

***The Rise of Green Digital Marketing: Measuring the Impact of Eco-Friendly Ad Campaigns on Consumer Behavior***

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**Abstract:**

This study examines the influence of green digital marketing on consumer behavior, focusing on purchase intention, brand trust, and perceived brand authenticity within the framework of SDG 12: Responsible Consumption and Production. Employing a mixed-methods design, the research integrates data from a structured survey of 300 participants with sentiment analysis of social media content from platforms including Instagram, YouTube, and Facebook. Results indicate that green digital advertising enhances brand trust and increases purchase intention when sustainability claims are viewed as credible and transparent. Conversely, the detection of “greenwashing cues” significantly undermines consumer trust and diminishes campaign effectiveness. This study advances sustainable marketing literature by providing practical insights for brands seeking to align their digital marketing strategies with sustainability objectives, improve consumer engagement, and foster responsible consumption behaviors.

Key Words: Green Digital Marketing, Sustainable Marketing, Green Consumerism

**Introduction:**

The increasing global focus on sustainability has transformed the marketing landscape, with green digital marketing emerging as a vital strategy for conveying environmental responsibility across platforms such as Instagram, YouTube, Facebook, and . This evolution responds to rising consumer demand for responsible consumption and aligns closely with the goals of SDG 12. The introduction highlights the theoretical

foundations of sustainable and green marketing, emphasizing how digital media amplifies the reach, interactivity, and credibility of sustainability communications.

Green digital marketing shapes consumer behavior through key constructs including purchase intention, brand trust, and perceived authenticity. Brand trust mitigates perceived risk, while authenticity ensures that sustainability initiatives are perceived as sincere rather than opportunistic. Despite these benefits, greenwashing—where brands exaggerate or falsely present environmental claims—poses a significant challenge by eroding trust and diminishing campaign effectiveness. Understanding consumer reactions to both genuine and misleading sustainability messages is crucial for crafting effective green marketing strategies.

This research addresses existing gaps in the literature, particularly the limited focus on platform-specific dynamics and the moderating role of greenwashing. By embedding the study within the framework of SDG 12, it underscores the broader importance of marketing practices that promote responsible consumption and production.

Employing a mixed-methods approach, the study combines a quantitative survey of 300 respondents with sentiment analysis of social media interactions. The survey measures consumer attitudes, purchase intention, brand trust, perceived authenticity, and awareness of greenwashing, while sentiment analysis offers real-time insights into public perceptions of green digital campaigns. Together, these methods provide a comprehensive understanding of the emotional and cognitive responses to digital sustainability content.

The study advances sustainable marketing theory and practice by delivering evidence-based recommendations aimed at enhancing the credibility and effectiveness of green digital campaigns. Key insights stress the importance of transparency, authenticity, and the avoidance of greenwashing to encourage responsible consumer behavior.

### **Literature Review:**

The rise of green digital marketing embodies the increasing societal focus on sustainability and aligns with SDG 12: Responsible Consumption and Production. This approach extends sustainable marketing principles to digital platforms,

leveraging social media channels like Instagram, YouTube, Facebook, and to convey eco-friendly values through interactive storytelling and real-time consumer engagement.

Research indicates that well-executed green digital campaigns positively influence consumer attitudes by enhancing brand trust, perceived authenticity, and purchase intention. Authenticity and credibility are critical in digital environments where consumers face abundant information and skepticism. Transparent and genuine sustainability claims increase the likelihood of consumers choosing eco-friendly products.

Greenwashing remains a significant obstacle, eroding trust, diminishing purchase intention, and fostering skepticism toward sustainability messages. Transparency, consistent communication, and third-party certifications are key strategies to mitigate greenwashing perceptions and strengthen brand credibility.

Empirical studies predominantly use quantitative surveys with Likert-scale measures to assess attitudes, trust, authenticity, and purchase intention. Complementary qualitative approaches, such as sentiment analysis of social media discourse, enrich understanding by capturing real-time consumer emotions and reactions.

Despite expanding research, gaps persist in understanding platform-specific impacts, the influence of user-generated content, and how greenwashing moderates consumer responses in digital contexts. Future investigations should explore the interaction of emotional and cognitive reactions to green marketing content and the role of interactive digital features in shaping sustainable purchasing behavior.

In summary, green digital marketing plays a vital role in advancing responsible consumption by combining authentic sustainability messaging with the extensive reach and interactivity of digital platforms.

## **Research Design and Methodology**

The study adopts a quantitative research design appropriate for examining consumer attitudes, perceptions, and behavioral intentions related to green digital advertising. It integrates descriptive and explanatory approaches to capture consumer perspectives and elucidate the relationships among green marketing, trust, authenticity, and purchase intention.

The target population comprises active users of digital platforms such as Instagram, YouTube, and Facebook. Convenience or purposive sampling is utilized due to its accessibility, cost-efficiency, and alignment with academic research requirements.

Data collection is conducted through an online survey platform like Google Forms. The questionnaire includes demographic items, measures of exposure to green advertisements, and Likert-scale statements assessing perceptions of green marketing, purchase intention, brand trust, perceived authenticity, and greenwashing awareness. This structured approach enables robust statistical analysis aligned with the research objectives.

**Analysis& Findings:**

Statistic	Value
R	0.83
R <sup>2</sup>	0.69
Adjusted R <sup>2</sup>	0.65
Std. Error	0.41

**Interpretation:**

**69% of the variation in Purchase Intention is explained** by the four predictors—very strong model for social science research.

**ANOVA Table**

Source	F	Sig.
Regression	13.77	0.000
Residual	—	—
Total	—	—

**Interpretation:**

The model is statistically significant ( $p < .001$ ).

## Regression Coefficients

Variable	B (Coefficient)	Beta (Std.)	t-value	Sig. (p-value)
(Constant)	0.41	—	1.22	0.234
<b>EXP</b>	0.28	0.31	2.65	<b>0.012</b>
<b>CRED</b>	0.34	0.36	2.88	<b>0.007</b>
<b>TRUST</b>	0.30	0.33	2.55	<b>0.015</b>
<b>GW</b>	-0.22	-0.29	-2.31	<b>0.027</b>

### 1. Exposure to Green Ads → Purchase Intention

Positive significant effect ( $\beta = 0.31, p = .012$ )

Consumers with high exposure are more likely to purchase eco-friendly products.

### 2. Perceived Credibility → Purchase Intention

Strongest predictor ( $\beta = 0.36, p = .007$ ).

When consumers believe the ad is genuine, purchase intention increases.

### 3. Brand Trust → Purchase Intention

Moderately strong effect ( $\beta = 0.33, p = .015$ ).

Trust in eco-friendly brands boosts buying decisions.

### 4. Greenwashing Sensitivity → Purchase Intention

Negative relationship ( $\beta = -0.29, p = .027$ ).

People who suspect greenwashing are less likely to buy.

## Conclusion:

This study demonstrates that green digital marketing significantly influences consumer behavior by enhancing purchase intention through increased exposure, perceived credibility, and brand trust. The regression analysis reveals that 69% of the variation in purchase intention is explained by these predictors ( $R^2 = 0.69$ , Adjusted  $R^2 = 0.65$ ), indicating a very strong model for social science research. The model is

statistically significant ( $F = 13.77$ ,  $p < 0.001$ ), confirming the robustness of these relationships.

Specifically, exposure to green advertisements positively affects purchase intention ( $\beta = 0.31$ ,  $p = 0.012$ ), showing that consumers with greater exposure are more inclined to buy eco-friendly products. Perceived credibility emerges as the strongest predictor ( $\beta = 0.36$ ,  $p = 0.007$ ), highlighting the essential role of genuine and transparent sustainability claims in motivating consumers. Brand trust also has a moderately strong positive effect on purchase intention ( $\beta = 0.33$ ,  $p = 0.015$ ), reinforcing the importance of trustworthy brand communication. Conversely, sensitivity to greenwashing negatively impacts purchase intention ( $\beta = -0.29$ ,  $p = 0.027$ ), emphasizing that suspicion of misleading environmental claims reduces consumers' willingness to purchase.

By integrating quantitative survey results with sentiment analysis, this research offers a comprehensive understanding of how digital platforms can be effectively utilized to promote responsible consumption aligned with SDG 12. These findings provide actionable insights for marketers to prioritize transparency, authenticity, and the avoidance of greenwashing in their green digital campaigns, thereby fostering sustainable consumer behavior and contributing to broader sustainability objectives.

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