

Driving Environmental Change: The Impact of Social Media on Gen Z's Sustainability Efforts

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KEYWORDS	ABSTRACT
Generation Z, green purchase intentions, green consumption behavior, social media engagement, environmental awareness, influencer advocacy, influencer marketing, social media influencer.	This empirical study investigates the factors influencing green purchase intentions and green consumption behavior among Generation Z using SmartPLS for analysis and data collected from over 298 respondents. The study focuses on the role of social media engagement, environmental awareness, green advertising perception, social media influencers advocacy, and platform features in shaping sustainable consumption patterns. Results reveal that social media engagement and environmental awareness significantly impact green purchase intentions, demonstrating the importance of digital interaction and environmental knowledge among Generation Z. Furthermore, the study highlights the positive influence of credible green advertising, social media influencers advocacy, and engaging platform features in enhancing green purchase intentions. The findings confirm that green purchase intentions significantly drive green consumption behavior, emphasizing the importance of aligning marketing strategies and digital tools with the values of this demographic. By providing a detailed examination of these relationships, the study offers actionable insights for stakeholders, including businesses, policymakers, and educators, to design strategies that effectively promote sustainable behaviors. This research contributes to the growing literature on sustainability and digital engagement, offering a robust framework for understanding the drivers of environmentally conscious consumption in the digital age.

1. Introduction

Social media has emerged as a transformative tool for engaging with global challenges, including environmental sustainability. As digital natives, Generation Z (Gen Z) is uniquely positioned to leverage these platforms to address environmental issues, amplifying their voices and driving meaningful change (Chen & Madni, 2023). With their reliance on digital communication and heightened environmental consciousness, Gen Z uses social media to access, share, and advocate for sustainable practices, making it a critical area for research and practical intervention (Confetto et al., 2023; Pabian & Pabian, 2023).

There is a feeling of urgency, particularly among younger generations, due to the environmental issues that the globe is now confronting, such as pollution, climate change, and biodiversity loss. Users may engage with green content, join movements, and gather resources for sustainability initiatives using social media sites like Instagram, TikTok, and Twitter, which operate as advocacy and informative tools (Boulianne et al., 2020; Z. Hidayat & Hidayat, 2021). Studies highlight that social media fosters environmental awareness by disseminating information and connecting users to global sustainability campaigns (Kavada & Specht, 2022). These platforms also enable organizations and brands to promote eco-friendly practices and align with Gen Z's values, creating a synergy between activism and consumption (Rey et al., 2024).

Generation Z is particularly influenced by social media campaigns that integrate interactive and visual content, influencer advocacy, and user-generated narratives about sustainability.

(Confetto et al., 2023). Research suggests that influencers, as trusted figures, play a significant role in shaping Gen Z's perceptions of green products and behaviors (Panopoulos et al., 2023; Suryaputra et al., 2024). Moreover, platform features like hashtags, challenges, and live streaming have proven effective in encouraging engagement with environmental issues (Mahiwal et al., 2024). These interactions go beyond awareness to foster behavioral changes, such as increased green purchases and participation in environmental activism (Confetto et al., 2023).

However, the reliance on social media for sustainability efforts also has limitations. Concerns about misinformation, superficial engagement, and "greenwashing" practices remain significant barriers to achieving tangible outcomes (Eilstrup-Sangiovanni & Hall, 2024; Primananda, 2024; United Nations, 2021). Addressing these challenges requires understanding the nuanced role of social media in shaping Gen Z's sustainable behaviors and identifying strategies that foster authenticity and action (D. Hidayat et al., 2023; Salam et al., 2024).

This study explores the impact of social media on Gen Z's environmental sustainability efforts, focusing on its role in driving green behaviors. By examining social media engagement, green advertising perception, and social media influencers advocacy, this research provides insights into leveraging digital tools for environmental change.

2. Literature Review

Social media has become a transformative tool in addressing environmental challenges, particularly among Generation Z (Gen Z), who are digital natives with a strong inclination toward sustainability (Ghouse et al., 2024; Tan et al., 2023). Platforms like Instagram, TikTok, and Twitter not only foster awareness but also enable active participation in sustainability campaigns (Singha, 2024). Research highlights that social media engagement plays a critical role in shaping attitudes and behaviors by providing interactive tools such as challenges, live videos, and hashtags, which allow users to amplify the reach and impact of green content (Boulianne et al., 2020). Social media creates a sense of community among users, where collective actions can lead to broader behavioral shifts (Kavada, 2020).

Environmental awareness is another critical factor that influences sustainable behaviors. Awareness equips individuals with knowledge about global environmental challenges, such as climate change, pollution, and biodiversity loss, and how their consumption choices impact these issues (Kousar et al., 2022). Gen Z, characterized by their higher environmental consciousness, often transforms this awareness into actionable behaviors, bridging the gap between knowledge and intention (Kousar et al., 2022).

Green advertising has emerged as a powerful mechanism to influence consumer behavior. When advertisements are perceived as authentic and credible, they effectively promote green purchase intentions among Gen Z (Aldaihani et al., 2024). However, skepticism toward greenwashing, where companies falsely claim environmental benefits can significantly diminish the influence of green advertising on behavior (Andreoli et al., 2024). Overcoming this skepticism is essential to strengthening the relationship between green marketing efforts and sustainable actions (Andreoli et al., 2024; Tufan Özsoy & Mutlu Yüksel Avcilar, 2016).

Influencers play a vital role in advocating for sustainability. As trusted figures, they bridge the gap between environmental awareness and behavioral intentions by promoting sustainable products, lifestyles, and practices. Gen Z often looks to influencers for recommendations and aligns their actions with those endorsed by these social media personalities (Afianto et al., 2024; Vilkaite-Vaitone, 2024).

Lastly, platform features like gamification, interactive content, and visual tools enhance engagement with sustainability campaigns. Features such as live streaming, badges, and challenges make the content more appealing, driving deeper involvement and fostering sustainable behaviors (Hollebeek et al., 2014). These features are particularly effective in

sustaining interest and encouraging action among Gen Z, who value engaging and user-friendly digital experiences (Duong & Tran, 2024).

Together, these factors social media engagement, environmental awareness, green advertising perception, social media influencers advocacy, and platform features shape green purchase intentions, which serve as a precursor to green consumption behaviors (Nekmahmud et al., 2022; Sun & Wang, 2020). This review highlights the relationship of these elements in driving environmental sustainability efforts through social media.

2.1 Social Media Engagement

Social media engagement refers to the extent to which individuals interact with sustainability-related content on platforms like Instagram, TikTok, and Twitter (Confetto et al., 2023; Dessart, 2017). Engagement involves activities such as liking, commenting, sharing, and participating in campaigns or challenges focused on environmental issues (Khan, 2017). For Gen Z, who are highly active on social media, engagement fosters awareness and advocacy, making it a critical variable in shaping their environmental behaviors. Interactive tools like hashtags, live videos, and gamified challenges significantly enhance the level of engagement, amplifying the impact of green marketing efforts (Jain, 2024; Workman et al., 2021).

2.2 Environmental Awareness

Environmental awareness reflects an individual's understanding of ecological challenges and the importance of sustainable practices (Luan et al., 2022). It is a cognitive state that drives an individual's motivation to act in ways that support environmental conservation. Among Gen Z, heightened awareness often translates into support for eco-friendly products and behaviors (Agrawal et al., 2023). Social media plays a vital role in raising environmental awareness by disseminating educational content and connecting users with global sustainability initiatives, making it a key factor in influencing green purchase intentions (Truc, 2024; Zafar et al., 2021).

2.3 Green Advertising Perception

Green advertising perception captures how individuals evaluate the authenticity and credibility of advertisements promoting eco-friendly products and sustainable practices. Advertisements that align with Gen Z's values of transparency and environmental commitment are more likely to influence their attitudes and behaviors (Ghouse et al., 2024). However, the prevalence of greenwashing, misleading claims about environmental benefits, poses a challenge. Positive perceptions of green advertising can strengthen trust in brands and encourage sustainable consumption choices (Lopes et al., 2023; Tu et al., 2024).

2.4 Social Media Influencer

Social media influencer or Influencer advocacy refers to the promotion of sustainable practices by social media influencers (Schmuck, 2021). Influencers serve as intermediaries between brands and consumers, shaping attitudes and behaviors through their content (Ooi et al., 2023). For Gen Z, influencers often act as role models whose recommendations carry significant weight. Advocacy by credible influencers can foster trust in eco-friendly products and motivate followers to adopt sustainable lifestyles, bridging the gap between awareness and action (Nursansiwati, 2024; Rizomyliotis et al., 2024).

2.5 Platform Features

Platform features such as interactivity, gamification, and visual content significantly impact user engagement with sustainability campaigns (Fernández Galeote et al., 2023; Soares et al., 2024). Features like challenges, badges, and live streaming make sustainability campaigns more appealing and engaging for Gen Z, who value user-friendly and interactive digital experiences (Huang et al., 2024; Prasanna & Priyanka, 2024). These features play a critical role in sustaining interest and encouraging participation in green initiatives, making them an essential variable in driving sustainable behaviors (Qinghua & Tao, 2024).

2.6 Proposed research model and hypotheses development

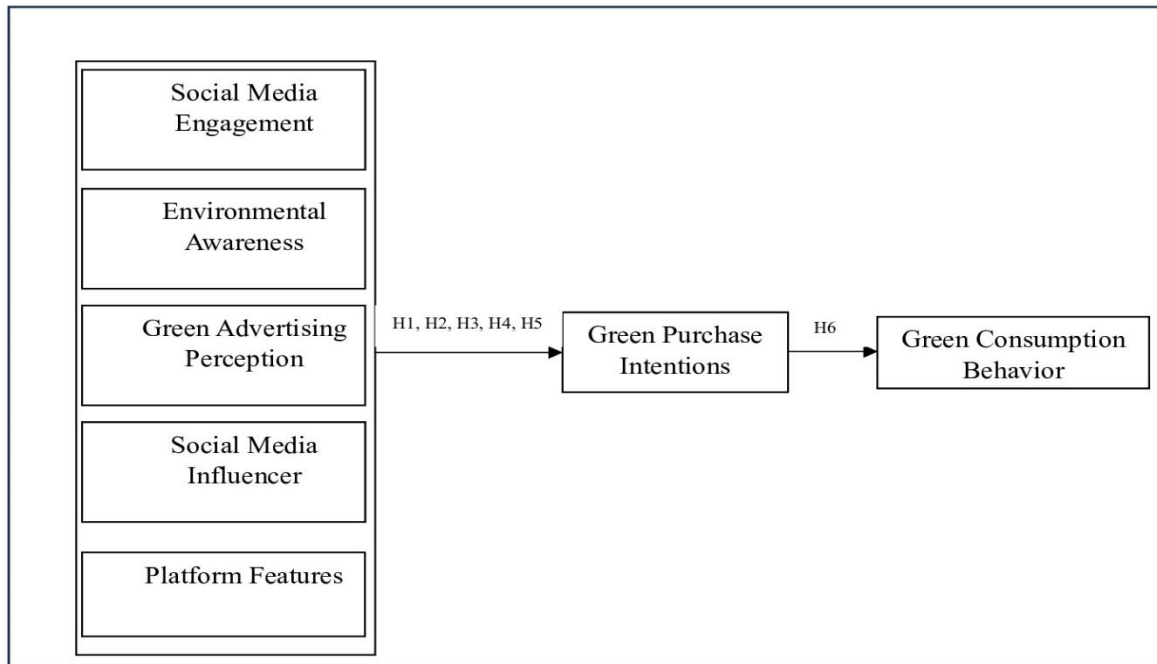


Figure 1 Proposed Research Model

2.7 Hypotheses

- H1: Social media engagement positively influences green purchase intentions*
H2: Environmental awareness positively influences green purchase intentions
H3: Green advertising perception positively influences green purchase intentions
H4: Social media influencer positively influences green purchase intentions
H5: Platform features positively influence green purchase intentions
H6: Green purchase intentions positively influence green consumption behavior

3. Methodology

With a focus on individuals hailing Jammu and Kashmir (Union Territory), India, this study used a quantitative research approach to examine the relationships between social media marketing and sustainable practices among Generation Z. The region's diverse socio-cultural and environmental context provided an appropriate setting to explore sustainability-related behaviors. Data were collected using a convenience sampling technique, targeting individuals aged 18 to 25 who are active social media users and have an interest in sustainability. To ensure comprehensive coverage, data collection was conducted through both online and offline channels. Online methods utilized platforms such as Instagram, WhatsApp, Facebook, and LinkedIn, while offline methods involved distributing questionnaires in universities, community centers, and youth groups. A total of 320 questionnaires were distributed, and 298 valid responses were obtained, providing a robust sample for structural equation modeling (SEM) analysis.

The structured questionnaire included sections on demographics, social media engagement, environmental awareness, green advertising perception, social media influencers advocacy, platform features, green purchase intentions, and green consumption behavior. Validated scales from existing literature (see Table 1) were used to ensure the reliability and validity of the constructs. Responses were measured on a 5-point Likert scale (Likert, 1932), ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). This methodological approach, incorporating both online and offline techniques, ensured diverse participation and provided valuable insights into the dynamics of social media marketing and sustainability behaviors among Generation Z in Jammu and Kashmir.

3.1 Methodological procedures

A quantitative approach was used, concentrating on Partial Least Squares Structural Equation Modelling (PLS-SEM) using Smart PLS 4 software, in light of the study's goal and suggested research model (Hair et al., 2016). In contrast to questionnaire data, which often follow a normal distribution, this approach is especially well-suited for exploratory research (Hair et al., 2022). PLS-SEM is often used in sustainability research, especially in studies that look at sustainable consumer behaviour and environmental issues (Antonetti & Maklan, 2014; Saari et al., 2021).

4. Data analysis

4.1 Measurement Model Assessment

Assessing the measurement model is the first step in doing PLS-SEM analysis. This procedure assesses reflectively assessed constructs by looking at discriminant validity, convergent validity, indicator reliability, and composite reliability, as suggested by (Hair et al., 2011). The first task in this phase is to assess the reliability of the indicators, which reflects the variance explained by their corresponding constructs (Chin, 2010). Indicator reliability is indicated by outer loadings, which should ideally exceed 0.70 (Wong, 2013). While outer loadings above 0.70 are generally preferred (Vinzi et al., 2010), lower loadings are often observed in social science studies. Instead of discarding items with loadings below 0.70 outright, researchers should carefully analyze whether removing them improves composite reliability, content validity, or convergent validity. As can be seen from Table 1 below, this process is crucial for determining the reliability and validity of the measurement model in PLS-SEM

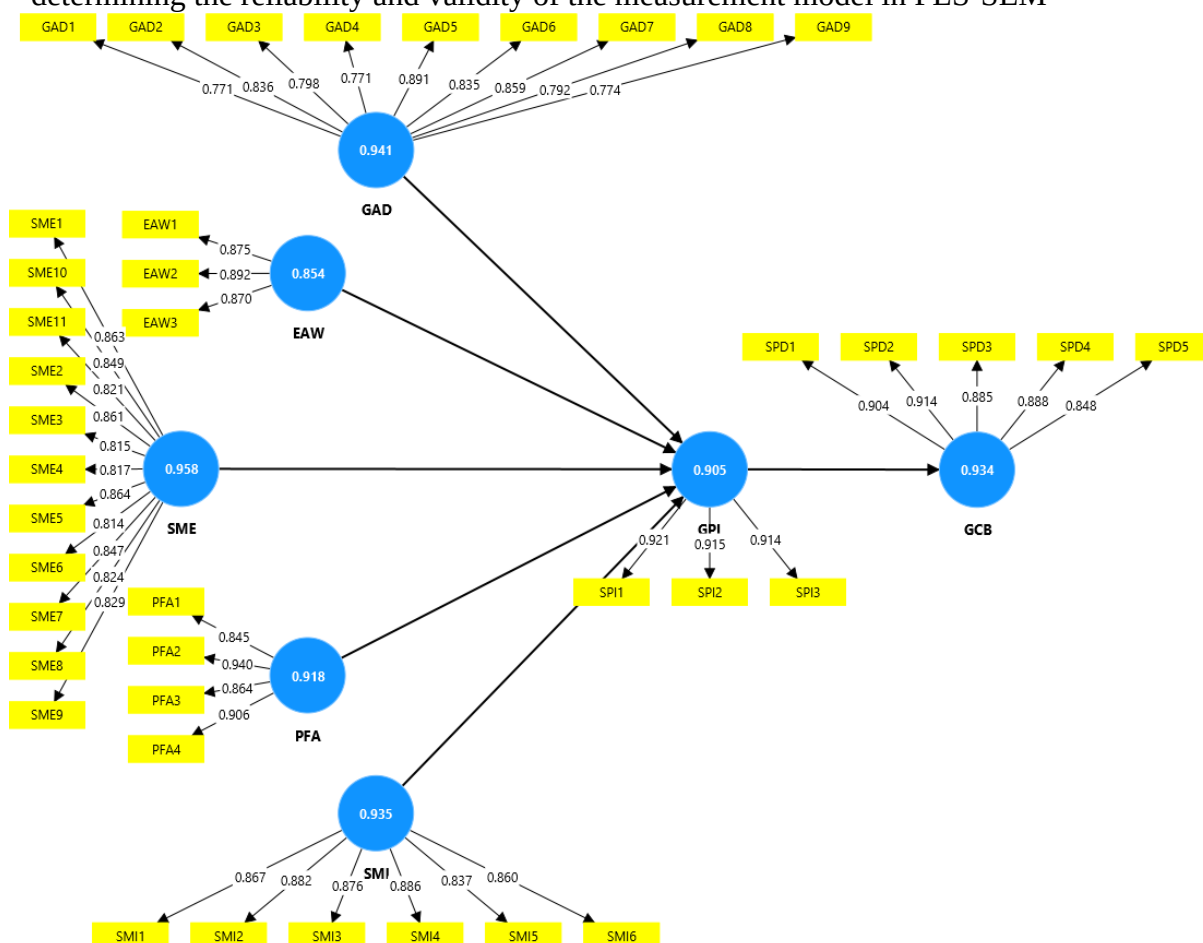


Figure 2 Measurement Model

Table 1 Factors Loadings, Reliability, Convergent Validity and VIF

Factor (Items)	λ	α	CR	AVE	VIF	Source
EAW1	0.875				2.074	
EAW2	0.892	0.854	0.854	0.774	2.248	(Fischer et al., 2015)
EAW3	0.870				2.033	
GAD1	0.771				2.586	
GAD2	0.836				2.773	
GAD3	0.798				2.632	
GAD4	0.771				2.565	
GAD5	0.891	0.941	0.992	0.664	3.026	(Bailey et al., 2016)
GAD6	0.835				2.708	
GAD7	0.859				2.643	
GAD8	0.792				2.382	
GAD9	0.774				2.364	
PFA1	0.845				2.691	
PFA2	0.940	0.918	1.112	0.791	2.936	(Brodie et al., 2013)
PFA3	0.864				3.034	
PFA4	0.906				3.302	
SME1	0.863				3.399	
SME2	0.861				2.986	
SME3	0.815				2.939	
SME4	0.817				3.281	
SME5	0.864				2.979	
SME6	0.814	0.958	0.977	0.701	2.805	(Ni et al., 2020)
SME7	0.847				3.086	
SME8	0.824				2.837	
SME9	0.829				2.742	
SME10	0.849				2.981	
SME11	0.821				3.133	
SMI1	0.867				2.944	
SMI2	0.882				3.229	
SMI3	0.876	0.935	0.939	0.754	3.029	(Onem & Selim Selvi, 2024)
SMI4	0.886				3.132	
SMI5	0.837				2.545	
SMI6	0.860				2.807	
GPB1	0.904				3.144	
GPB2	0.914				3.495	
GPB3	0.885	0.934	0.964	0.789	2.988	(Kumar & Ghodeswar, 2015)
GPB4	0.888				3.325	
GPB5	0.848				2.840	
GPI1	0.921				3.168	
GPI2	0.915	0.905	0.907	0.84	2.767	(Chan, 2001)
GPI3	0.914				2.895	

As shown in Table 1, no items were excluded from this study because all met the threshold of >0.600 , as recommended by (Gefen & Straub, 2005). The reliability of the constructs was assessed using Cronbach's Alpha, rho_A, and composite reliability (CR), all of which exceeded the recommended threshold of 0.700 (Wasko & Faraj, 2005). The rho_A values, which provide

an intermediate measure between Cronbach's Alpha and CR (Sarstedt et al., 2021), were also above 0.700, further confirming the reliability of the constructs (Henseler et al., 2016).

All constructs had Average Variance Extracted (AVE) values over 0.500, which satisfied the criterion established by Fornell & Larcker (1981a), confirming convergent validity. These findings show that the constructs exhibit enough convergent validity, internal consistency, and reliability, guaranteeing the measurement model's resilience. All of the indicators' VIF values were below the suggested cutoff point of 5.0 Hair et al. (2011), suggesting that there are no issues with multicollinearity. These findings bolster the constructs' appropriateness for further structural model assessment.

4.2 Discriminant Validity

Discriminant validity, as described by (Bagozzi et al., 1991), assesses the extent to which measures of different constructs are distinct from one another. It ensures that valid measures of unique constructs do not show excessively high correlations, thereby confirming that each construct captures a separate and independent concept.

4.3 Fornell and Larcker Criterion

When a construct's square root of the Average Variance Extracted (AVE) is higher than its correlation with any other construct, discriminant validity is proven according to the Fornell-Larcker Criterion (Fornell & Larcker, 1981b). Each construct in this research had a square root of AVE that was greater than the correlations between that construct and every other construct; these are shown in bold and italics in Table 2. This result validates the measurement model's discriminant validity.

In order to ensure the originality and distinctiveness of the measured dimensions, the findings show that each construct has more variation with its own indicators than with other constructs. The constructs in the model are well specified and may be safely utilised for further structural analysis, based to this strong validation.

Table 2 Fornell and Larcker Criterion

	EAW	GAD	PFA	SME	SMI	GPD	GPI
EAW	0.879						
GAD	0.091	0.815					
PFA	0.078	0.119	0.889				
SME	0.453	0.079	0.125	0.837			
SMI	0.059	0.131	0.040	0.031	0.868		
GPD	0.021	0.059	0.110	0.104	0.075	0.888	
GPI	0.170	0.138	0.059	0.178	0.372	0.150	0.917

4.4 Heterotrait-Monotrait Ratio (HTMT)

A key component in proving discriminant validity is the HTMT, a measure that calculates the correlation between components. Although the exact HTMT criterion has been up for dispute in the literature, Teo et al. (2008) offer a more liberal threshold of 0.90, while Kline (2018) proposes a harsher threshold of 0.85. The HTMT values were computed in this research in order to evaluate discriminant validity. All construct pairings' HTMT values fell below the suggested cutoff of 0.90, as seen in Table 3, suggesting that the constructs had adequate discriminant validity. These results confirm that the constructs in the model are not excessively correlated, ensuring their conceptual distinctiveness and reliability. The findings further validate the measurement model, supporting its use for subsequent structural model evaluations.

Table 3 Heterotrait-Monotrait (HTMT)

	EAW	GAD	PFA	SME	SMI	GPD	GPI
EAW							
GAD	0.105						
PFA	0.100	0.128					
SME	0.501	0.101	0.130				
SMI	0.068	0.135	0.060	0.070			
GPD	0.049	0.086	0.129	0.124	0.082		
GPI	0.194	0.115	0.056	0.176	0.401	0.154	

4.5 Structural Model

The structural model reveals positive, statistically significant relationships, validated by robust model fit indices, confirming its appropriateness and reliability in capturing and explaining relationships in the study. It encompasses the hypothesized paths within the research framework. Its assessment is based on R^2 , Q^2 , and the significance of the paths, following the guidelines of measure (Joseph F. Hair et al., 2013; Yuliantoro et al., 2019). The R^2 values, which can range from 0 to 1, indicate the proportion of variance explained by the model (Falk & Miller, 1992). Table 4 shows R^2 values of 0.520 for Green Consumption Behavior (GCB) and 0.399 for Green Purchase Intention (GPI), demonstrating that the model explains a moderate amount of variance in these constructs.

Table 4 Model Evaluation Metrics, R^2 and Q^2 Values

	R^2	Q^2
GCB	0.520	0.118
GPI	0.399	0.178

4.6 Goodness of Fit Analysis

Goodness of fit is a global metric that assesses the efficiency of the overall measurement model, particularly in terms of average variance extracted (AVE) (Tenenhaus et al., 2005; Tenenhaus & Vinzi, 2005). In addition to AVE, the Standardized Root Mean Square Residual (SRMR) is commonly used as a measure of fit, where values below 0.10 or 0.08 indicate a good fit (Hu & Bentler, 1999).

A satisfactory model fit is confirmed by the study's SRMR values, which are 0.045 for the saturated model and 0.056 for the estimated model (Table 5). Both values are within the acceptable range. In addition, the Chi-square and NFI values, as well as other fit indices like d_{ULS} and d_G , provide further evidence of the model's resilience. Together, these indicators confirm the model's applicability and effectiveness in capturing the connections being studied.

Table 5 Model Fit

	Saturated model	Estimated model
SRMR	0.045	0.056
d_{ULS}	1.775	2.728
d_G	0.947	0.958
Chi-square	1023.163	1032.101
NFI	0.852	0.851

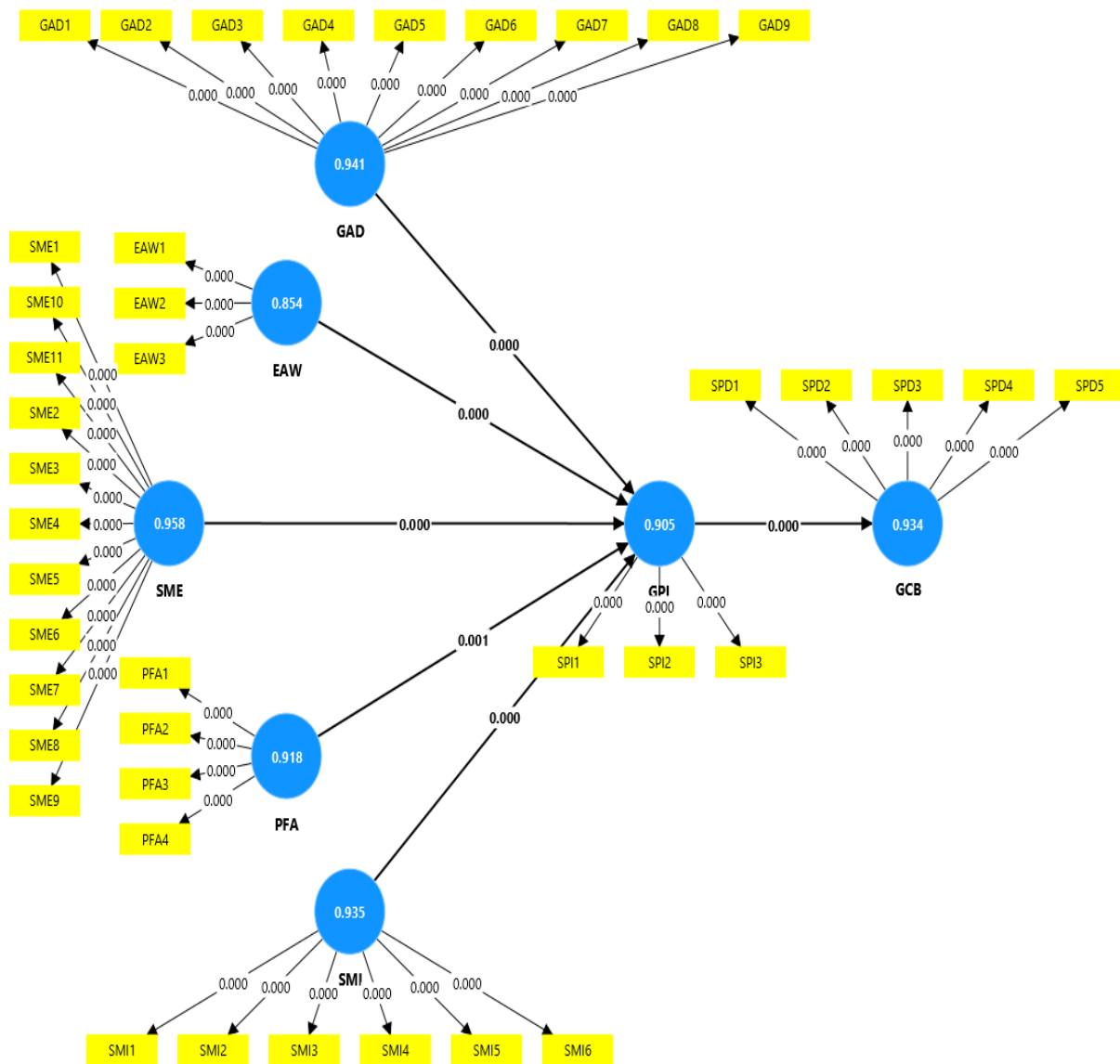


Figure 3 Structural Model

4.7 Path Coefficients and Bootstrapping Procedure

The structural model was evaluated using the PLS version 4 software, incorporating a bootstrapping procedure with 5000 subsamples drawn from the original dataset of 298 samples to ensure the robustness of the findings. Significance levels were assessed through two-tailed t-tests, with values greater than 1.96 indicating significance, and one-tailed t-tests, using a threshold of $p < 0.05$ and path coefficients exceeding 0.68, as recommended by (Nevitt & Hancock, 2001).

The model demonstrated the relationships between constructs, enabling the evaluation of the proposed hypotheses. Path coefficients were utilized to measure the strength and direction of associations between variables, while the bootstrapping procedure provided confidence intervals to confirm their statistical significance. The results, including path coefficients and t-statistics, are presented in Table 6 and served as the basis for determining whether each hypothesis was supported or rejected. This process ensures the reliability and validity of the structural model findings.

Table 6 Hypotheses testing

	Beta	(STDEV)	T-statistics	P-values
EAW -> GPI	0.304	0.081	3.754	0.000
GAD -> GPI	0.128	0.051	2.517	0.000
PFA -> GPI	0.284	0.102	2.787	0.001
SME -> GPI	0.196	0.086	2.283	0.000
SMI -> GPI	0.377	0.096	3.930	0.000
GPI -> GCB	0.149	0.034	4.387	0.000

Following the assessment of the measurement model (Table 6), the next step involves evaluating the structural paths to assess the relationships among the study constructs and their statistical significance.

H1 evaluates whether Environmental Awareness (EAW) significantly and positively influences Green Purchase Intentions (GPI). The results reveal that environmental awareness has a significant and positive impact on green purchase intentions ($B=0.304$, $t=3.754$, $p<0.001$). Hence, H1 is supported. H2 examines whether Green Advertising Perception (GAD) significantly and positively affects Green Purchase Intentions (GPI). The findings indicate that green advertising perception has a significant and positive impact on green purchase intentions ($B=0.128$, $t=2.517$, $p<0.001$). Thus, H2 is supported.

H3 assesses whether Platform Features (PFA) significantly and positively influence Green Purchase Intentions (GPI). The results show that platform features have a significant and positive effect on green purchase intentions ($B=0.284$, $t=2.787$, $p<0.001$). Therefore, H3 is supported. H4 evaluates whether Social Media Engagement (SME) significantly and positively impacts Green Purchase Intentions (GPI). The analysis reveals that social media engagement positively and significantly influences green purchase intentions ($B=0.196$, $t=2.283$, $p<0.001$). Hence, H4 is supported.

H5 investigates whether Social Media Influencer (SMI) significantly and positively affects Green Purchase Intentions (GPI). The results indicate that social media influencer has a significant positive impact on green purchase intentions ($B=0.377$, $t=3.930$, $p<0.001$). Consequently, H5 is supported.

H6 examines whether Green Purchase Intentions (GPI) significantly and positively influence Green Consumption Behavior (GCB). The findings confirm that green purchase intentions have a significant and positive impact on green consumption behavior ($B=0.149$, $t=4.387$, $p<0.001$). Thus, H6 is supported.

These results confirm the hypothesized relationships, providing strong evidence for the structural model's validity.

5. Results and Discussions

The findings of this study provide critical insights into the relationships between social media engagement, green purchase intentions, and green consumption behavior, offering a nuanced understanding of the factors shaping sustainable practices among Generation Z. Social media engagement emerged as a significant driver of green purchase intentions. Active interaction

with sustainability-related content, such as sharing, commenting, and participating in digital campaigns, underscores the power of social media platforms in fostering pro-environmental attitudes. This supports existing literature emphasizing the role of digital engagement in creating a bridge between awareness and intention (Arora et al., 2023; HAMROUNI, 2024).

Green purchases were shown to be positively impacted by awareness of the environment. Generation Z is more inclined to embrace sustainable purchasing patterns as a result of their increased awareness of global environmental challenges. The findings demonstrate how crucial environmental education is to developing knowledgeable customers who are inspired to make environmentally responsible decisions. These findings are consistent with prior studies linking awareness to behavioral intentions, particularly in the context of environmental sustainability.

Green advertising perception also significantly influenced green purchase intentions. Credible and authentic advertising campaigns were shown to enhance trust and motivate Gen Z consumers to align their purchasing behavior with environmental values. This finding reinforces the importance of avoiding greenwashing and ensuring transparency in marketing efforts, aligning with prior research that highlights consumer skepticism as a barrier to trust (Zameer & Yasmeen, 2022, 2022).

Social media influencer or Influencer advocacy demonstrated the strongest influence on green purchase intentions, indicating the vital role of social media influencers in shaping sustainable consumption behaviors. Influencers, as trusted figures, act as effective intermediaries between brands and consumers, promoting eco-friendly products and lifestyles in a manner that resonates with their audience. This finding aligns with previous studies emphasizing the role of influencers in guiding consumer behavior, particularly among digitally savvy generations like Gen Z (Confetto et al., 2023; Rodrigo & Mendis, 2023).

Platform features were also shown to play a critical role in driving green purchase intentions. Interactive and engaging features, such as gamification and live streaming, enhance user experience and sustain interest in sustainability campaigns. These results underscore the importance of designing user-friendly platforms that effectively engage Gen Z users and promote pro-environmental behaviors (Ahmad & Zhang, 2020).

Green purchase intentions were identified as a significant predictor of green consumption behavior, confirming their role in influencing actual behaviors. The translation of intentions into sustainable practices highlights the need for strategies that strengthen consumer commitment and reduce barriers to action. These findings validate theoretical models positing that intentions serve as a precursor to behavior, emphasizing the importance of fostering strong intentions to achieve meaningful behavioral outcomes (Arpaci et al., 2024; Wu & Chen, 2014).

This study provides a comprehensive framework for understanding the dynamics influencing sustainable behaviors among Generation Z. By integrating factors such as social media engagement, environmental awareness, and social media influencers advocacy, the findings contribute to both academic literature and practical strategies aimed at promoting sustainability. The results underscore the importance of leveraging digital platforms and personalized messaging to foster pro-environmental behaviors effectively.

5.1 Implication of this research

The findings of this research have significant implications for various stakeholders involved in promoting sustainability. Policymakers can leverage the role of social media platforms as effective tools for raising environmental awareness and encouraging sustainable behaviors. Designing targeted campaigns that integrate interactive platform features, such as gamification or live events, can enhance engagement and broaden participation in environmental initiatives. Additionally, regulatory measures to promote transparent green advertising can reduce skepticism and foster trust, ensuring that greenwashing practices are minimized.

For businesses, the results highlight the importance of aligning marketing strategies with the values and preferences of Generation Z. Collaborating with credible influencers who resonate with this demographic can effectively promote eco-friendly products and encourage sustainable consumption patterns. Businesses must prioritize authentic and transparent green advertising to build long-term consumer trust and loyalty. Furthermore, enhancing user engagement through interactive features on social media platforms can strengthen intentions to adopt sustainable products and behaviors. Educators have a critical role in integrating environmental education into formal curricula to equip Generation Z with the knowledge and tools necessary for making informed decisions. By fostering a deeper understanding of sustainability and emphasizing digital literacy, educators can enable students to critically engage with sustainability-related content on social media, bridging the gap between awareness and action.

Environmental advocates and NGOs can use these findings to design impactful campaigns that prioritize relatable and accessible digital content. Collaborating with influencers and utilizing gamified tools can amplify the reach and effectiveness of advocacy efforts. Addressing barriers such as cost and accessibility can ensure that green purchase intentions translate into tangible actions, contributing to broader environmental outcomes. Social media platforms themselves can play an active role in promoting sustainability by integrating features that support interactive and gamified content. By partnering with brands and influencers, platforms can enhance the visibility of eco-friendly practices and foster a culture of sustainable engagement among users. This aligns with the preferences and behaviors of Generation Z, who value interactive and authentic digital experiences.

For consumers, particularly Generation Z, the study emphasizes their role as active participants in driving demand for sustainable products and practices. By critically engaging with sustainability-related content and supporting transparent brands, consumers can collectively contribute to positive environmental outcomes. The research underscores the interconnectedness of individual actions and broader environmental impacts, highlighting the importance of collaborative efforts among stakeholders to foster a more sustainable society.

5.2 Limitations and Future Directions

Despite offering insightful information, this research has certain limitations that should be noted. First, social desirability bias might be introduced by using self-reported data, which could lead to an overestimation of sustainable behaviours. Second, the sample is limited to Generation Z, which may restrict the generalizability of findings to other demographic groups. Additionally, the study focuses on a specific geographic region, limiting its applicability to broader contexts. The cross-sectional design provides a snapshot of behaviors and intentions but does not account for changes over time or causal relationships.

In order to overcome these constraints, future studies should use longitudinal designs to examine behavioural changes over time and validate causation. Generalisability would be improved by enlarging the sample to include a range of demographic and geographic groupings. Further studies could also integrate experimental designs to test the effectiveness of specific social media strategies and examine additional moderating factors, such as cultural influences, to deepen understanding of sustainability behaviors.

6. Conclusion

This study provides a comprehensive analysis of the factors influencing green purchase intentions and green consumption behavior among Generation Z, emphasizing the pivotal role of social media engagement, environmental awareness, green advertising perception, social media influencer, and platform features. The findings underscore the interconnected dynamics through which these variables shape sustainable consumption patterns, offering significant theoretical and practical implications.

The results confirm that social media platforms serve as a critical bridge between awareness and action, facilitating the translation of pro-environmental attitudes into behavioral intentions. Generation Z, characterized by their digital fluency and environmental consciousness, demonstrates how active engagement with sustainability-related content fosters stronger green purchase intentions. Furthermore, the positive impact of environmental awareness and credible advertising highlights the importance of education and authenticity in driving sustainable practices. Social media Influencers advocacy emerged as the strongest predictor of green purchase intentions, underscoring the trust and influence that social media personalities command in promoting eco-friendly behaviors. Platform features, such as gamification and interactivity, further enhance engagement, creating immersive experiences that sustain interest in sustainability campaigns.

Green purchase intentions were also validated as a key factor, linking the influencing factors to actual green consumption behaviors. This finding emphasizes the importance of strengthening consumer intentions to drive tangible environmental outcomes. The study's findings align with theoretical models like the Theory of Planned Behavior and contribute to the broader literature on sustainability, providing actionable insights for stakeholders. By leveraging the potential of social media and addressing barriers to sustainable behavior, targeted strategies can foster a more environmentally conscious and sustainable society.

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