

Understanding the Digital-Green Nexus: Generational Insights into Sustainable Buying Behaviour

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ABSTRACT

The growing penetration of digital technologies into the daily life has changed the way consumers obtain, process, and react to information that is related to sustainability. The digital platforms are now considered to be powerful spaces of communicating and assessing environmental discourses, and credibility and trust become essential in consumer decision-making. The paper discusses how perceived credibility of digital platforms and environmental concern affects sustainable buying behaviour and how digital engagement and trust in green advertising affect consumer responses. It also examines the effect of age in the strength of these relationships among generational groups. The research is based on the Stimulus-Organism-Response (S-O-R) theory, which suggests that believable digital environments and an increased awareness of the environment provoke internal consumer appraisals resulting in responsible purchasing behaviour. The combination of technological, psychological, and communication-related considerations results in the comprehensive understanding of the functioning of the sustainability messages in the digital ecosystems. The results are likely to provide the marketers and policymakers with knowledge on how to develop clear and reliable sustainability communications policies that can help motivate veritable behavioural change and enhance responsible consumption patterns.

Keywords: Digital Platform Credibility, Environmental Concern, Digital Engagement, Green Advertising Trust, Sustainable Buying Behaviour.

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INTRODUCTION

The growth of digital technologies has transformed the manner in which sustainability information is delivered and utilized in a significant manner. Social media and brand websites, online marketplaces have now become the main avenues where consumers can be exposed to environmental narratives and their assessment of green claims prior to making a purchasing decision. These interactive platforms allow users to question, confirm and exchange sustainability information on a real-time basis, and turn consumers into active participants in the sustainability debate rather than passive receivers. The extent of digitalization of customer engagement has been demonstrated to drive sustainability-related activities by raising demands on transparency and dissuading deceptive environmental communication (Li et al., 2025). This has led to the fact that sustainability communication is no longer restricted to organizational

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communication but is constantly construed in dynamic digital ecosystems.

In this context, trustworthiness of online platforms is a decisive factor when it comes to whether sustainability messages will be embraced or doubted. To evaluate the credibility of the environmental claims, consumers use cues, which include clarity, authenticity and consistency

of information. Sustainability communication may lead to information overload when it is too much or too complex, which increases skepticism and enhances greenwashing perceptions, thereby decreasing the intentions to act pro-environmentally (Zhang et al., 2025). Environmental concern is a significant psychological basis of sustainable consumption, which is characterized by the awareness of environmental issues and the readiness to promote environmentally friendly behavior; however, the concern is not a guarantee of sustainable purchasing behavior. The deceptive sustainability rhetoric and tokenistic green branding can make people confused and lower trust in the claims related to the environment, preventing the transfer of positive intentions into a practical action (Pattnayak, 2025).

Faith in green advertising has now become a focal point in determining sustainable consumption within digitally mediated settings. Perceived greenwashing discredits, diminishes consumer confidence, and breaks the long-term consumer-brand relationships (Daou et al., 2025). False or inflated environmental communications may serve as a hindrance to sustainability by influencing a lack of responsible buying behavior (Areethai et al., 2025), and a lack of trust is linked to lower brand equity and unwillingness to interact with environmentally positioned products (Zhang and Ismail, 2024). This relationship is also influenced by digital engagement that enhances engagement with sustainability content; a higher number of repetitions makes people more aware of sustainability while also making them more critical, which makes them more sensitive to greenwashing (Eze, 2025). These dynamics differ between generations, with younger consumers being highly responsive to digital communication that covers sustainability topics and those that skeptically analyse claims about the environment (Lopes et al., 2024).

Objectives

- To test the role of perceived credibility of digital platforms and environmental concern on digital engagement and trust in green advertising in consumers.
- To identify the contribution of digital engagement and green advertising trust towards sustainable buying behaviour.
- To determine the impact of age in determining the relationship between digital engagement and sustainable buying behaviour and between green advertising trust and sustainable buying behaviour.

REVIEW OF LITERATURE

The past few years have seen a remarkable growth of studies concerning the effect of digital environment on sustainable consumption. The increased penetration of sustainability communication on digital platforms has transformed consumer perception of the environmental claims and turned them into purchase behaviour. Research indicates that online environments are becoming an influential tool on the sustainability awareness by determining cognitive, affective, and behavioural orientations towards responsible consumption of the environment (Bhati and Garg, 2025). Movement towards online interaction has thus put digital ecosystems as determinants of sustainable marketplace behaviour.

Digital Platform Perceived Credibility

Digital communication channels on digital platforms is critical in the legitimization of sustainability communication and promotion of responsible consumption.

Green Issue as a force of Sustainable Behaviour

The issue of environmental concern has always been defined as a psychological antecedent of sustainable purchasing. The studies connecting green orientation and environmental concerns across generations indicate that environmental awareness is a key factor determining environmentally friendly procurement decisions (Gawshinde et al., 2025). The growing concern towards sustainability in society has influenced organizations to match the same in marketing strategies with environmentally sustainable positioning to match the demands (Amir and Daryal, 2024). However, the researchers stress that the environmental concern is not sufficient to ensure the change in behaviour, and the supportive communication and trust-building mechanisms are required.

Digitally Interactive and Sustainable Interaction

Online involvement is important in the transformation of sustainability awareness to behavioural impacts. Empirical evidence indicates that the use of digital platforms improves the knowledge and attitudes related to sustainability but might not have a significant effect on the change in behaviour (Bhati and Garg, 2025). The interactions on social media about sustainability topics create more involvement when the user encounters the content related to controversies or criticisms, which means that engagement is influenced by the

perceived authenticity and the intensity of the discourse (Okkiran, 2025). A systematic review also supports the idea that influencers and online communities have a significant impact on the attitudes towards sustainable consumption, especially younger audiences who have been exposed to digital advocacy (Sustainable Production and Consumption review, 2024). These results imply that digital interactions are forms of interpretation in which consumers work out the meaning of sustainability by engaging.

Trust in Green Advertising

The green advertising has turned into a conclusive factor of sustainable purchase behaviour particularly in the light of the increased greenwashing issues. The studies point to the fact that false environmental claims weaken consumer trust and cause confusion which influences the process of making a purchase decision (Pattnayak, 2025). The experimental results indicate that the perceived greenwashing in social media advertising has a considerable impact on the consumer trust and engagement patterns (Okkiran, 2025). Research also shows that greenwashing minimizes consumer trust and has a more significant adverse impact on purchase intention than traditional marketing variables (Cleaner Environmental Systems study, 2025). In the same vein, empirical studies also report that green trust is an important predictor of sustainable decision-making despite having greenwashing perception (Vilkaite-Vaitone, 2024). The above findings all point towards trust as an essential relational process that relates sustainability communication to behavioural results.

Greenwashing, Transparency and Sustainable Outcomes

The negative outcomes of greenwashing and the necessity of clear communication on sustainability becomes more and more the topic of the literature. Research indicates that greenwashing undermines the integration and sustainability performance of supply chains, which explains the importance of sharing credible information to enable effectiveness in the environmental results (Environment, Development and Sustainability study, 2024). The development of sustainability communication and the need to combine the authentic environmental message with digital strategies to keep the consumer confident are also traced in broader reviews of digital green marketing (Alkhatib et al., 2023).

Generational Differences in Sustainable Consumption

The issue of age-based differences has come up as a significant aspect of sustainability studies. There is evidence that generational cohorts differ in their environmental orientation and purchasing patterns that are environmentally friendly, which supports the necessity to study the role of demography in the analysis of sustainable consumption (Gawshinde et al., 2025). The studies of younger people show that Gen Z reactions to ESG-labeled online advertisements include mental hesitation to persuasion and critical scrutiny of sustainability assertions (Balaskas et al., 2025). These results indicate that the age factor affects the translation of digital interaction and trust into buying behaviour.

All of these, as a collective of findings in the modern literature, indicate that sustainable purchasing behaviour is a product of a combination of informational credibility, environmental concern, online activity, and belief in green advertising. The digital platforms also support sustainability awareness, and behavioural results are based on the perceived credibility and trustworthiness of the communicated information (Bhati and Garg, 2025; Li et al., 2025). Trust is a decisive channel through which claims of sustainability affect the decision-making process of consumers, whereas greenwashing disrupts this channel, causing skepticism (Pattnayak, 2025; Vilkaite-Vaitone, 2024). Moreover, the awareness and scrutiny that engagement-based digital ecosystems increase also render authenticity and transparency as paramount to creating sustainable consumption (Okkiran, 2025; Sustainable Production and Consumption review, 2024).

Research Gap

Even though previous research has investigated separate factors like green marketing, digital interaction, or environmental interest, little research has combined all these in one conceptual framework that simultaneously takes into account platform credibility, confidence in green marketing, and generational factors. The literature suggests that there is a necessity to have the detailed framework which explains how the digital-age sustainability communication can be transformed to sustainable buying behaviour of various age groups. This is the gap that the current research is based on.

THEORETICAL FRAMEWORK

The current research is mostly based on the Stimulus-Organism-Response (S-O-R) theory (Mehrabian and



Russell, 1974) which is a cause of how the external environmental stimuli affect the internal assessment of people and consequently affect the result of behavior. Perceived credibility of digital platforms and environmental concern are the stimuli in this research that cause the consumers to process the information cognitively and emotionally. These stimuli influence the organismic conditions manifested in the digital engagement and trust in green advertising that express the way people perceive and react to the information related to sustainability. These internal responses eventually result into the behavioural outcome, which is sustainable buying behaviour. Another individual characteristic that is seen in the framework is age, as it is a significant personal factor that can determine the conversion of engagement and trust into a final buying choice, considering the differences in generational attitudes to digital interaction and sustainability perception. Therefore, the S-O-R theory offers a holistic background on the power of digital era sustainability communication in influencing consumer behaviour.

RESEARCH METHODOLOGY

The study adopted a descriptive research design to examine the factors influencing sustainable buying behaviour among consumers. This design was selected to describe and understand the relationships between perceived credibility of digital platforms, environmental concern, digital engagement, green advertising trust, and sustainable buying behaviour. The research focused on consumers across the state of Kerala, India, allowing the study to capture a wide range of consumer perceptions and attitudes toward sustainability oriented digital communication.

A conceptual model was used in this research (Fig 1). Data for the study were collected through a structured

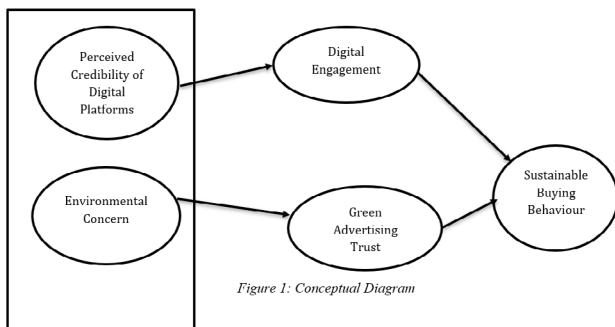


Figure 1: Conceptual Diagram

Figure 1: Conceptual Model

questionnaire. The questionnaire consisted of items measuring the key constructs related to sustainable buying behaviour and consumer interaction with digital platforms. A convenience sampling method was employed for selecting respondents because it enabled the collection of information from individuals who were easily accessible and willing to participate in the study.

The total sample size for the study consisted of 400 respondents from different districts of Kerala. The collected data were used to understand consumer attitudes toward sustainability driven digital platforms and environmentally responsible purchasing decisions. To ensure the reliability of the measurement instrument, Cronbach's alpha was calculated for the overall questionnaire. The reliability coefficient was found to be 0.95, indicating a very high level of internal consistency among the items included in the questionnaire.

RESULTS AND DISCUSSION

Demographic Profile

The demographic profile of the 400 participants (Table 1) reveals a diverse distribution across various characteristics, providing valuable insights into the segments influencing sustainable buying behavior. Among the sample, 228 participants are male, while 172 are female, representing a balanced gender distribution. The age group of 18-24 years comprises the largest proportion at 30%, followed by 25-34 years at 25%. The educational qualifications of the participants reflect a broad spectrum, with 45% having undergraduate degrees, 37.5% holding postgraduate qualifications, and 17.5% with diplomas or vocational training.

Occupation-wise, 30% are students, and 37.5% are employed in the private sector, highlighting a mix of different professional backgrounds. Income levels show a significant distribution, with 25% earning below ₹20,000 per month, while another 30% fall within the ₹20,000-₹40,000 bracket. Geographically, the majority of participants are from urban areas (62.5%), with semi-urban (25%) and rural areas (12.5%) also represented. Furthermore, digital engagement varies among participants, with 37.5% actively engaging with digital platforms daily, reflecting the growing digital literacy and consumption patterns. This demographic diversity provides a comprehensive foundation for analyzing how different segments engage with sustainability-driven digital platforms.

Table 1: Demographic profile

<i>Demographic Category</i>	<i>Category</i>	<i>Numbers (n=400)</i>	<i>Percentage (%)</i>
Gender	Male	228	57.0
	Female	172	43.0
Age Group	18-24 years	120	30.0
	25-34 years	100	25.0
	35-44 years	80	20.0
	45-54 years	50	12.5
	55 years and above	50	12.5
Educational Qualification	Undergraduate	180	45.0
	Postgraduate	150	37.5
	Diploma	70	17.5
Occupation	Student	120	30.0
	Employed (Private Sector)	150	37.5
	Employed (Public Sector)	50	12.5
Income Level	Below ₹20,000 per month	100	25.0
	₹20,000 - ₹40,000 per month	120	30.0
	₹40,000 and above	180	45.0
Geographic Area	Urban	250	62.5
	Semi-Urban	100	25.0
	Rural	50	12.5
Digital Engagement	Daily Engagement	150	37.5
	Occasionally	100	25.0
	Rarely	150	37.5

CORRELATIONS

To examine the relationships between key variables and sustainable buying behaviour.

A Pearson correlation analysis (Table 2) was conducted to examine the relationships between key variables and sustainable buying behaviour. The results indicated several significant positive correlations. The Perceived Credibility of Digital Platforms had moderate positive correlations with Environmental Concern ($r = .180, p < .01$), Digital Engagement ($r = .421, p < .01$), Green Advertising Trust ($r = .448, p < .01$), and Sustainable Buying Behaviour ($r = .474, p < .01$). Similarly, Environmental Concern was positively correlated with Digital Engagement ($r = .274, p < .01$), Green Advertising Trust ($r = .443, p < .01$), and Sustainable Buying Behaviour ($r = .528, p < .01$). Digital Engagement also demonstrated significant positive associations with Green Advertising Trust ($r = .427, p < .01$) and Sustainable Buying Behaviour

($r = .541, p < .01$). Furthermore, Green Advertising Trust was strongly correlated with Sustainable Buying Behaviour ($r = .632, p < .01$). These findings suggest that all variables studied are positively related to sustainable buying behaviour.

Regression

Prediction of Sustainable Buying Behaviour based on Perceived Credibility of Digital Platforms, Environmental Concern, Digital Engagement, and Green Advertising Trust.

A Multiple Linear Regression (Table 3) was performed to predict Sustainable Buying Behaviour based on Perceived Credibility of Digital Platforms, Environmental Concern, Digital Engagement, and Green Advertising Trust. The regression model was found to be statistically significant, $F(4, 395) = 131.88, p < .05$, with an R^2 value of .572, meaning that 57.2% of the variance in sustainable buying behaviour was explained by the four predictor



Table 2: Correlations

Variable	N	M	SD	Perceived Credibility of Digital Platforms	Environmental Concern	Digital Engagement	Green Advertising Trust	Sustainable Buying Behaviour
Perceived Credibility of Digital Platforms	400	2.886	0.6996	1	.180**	.421**	.448**	.474**
Environmental Concern	400	2.783	0.7067	.180**	1	.274**	.443**	.528**
Digital Engagement	400	2.815	0.5686	.421**	.274**	1	.427**	.541**
Green Advertising Trust	400	3.107	0.7832	.448**	.443**	.427**	1	.632**
Sustainable Buying Behaviour	400	2.754	0.6646	.474**	.528**	.541**	.632**	1

Table 3: Regression analysis summary for predicting Sustainable Buying Behaviour among consumers (N=400)

Variable	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	SE	Beta (β)		
Constant	-0.164	0.136		-1.203	0.23
Perceived Credibility of Digital Platforms	0.164	0.037	0.172	4.477	0
Environmental Concern	0.333	0.043	0.285	7.707	0
Digital Engagement	0.216	0.032	0.254	6.645	0
Green Advertising Trust	0.301	0.039	0.32	7.712	0

Note: Constant = -0.164, F (4, 395) = 131.88, p < .05, R² = .572, Dependent = Sustainable Buying Behaviour

variables. The results revealed that Environmental Concern ($\beta = .285, p < .05$), Digital Engagement ($\beta = .254, p < .05$), and Green Advertising Trust ($\beta = .32, p < .05$) were significant positive predictors of Sustainable Buying Behaviour. The Perceived Credibility of Digital Platforms ($\beta = .172, p < .05$) also had a positive influence, though it was the least influential among the predictors. This regression analysis underscores the critical role of environmental concern, digital engagement, and green advertising trust in shaping sustainable purchasing behaviour, with perceived credibility playing a secondary but notable role.

DISCUSSION

The demographic results reveal a varied sample in terms of gender, age, education, occupation, income, locale, and digital engagement, offering a solid foundation for examining sustainable buying behaviour. Younger adults and digitally active consumers are well represented,

suggesting relevance to online sustainability influences. The correlation results indicate that perceptions of digital platform credibility, environmental concern, digital engagement, and trust in green advertising are consistently linked with sustainable buying behaviour. Regression outcomes further show these constructs collectively explain a notable portion of the variance in sustainable buying behaviour, with environmental concern, digital engagement, and trust in green advertising having stronger influences than perceived credibility alone. These findings align with prior research highlighting the intricate interplay between digital attitudes, trust, and sustainability-related choices.

Recent studies support these patterns. Research by Liu, Kim, and Lee (2025) found that digital customer engagement significantly strengthens the relationship between green perceived value, brand trust, and consumer purchase intentions, pointing to the critical role of interactive digital engagement in

driving sustainable consumption decisions. Tiwari et al. (2025) emphasised that credibility and other attributes of social media advertising shape consumer attitudes and purchase intentions toward sustainable products, reinforcing the importance of credible digital communication in fostering sustainable choices. Li's (2025) work also shows that green advertising positively influences consumer intentions for green purchases, especially when coupled with environmental knowledge, suggesting that environmental concern amplifies the impact of sustainability messaging. Together, this literature underscores that credible, engaging, and informative digital sustainability communication, in conjunction with environmental concern and trust, drives sustainable buying behaviour in contemporary consumer contexts.

CONCLUSION

The study reveals significant insights into the factors influencing sustainable buying behaviour in Kerala. Perceived credibility of digital platforms, environmental concern, digital engagement, and trust in green advertising were all positively correlated with sustainable purchasing decisions. The regression analysis highlighted that environmental concern, digital engagement, and green advertising trust are the most influential predictors of sustainable buying behaviour. These findings underscore the importance of building consumer trust and engaging them through credible, environmentally focused digital content. This research emphasizes the growing role of digital platforms in shaping consumer attitudes toward sustainability. The study provides valuable implications for marketers and policymakers aiming to promote sustainable consumption practices through digital channels.

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