study provides valuable insights into the significant role of social media marketing in driving consumer engagement and influencing purchase intentions within the green e-commerce sector. Through the application of Structural Equation Modeling (SEM), the research reveals that social media engagement, measured by interactions such as likes, comments, and shares, plays a pivotal role in fostering consumer engagement with green e-commerce platforms. The findings underscore that interactive and user-generated content on platforms like Instagram, Facebook, and other social media channels substantially enhances consumer involvement with eco-friendly brands, leading to heightened awareness and deeper engagement with sustainability-focused products.

The direct positive impact of consumer attitudes toward sustainability on purchase intentions further reinforces the role of ethical considerations in the decision-making process. As consumers become more environmentally conscious, their purchasing behavior is increasingly influenced by brands that align with their personal values regarding sustainability. This finding is consistent with the growing body of literature that suggests ethical and environmental considerations are no longer optional, but essential, for businesses looking to attract and retain consumers in the green e-commerce market.

Another limitation is the sample, which primarily consisted of consumers already active in the green e-commerce space. This may limit the generalizability of the findings to a broader consumer population. Expanding the research to include more diverse consumer segments, including those who are less engaged with green products, would provide a more comprehensive understanding of how social media marketing can influence a wider range of consumers. Additionally, exploring the influence of cultural and regional differences in sustainability attitudes and purchasing behaviors could offer valuable insights into how green marketing strategies should be tailored to different markets.

Finally, this study demonstrates the critical role that social media marketing plays in enhancing consumer engagement and driving purchase intentions within the green e-commerce sector. By fostering meaningful interactions and promoting sustainability values, businesses can effectively leverage social media platforms to convert consumer interest into real-world sales. These findings have significant implications for green e-commerce businesses, suggesting that a focused social media strategy, combined with transparent and values-driven marketing communications, is key to succeeding in an increasingly competitive market. As the demand for eco-friendly products continues to rise, businesses that prioritize consumer engagement and align their brand with sustainability will be well-positioned to capture the loyalty of environmentally conscious consumers.

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Andi Safiri Hafida

Hasanuddin University, Makassar, Indonesia
hafidaas23a@students.unhas.ac.id

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1 Introduction

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