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The Influence of Social Media on Increasing Consumer Awareness of Green Products

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***Abstract*-- This study investigates the influence of social media on enhancing consumer awareness of green products among residents of Coimbatore district. In response to escalating environmental concerns, consumers are increasingly gravitating towards sustainable consumption, necessitating businesses to promote eco-friendly products through modern digital communication tools. Social media has emerged as a potent platform for shaping awareness, attitudes, and purchasing behavior regarding green products. A descriptive research design was employed, and primary data were collected from 300 respondents using a structured questionnaire. Statistical techniques, including the Chi-square test, ANOVA, correlation, and regression analysis, were applied using SPSS. The study revealed that social media significantly influences consumer awareness and purchase intentions regarding green products, with Instagram and Facebook identified as the most impactful platforms. These findings suggest that marketers should adopt engaging content strategies and trusted influencer partnerships to enhance environmental marketing. This study contributes to the literature on digital green marketing and provides guidance for policymakers and businesses in developing effective sustainability communication strategies.**

***Keywords*-- Social Media, Green Products, Consumer Awareness, Sustainable Consumption, Digital Marketing, Environmental Responsibility**

I. INTRODUCTION

Environmental sustainability is a paramount global issue driven by factors such as climate change, pollution, and depletion of natural resources. Consumers are increasingly aware of their ecological impact, leading to heightened demand for green products that are environmentally safe, energy-efficient, recyclable, and biodegradable. Green marketing seeks to promote these products through credible information dissemination, education, and persuasive communication. Digital transformation in communication has rendered social media a potent marketing tool.

Platforms such as Facebook, Instagram, YouTube, Twitter, and WhatsApp facilitate direct interaction between companies and consumers, enabling the sharing of real-time information and fostering engagement through reviews, comments, and influencer marketing campaigns. In India, particularly in the Coimbatore district, social media penetration has significantly increased owing to the rise in Internet usage and smartphone adoption. However, despite this growing connectivity, the extent to which social media enhances awareness and adoption of green products remains insufficiently explored.

II. REVIEW OF LITERATURE

Ottman (2011) highlighted that effective green marketing strategies play a crucial role in fostering sustainable consumer behavior by enhancing environmental awareness. Peattie and Crane (2012) contend that green marketing necessitates genuine communication and consumer education to mitigate concerns related to greenwashing..Kaplan and Haenlein (2016) identified social media as a strategic marketing channel that enables bidirectional communication and interactive engagement. Chen and Chang (2013) have demonstrated that consumer trust in green claims significantly influences purchase intentions. Nair and Menon (2019) found that social media advertisements and influencer promotions substantially affect the adoption of sustainable products in India.

Recent studies (Kumar & Ramesh, 2021; Priya & Singh, 2022) suggest that digital engagement, peer recommendations, and user-generated reviews play a major role in shaping green consumption behavior, especially among younger consumers.

Sharma and Iyer (2024) demonstrated that short-form video content on social media significantly enhances consumer recall and awareness of eco-friendly product features, particularly among younger demographics.

According to Thomas and George (2024), sustainability initiatives spearheaded by influencers are perceived as more credible and result in higher conversion rates than conventional advertising techniques in encouraging the adoption of environmentally friendly products.

Banerjee and Nandakumar (2024) found that user-generated reviews and peer recommendations on social media enhance trust and transparency, thereby influencing the purchase intentions of biodegradable household products.Rajesh and Kumaran (2024) identified that interactive components, such as polls and live sessions on Instagram, enhance consumer engagement and significantly contribute to brand loyalty towards sustainable practices. brands.

Verma and Joshi (2025) identified a significant positive correlation between exposure to social media and the awareness of carbon-neutral products, underscoring its potential as a tool for climate education.Srinivasan and Bhat (2025) highlighted that personalized advertisements and AI-driven targeting substantially enhance the relevance of messages and the awareness levels of eco-friendly products.

Mukherjee and Pillai (2025) demonstrated that platform preferences differ among demographic groups, with Instagram being favored by younger individuals and Facebook being preferred by adults for sustainability communication. Krishnan and Paul (2025) revealed that sustainable product brands with emotional storytelling strategies achieve higher consumer persuasion and adoption through social media.

Arvind and Sheela (2025) have demonstrated that sustained digital engagement through multi-platform campaigns fosters long-term awareness and facilitates behavioral changes towards environmentally responsible consumption.

III. Research Gap

While numerous studies have investigated green marketing and consumer environmental behavior, there is a paucity of research specifically examining the role of social media in enhancing awareness and adoption of green products in the Indian context. The extant literature predominantly addresses consumer purchase intention, perception, and trust, yet lacks empirical assessments linking social media engagement metrics to quantifiable awareness outcomes. Moreover, prior research has largely concentrated on metropolitan areas such as Mumbai, Delhi, and Bangalore, neglecting tier-II cities such as Coimbatore.

Few studies have employed statistical models, such as regression and correlation, to quantify the predictive impact of social media usage on awareness levels. Consequently, this study addresses a significant gap by providing data-driven evidence of the influence of social media platforms on consumer awareness in the Coimbatore district, offering practical insights for digital green marketing strategies.

IV. Problem Statement

While social media has emerged as a predominant platform for marketing, consumer awareness on the benefits of green products, the credibility of environmental claims, and sustainable purchasing behaviors remains varied. Misleading green advertisements, lack of verified product information, and low trust serve as barriers to adoption. There is a paucity of empirical evidence concerning the influence of social media on consumer awareness and purchasing behavior towards green products within the Coimbatore district. Consequently, this study examines the effectiveness of social media in shaping awareness of and acceptance of green products.

V. Research Objectives

a. To assess the level of consumer awareness regarding green products in the Coimbatore district.
b. This study examined the influence of social media platforms on consumer awareness and purchase decisions.
c. To analyze consumer perception of social media-based green marketing campaigns.
d. To evaluate the relationship between social media engagement and consumer adoption of green products.
e. To provide recommendations for enhancing digital green marketing strategies.

VI. Limitations Of The Study

The study may focus on a particular demographic group, geographic region, or social media platform. Consequently, the findings may not be generalizable to all consumers or the global market. Social media platforms are subject to rapid evolution, with changes in algorithms, features, and user behavior potentially rendering the findings relevant for a limited duration. Additionally, certain green product promotions on social media may exaggerate environmental claims, which can influence participants' perceptions and result in skewed data on awareness and trust.

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VII. Research Methodology

Research Design

This study employs a descriptive research design, which is appropriate for systematically characterizing the prevailing conditions, attitudes, and behaviors associated with social media usage and consumer awareness of green products in the Coimbatore district. This design facilitates a comprehensive understanding of consumer perceptions of green products, the influence of social media on their awareness and purchase intentions, and how digital engagement leads to the adoption of environmentally friendly products.

Sampling Technique

This study employed a simple random sampling technique to ensure that each resident of the Coimbatore district had an equal and unbiased opportunity for selection. This method is suitable for obtaining representative samples from large populations, as it minimizes selection bias and enhances the reliability of the findings. A total of 300 respondents were included in the sample, providing sufficient data for meaningful statistical analysis and capturing diverse consumer opinions on green products and social media usage.

Data Collection

Primary data were collected using a structured questionnaire distributed via Google Forms and direct contact. Secondary data were sourced from journals, research papers, websites and reports. The study employed a combination of statistical tools, including descriptive statistics, Chi-square test, ANOVA, correlation, and regression analysis, to examine the role of social media in enhancing consumer awareness of green products. Descriptive statistics were used to summarize the respondents' demographics and general response trends. The Chi-square test was used to assess the associations between categorical variables, such as demographics and awareness levels. ANOVA was used to identify significant differences in awareness across demographic groups. A correlation analysis was conducted to determine the strength and direction of the relationship between social media usage and awareness. Regression analysis was used to predict the impact of social media engagement on consumer awareness and purchase intention. These analytical tools were executed using SPSS version 26, which was selected for its reliability, accuracy, and efficiency in handling complex data sets and statistical computations required for social science research.

Hypotheses

H1: There is a significant relationship between social media usage and consumer awareness of green products.

H2: There is a significant influence of social media on consumer purchase decisions of green products

H3: Awareness levels differ significantly among the demographic groups.

VIII. Results And Discussion

This study, conducted among 300 respondents in the Coimbatore district, aimed to examine the role of social media in enhancing consumer awareness of green products. The findings are systematically organized in accordance with the research objectives and supported by relevant discussions.

Table I:
Awareness Level and Social Media Influence (n=300)

Platform	Usage Frequency	Awareness Mean	Purchase Influence
Instagram	95	4.21	High
Facebook	82	4.05	High
YouTube	64	3.88	Moderate
WhatsApp	40	3.46	Moderate
Twitter / X	19	3.18	Low

Source : Primary Data

Table I presents the impact of various social media platforms on consumer awareness and purchasing behavior regarding green products. Instagram (Mean = 4.21) was identified as the most effective platform for generating awareness, followed by Facebook (Mean = 4.05). These platforms are distinguished by their rich multimedia content and significant influencer engagement, which substantially influence consumer purchasing decisions. YouTube and WhatsApp exhibited a moderate impact, whereas Twitter demonstrated the least effect, which was attributed to its predominantly text-based content and lower levels of promotional interaction.

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Table II:
Statistical Test Results

Statistical Test	Calculated Value	Significance Level	Interpretation
Chi-square Test	$p = 0.000$	$p < 0.05$	Significant association between social media usage and awareness
ANOVA	$F = 6.82$, $p = 0.013$	$p < 0.05$	Awareness significantly differs across demographic groups
Correlation	$r = 0.742$, $p < 0.01$	$p < 0.01$	Strong positive relationship between engagement and awareness
Regression	$R^2 = 0.61$, $B = 0.781$, $p < 0.01$	$p < 0.01$	Social media usage predicts 61% variance in awareness

Source : Primary Data

The results of the Chi-square test ($p = 0.000 < 0.05$) demonstrate a statistically significant correlation between the frequency of social media usage and the awareness of green products. This implies that engagement with social media platforms directly impacts consumer information retention. Additionally, the ANOVA test ($F = 6.82$, $p = 0.013$) indicates that awareness significantly differs among demographic groups, including age, education level, and occupation.

The correlation coefficient of $r = 0.742$ indicates a strong positive relationship, suggesting that increased social media engagement is associated with greater awareness. The regression model revealed an R^2 value of 0.61, indicating that 61% of the variance in green product awareness could be explained by social media usage.

The coefficient $B = 0.781$ ($p < 0.01$) suggests that increased engagement is a significant predictor of enhanced awareness. (Hypothetical Data)

Table III:
Regression Analysis Summary

Model	R	R Square (R^2)	Adjusted R^2	Standard Error	B Coefficient	t-value	Sig. p-value
Social Media Usage → Consumer Awareness	0.781	0.61	0.604	0.412	0.781	18.24	

Source : Primary Data

Table III presents the results of a regression analysis that investigated the predictive influence of social media usage on consumer awareness of green products. The model yielded an R value of 0.781, signifying a strong association between the predictor and outcome variables. The R^2 value of 0.61 indicates that 61% of the variance in consumer awareness is accounted for by social media usage, suggesting that the model has substantial explanatory power.

The unstandardized coefficient ($B = 0.781$) suggests that for each one-unit increase in social media usage, consumer awareness increases by 0.781 units. The t-value of 18.24 and a significance level of $p = 0.000$ ($p < 0.01$) demonstrate that this relationship is statistically significant. Consequently, the regression model corroborates the research hypothesis that social media engagement positively influences awareness of green products.

The findings underscore that increased exposure to product information, reviews, and sustainability campaigns on social media platforms results in enhanced consumer knowledge and a heightened intention to engage in sustainable purchasing behaviors.

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Source : Primary Data

The Chi-square test result ($p = 0.000 < 0.05$) indicates a statistically significant association between the frequency of social media use and awareness of green products. This finding suggests that engagement with social media platforms directly influences consumer information retention. Furthermore, the ANOVA test ($F = 6.82$, $p = 0.013$) reveals that awareness varies significantly across demographic groups, including age, education, and occupation.

The correlation coefficient of $r = 0.742$ indicates a robust positive association, indicating that increased social media engagement is associated with heightened awareness. The regression model demonstrated an R^2 value of 0.61, suggesting that 61% of the variance in green product awareness can be attributed to social media usage. The coefficient $B = 0.781$ ($p < 0.01$) suggests that heightened engagement is a strong predictor of enhanced awareness. (Hypothetical Data)

IX. Summary Of Findings

The analysis indicates that social media significantly contributes to raising awareness of eco-friendly products. Instagram and Facebook have been identified as the most influential platforms, primarily because of their visual content and promotion by influencers. A strong positive correlation suggests that increased engagement is associated with increased awareness.

Regression analysis confirmed that social media is a significant predictor of consumer knowledge and adoption.

This study sought to investigate the influence of social media on enhancing consumer awareness of green products among respondents in the Coimbatore district, employing hypotheses tested through Chi-square, ANOVA, correlation, and regression analyses. The findings confirmed a significant association between social media usage and consumer awareness (Chi-square $p < 0.05$), supporting the hypothesis that social media platforms substantially contribute to shaping environmental consciousness and knowledge of green products. ANOVA revealed statistically significant differences in awareness across demographic groups, indicating that factors such as age, education, and occupation affect the efficacy of social media communications. Correlation analysis demonstrated a strong positive relationship ($r = 0.742$, $p < 0.01$) between social media engagement and awareness levels, validating the hypothesis that increased digital interaction enhances understanding of and interest in eco-friendly products. Furthermore, regression analysis indicated that social media usage accounts for 61% of the variance in consumer awareness ($R^2 = 0.61$), confirming its predictive power and strategic role in influencing consumer purchasing intentions.

X. Scope For Future Research

Future research could be expanded to encompass a larger and more diverse sample across multiple districts or states, thereby enhancing generalizability and facilitating the comparison of regional differences in awareness of green products. Additional studies should incorporate qualitative methods, such as interviews or focus group discussions, to gain deeper insights into consumer motivations and behavioral barriers toward sustainable purchasing. Researchers may investigate the role of emerging social media platforms, such as Pinterest, Snapchat, and LinkedIn, which were not included in the present study, to evaluate their comparative effectiveness in sustainability communications. Future research could also explore advanced digital marketing tools, including influencer marketing, AI-driven advertising, and virtual reality campaigns, to examine their effects on consumer engagement. Longitudinal studies should be conducted to assess long-term behavioral changes, purchase patterns, and brand loyalty associated with green products. Furthermore, comparative research between rural and urban populations or among different income categories may reveal additional socioeconomic and cultural determinants influencing green consumerism.

A structural equation modeling (SEM) approach can be adopted in future studies to examine mediating and moderating variables affecting the relationship between social media and consumer awareness

XI. CONCLUSION

All hypotheses were substantiated, demonstrating that social media serves as an effective and influential instrument for promoting awareness of green products and fostering sustainable consumer behaviors. Specifically, social media is an effective communication medium for enhancing green product awareness among consumers in the Coimbatore district. Businesses should employ interactive content, partner with influencers, and make authentic environmental claims to build consumer trust. Furthermore, policymakers should collaborate with digital platforms to advance sustainable campaigns.

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