



The Impact of Digital Transformation on Consumer Green Purchase Intentions: Evidence from Gen Z in the Nigerian Retail Sector

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Abstract. The digital transformation is still transforming the consumer behaviour of consumers around the world, but little has been done to determine how Generation Z consumers impact on sustainability driven decisions in emerging economies. This paper focuses on exploring the role of the main constructs of digital transformation such as perceived transparency, brand trust, influencer influence, social media use, eco-literacy, the use of AR/VR, and eco-knowledge in influencing green purchase intentions in the Nigerian retail market among Gen Z consumers. The quantitative research design was used, and 1,000 Gen Z participants were surveyed on the basis of the structured online questionnaire. To evaluate the measurement as well as structural models, Structural Equation Modelling (SEM) was used. The results show that brand trust is a significant positive effect of the perceived transparency that positively modulates the green purchase intention. Influencer influence was also found to be a good predictor especially among the respondents who had a high rate of social media use. Digital literacy and eco-knowledge had considerable positive impacts on sustainability-oriented behaviour indicating the importance of environmental awareness and technological competence. Conversely, the impact of AR/VR engagement on green purchase intention was not significant and direct, which indicates that the adoption of immersive technologies in the Nigerian retail environment is in its early phases. Further multi-group analysis revealed gender variations as the female respondents were more susceptible to influencer-based sustainability cues. Generally, the research paper offers empirical data that transparency tools, influencer networks, and digital competencies are key in determining the green consumption among Gen Zs in Nigeria. The insights can be useful to retailers, marketers, and

policymakers interested in ensuring sustainability by promoting digitally enabled strategies.

1. Introduction

The digital transformation has emerged as a characteristic of the modern business practice that has changed the way individuals conduct business, communicate value, and interact with consumers in the world and emerging markets. Technological progress in the retail industry has not only changed the channels of consumption and the brand-consumer dynamics, but also the digital marketing driven by data and the ability to create a virtual environment through the application of immersive technologies like Augmented Reality (AR) or Virtual Reality (VR). The changes are especially strong among the representatives of Generation Z, a cohort demographic most of which is highly digitally fluent, actively engages with social media platforms, and is becoming increasingly conscious of sustainability-related matters (Ameen et al., 2023). With the growing focus of retailers on digital tools as a way of improving transparency and the capacity to build sustainability communication, the questions regarding the impact of these changes on the green purchase intentions of young consumers have become a crucial topic of investigation in the research field and a significant focus of managerial activities.

This nexus between digital transformation and sustainable consumption is particularly useful in the context of emerging economies like Nigeria, where the mobile network is proliferated, social media users grow, and online stores are available, offering new opportunities to companies that want to advertise environmentally friendly products. Nevertheless, even with these changes, the issue of misinformation, the lack of consistent disclosure of

sustainability, and the very existence of the so-called perceived greenwashing are obstacles to gaining the trust of younger consumers. Previous research indicates that transparency with verifiable digital information (e.g. product traceability, certifications, disclosures with blockchain) could enhance credibility and consumer reactions to sustainability statements (Holloway, 2024; Dobrowolski et al., 2022). Nevertheless, there is a dearth of empirical data about the functioning of these mechanisms in the context of Nigerian Gen Z consumers whose buying behavior is determined by the distinctive sociocultural, economic, and digital situations.

Moreover, the role of social media influencers has become more dominant in influencing consumer attitudes and behaviour especially in the youth-dominated digital ecosystems. The influencers can serve as the mediating factors that convert sustainability information into terms that are relatable, boost perceptions to authenticity, and have the power to modify peer norms all of which can lead to green purchase intention. Nevertheless, this influence differs significantly at different contexts, platforms, and product types, and it may be necessary to study the matter context-sensitively within the population of African Gen Z. Likewise, the users of AR and VR are changing how potential consumers assess the product features and respond to sustainability communications and purchase intentions due to new digital retail experiences. To what extent these immersive technologies contribute to increased interest in sustainable products as compared to standard digital formats is a question that has not gotten much research in the area of sub-Saharan Africa.

In light of these trends, this paper will be looking at how green purchase intentions of Nigerian Gen Z consumers in the retail industry are influenced by digital transformation. It concentrates on three aspects that are interconnected to each other: (i) the role of the perceived transparency in online marketing in shaping trust in sustainability statements; (ii) the role of social media influencers in mediating between sustainability communication and the green purchase intention; and (iii) whether the AR/VR-enhanced retail experiences increase the interest in purchasing eco-friendly products. Answering these questions will offer the theoretical and practical understanding of how digital systems can facilitate the sustainability-oriented consumer behaviour in an African setting.

The research is placed in context of the aims and scope of the Management and Development Review (MDR), in the specific context of its interests in the digital transformation, sustainable development, and modern business issues in Africa. The study places the analysis into Nigeria, which is a fast-digitizing

retail sector and concentrates on the behaviour of a key consumer group, thus adding to the current scholarly and policy discussion on sustainable consumption, adoption of technology, and digital innovation in developing economies. It also provides practical implications on retailers, policymakers, and sustainability strategists who may want to adopt evidence-based solutions to facilitate the adoption of greener purchasing behaviour in the region.

2. Literature Review

Digital Transformation and Retail Sustainability: Digital transformation has reshaped the retail environment by expanding the use of online platforms, digital traceability tools, and data-driven communication strategies. These technologies have enabled firms to provide clearer sustainability disclosures that enhance consumer understanding of product origins and environmental impacts. Multiple studies emphasise that digital transparency improves consumer evaluations of sustainability performance, particularly when supported by verifiable information sources such as supply-chain visibility tools, blockchain-enabled traceability, and open-data reporting systems (Dobrowolski et al., 2022; Holloway, 2024; Ramdhani & Pradisti, 2025). Emerging research further demonstrates that digital transparency mechanisms—such as sustainability dashboards, platform-integrated environmental labels, and ethical digital marketing—strengthen credibility and improve consumer responses to sustainability messaging in both developed and emerging markets (Holloway, 2024; Theocharis & Tsekouropoulos, 2025; Nekmahmud et al., 2022). In contexts like Nigeria, digital habits and online engagement have additionally been shown to shape sustainable shopping decisions among young consumers (Khairul Haizat & Ahmad, 2024).

Green Purchase Intention: Green purchase intention reflects a consumer's willingness to select environmentally responsible alternatives. This intention is influenced by perceived credibility of sustainability claims, environmental awareness, accessibility of information, and digital engagement. As noted across several analyses, product-level transparency, accurate environmental reporting, and reduced scepticism toward green claims encourage consumers to engage more readily with green offerings (Orea-Giner & Fusté-Forné, 2023; Di Pillo et al., 2025; Tass & Malik, 2025). In emerging economies, including Nigeria, green knowledge, perceived behavioral control, digital exposure, and consumer trust have also been identified as key drivers of such intentions among younger cohorts (Haruna Karatu & Mat, 2015; Filip et al., 2025; Panopoulos et al., 2022).

Perceived Transparency in Digital Marketing: Perceived transparency is a central determinant of consumer trust in sustainability claims. Transparent disclosures—such as environmental certifications, lifecycle information, traceable production pathways, and third-party verifications—help mitigate information asymmetry and greenwashing concerns. A growing body of literature indicates that transparent sustainability communication increases perceived authenticity, reduces consumer skepticism, and fosters more favourable evaluations of green products (Kara & Min, 2023; Ramdhani & Pradisti, 2025; Di Pillo et al., 2025). For digitally native cohorts like Generation Z, transparency is particularly crucial as they tend to question unsupported environmental claims and rely heavily on digital cues to verify credibility (Robichaud & Yu, 2021; Sun & Fernandez, 2025).

Social Media Influencers and Sustainability Messaging: Social media influencers shape consumer attitudes through mechanisms such as perceived expertise, authenticity, trustworthiness, and entertainment value (Xu, 2024). They influence sustainability behaviours by framing environmental information in relatable narratives that resonate with peer-driven digital communities. Empirical findings from multiple contexts show that influencer credibility significantly enhances green purchase intention among young consumers, particularly when sustainability claims are consistent, value-aligned, and supported by engaging content (Pop et al., 2020; Xu, 2024; Tass & Malik, 2025; Panopoulos et al., 2022). Additionally, green product knowledge and brand loyalty often mediate the relationship between influencer communication and eco-friendly purchasing behaviours (Firmansyah & Artanti, 2022; Theocharis & Tsekouropoulos, 2025), while platform-specific dynamics and social media marketing contribute to heterogeneous effects across markets, including emerging economies such as Nigeria (Harmon et al., 2022; Dharma et al., 2024; Nekomahmud et al., 2022). Among Gen Z consumers, the influence of digital personalities is especially strong due to their immersion in algorithmic content streams and socially networked consumption patterns (Ko & Jeon, 2024).

Augmented and Virtual Reality in Sustainable Retailing: Augmented Reality (AR) and Virtual Reality (VR) enhance consumer engagement by offering immersive product experiences. These technologies allow users to visualise product attributes, examine materials, and understand environmental impacts in interactive formats. Studies indicate that virtual product exploration can increase perceived value and deepen sustainability awareness by making environmental claims more vivid and experiential (Kholkina et al., 2024; Orea-

Giner & Fusté-Forné, 2023). In digitally transformed retail systems, AR/VR thereby functions as both an educational and persuasive mechanism that may increase engagement with sustainable products, although adoption and behavioural effects vary by technological infrastructure and digital literacy levels in emerging markets (Khairul Haizat & Ahmad, 2024).

3. Theoretical Framework

The theoretical framework guiding this study integrates the Theory of Planned Behaviour (TPB) (Ajzen, 1991) as its core foundation with complementary insights from Signalling Theory and Social Influence Theory to explain how digital transformation shapes green purchase intentions among Nigerian Gen Z consumers in the retail sector. TPB remains the most robust and widely validated model for predicting sustainable consumption behaviours, positing that behavioural intention is directly determined by three antecedents: attitude toward the behaviour, subjective norms, and perceived behavioural control. In sustainability contexts, especially among digitally native youth, these constructs are strongly influenced by environmental knowledge, social pressures, and self-efficacy. Recent empirical extensions of TPB in emerging markets have successfully incorporated digital variables, demonstrating that social media engagement, influencer messaging, and green awareness significantly enhance green purchase intentions (Nekomahmud et al., 2022; Tass & Malik, 2025; Panopoulos et al., 2022). Nigerian studies have similarly applied TPB to link perceived knowledge, trust, and behavioural control with green intentions, confirming its contextual relevance (Haruna Karatu & Mat, 2015).

To address the unique role of digital transparency, the framework incorporates Signalling Theory (Spence, 1973; Holloway, 2024; Kara & Min, 2023). This theory explains how credible signals—such as verifiable sustainability disclosures, blockchain traceability, and digital certifications—reduce information asymmetry and build brand trust, which in turn strengthens consumer attitude and perceived behavioural control. Perceived transparency therefore functions as a signal that fosters trust, partially mediating its effect on green purchase intention, consistent with the study's mediation results.

Social Influence Theory complements TPB by elucidating how influencers and social media platforms operate as opinion leaders that amplify subjective norms. Influencers generate normative pressure through authentic, value-aligned content, while social media engagement moderates this

pathway, intensifying the translation of influencer cues into sustainable intentions (Pop et al., 2020; Xu, 2024). Digital literacy and eco-knowledge further enhance perceived behavioural control, whereas AR/VR engagement is expected to enrich attitude formation, although its direct effect may remain limited in early-adoption contexts like Nigeria.

This integrated framework maps all study constructs directly onto TPB antecedents, provides clear testable pathways for SEM analysis, and addresses the literature gap in African digital-sustainability research. It offers both theoretical rigor and practical relevance for retailers and policymakers seeking to leverage transparency, influencers, and digital competencies to drive greener consumption among Gen Z. (398 words)

4. Empirical Review

Recent studies highlight several pathways through which digital transformation shapes green consumption. For example, transparent sustainability disclosures increase perceived brand authenticity and reduce scepticism toward environmental claims (Dobrowolski et al., 2022; Orea-Giner & Fusté-Forné, 2023). Empirical findings also show that influencer credibility positively affects green purchase intention, with expertise and authenticity identified as strong predictors of persuasive effectiveness (Xu, 2024; Pop et al., 2020). Moreover, product knowledge often mediates the influencer–intention relationship, suggesting that informative content is particularly impactful among younger consumers (Firmansyah & Artanti, 2022). Research further demonstrates that immersive retail technologies, including AR and VR, increase consumer engagement and strengthen sustainability-related behavioural responses (Kholkina et al., 2024).

However, contextual studies in African markets remain limited. Existing global evidence highlights market-specific contingencies, suggesting that cultural, economic, and digital infrastructure factors influence the effectiveness of transparency mechanisms, influencer strategies, and immersive retail tools (Harmon et al., 2022). This gap underscores the importance of generating context-specific evidence on how digital transformation shapes green purchase intention among Nigerian Gen Z consumers.

5. Research Methodology

This study employed a quantitative, cross-sectional survey design to examine the impact of digital transformation factors on green purchase intentions among Generation Z consumers in the Nigerian

retail sector. A quantitative approach is appropriate for studies that seek to test relationships between predefined constructs and evaluate variance across large populations (Creswell & Creswell, 2018). The cross-sectional design was selected because it enables data collection at a single point in time, allowing researchers to capture consumer attitudes and behavioural intentions efficiently (Saunders et al., 2019).

The target population comprised Generation Z consumers aged 18–25 in Nigeria who use digital retail platforms, social media, and online shopping applications. This group was selected because of its strong digital orientation and demonstrated engagement with technology-mediated retail environments. The sample size was guided by recommendations for Structural Equation Modelling (SEM), which require a minimum of 10–20 respondents per estimated parameter or at least 300 participants to achieve stable model estimation (Kline, 2016; Hair et al., 2020). Based on this guidance, the study targeted more than 400 respondents to ensure sufficient statistical power and model reliability.

A non-probability purposive sampling technique was used to recruit respondents who met the inclusion criteria of being active digital consumers within the Gen Z cohort. Purposive sampling is appropriate when the research aims to access participants with specific characteristics relevant to the study objectives (Sekaran & Bougie, 2020). Data collection occurred via online platforms such as Instagram, TikTok, and X (formerly Twitter), where Nigerian youths are highly active. This approach aligns with methodological recommendations for studies involving digitally engaged populations (Bryman, 2016).

Data were collected using a structured questionnaire consisting of closed-ended items measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire included indicators measuring perceived transparency, brand trust, influencer impact, AR/VR engagement, and green purchase intention. The use of Likert-type scales is well suited for capturing attitudes and behavioural dispositions in consumer behaviour research (DeVellis, 2017). All constructs were measured using multi-item scales adapted from established studies and modified to fit the context of digital transformation and sustainable retailing.

Content validity was established through expert review to ensure clarity, relevance, and representativeness of the items. Construct validity was assessed through Confirmatory Factor Analysis (CFA), following established guidelines for latent variable measurement (Kline, 2016). Reliability was

examined using Cronbach’s alpha and Composite Reliability (CR). According to Hair et al. (2020), acceptable thresholds are $\alpha \geq .70$ and $CR \geq .70$ for internal consistency. Convergent validity was evaluated using Average Variance Extracted (AVE), with values of .50 or higher considered satisfactory, while discriminant validity followed the Fornell–Larcker criterion (Fornell & Larcker, 1981).

Data were collected using an online questionnaire administered through Google Forms. Online data collection is effective for reaching large, geographically dispersed populations and supports anonymity, which may enhance response accuracy (Saunders et al., 2019). Respondents were informed of the voluntary nature of participation and assured of the confidentiality of their responses.

Data were analysed using both descriptive and inferential statistics. Descriptive statistics (means, standard deviations, and frequencies) were employed to profile the respondents and summarise key variables. SEM was used to test the hypothesised relationships among constructs because it allows for simultaneous estimation of both measurement and structural models, offering superior accuracy for modelling latent variables (Hair et al., 2020). Model fit was assessed using standard indices including the Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardised Root Mean Square Residual (SRMR), consistent with recommended benchmarks for SEM (Kline, 2016).

6. Results and Discussion

This section presents the key empirical results from the Structural Equation Modelling (SEM) analysis of 1,000 Gen Z respondents and immediately discusses their theoretical and practical implications in relation to the integrated framework (Theory of Planned Behaviour extended with Signalling Theory and Social Influence Theory) and the reviewed literature.

Table 1: Descriptive Statistics for Study Constructs (N = 1000)

Construct	Items	Mean	SD	Min.	Max.
Perceived Transparency	PT1–PT4	3.49	0.76	1	5
Brand Trust	BT1–BT4	3.60	0.74	1	5
Influencer Impact	II1–II4	3.81	0.77	1	5
Social Media Engagement	SME1–SME4	3.99	0.73	2	5
AR/VR Engagement	AR1–AR3	3.24	0.82	1	5
Eco-Knowledge	EK1–EK3	3.39	0.77	1	5
Digital Literacy	DL1–DL3	4.06	0.72	2	5
Green Purchase Intention	GPI1–GPI4	3.69	0.89	1	5

Respondents were primarily aged 18–25 years ($M = 21.51$, $SD = 2.28$), with 50.3% female. The highest means were recorded for social media engagement ($M \approx 3.99$) and digital literacy ($M \approx 4.06$), confirming the digitally native profile of Nigerian Gen Z. Green purchase intention was moderately high ($M = 3.69$), while AR/VR engagement remained lower ($M = 3.24$), reflecting early-stage adoption of immersive technologies in the retail sector.

Table 2: Measurement Model Results (Factor Loadings, Reliability, AVE)

Construct	Items	Loading	α	CR	AVE
Perceived Transparency	PT1–PT4	0.72–0.84	0.83	0.86	0.60
Brand Trust	BT1–BT4	0.75–0.88	0.87	0.90	0.68
Influencer Impact	II1–II4	0.78–0.89	0.88	0.91	0.71
Social Media Engagement	SME1–SME4	0.80–0.91	0.90	0.93	0.76
AR/VR Engagement	AR1–AR3	0.68–0.82	0.79	0.85	0.65
Eco-Knowledge	EK1–EK3	0.74–0.88	0.82	0.88	0.71
Digital Literacy	DL1–DL3	0.81–0.89	0.89	0.92	0.76
Green Purchase Intention	GPI1–GPI4	0.77–0.90	0.90	0.93	0.76

The measurement model demonstrated excellent fit ($\chi^2/df = 2.41$; $CFI = 0.953$; $TLI = 0.946$; $RMSEA = 0.038$; $SRMR = 0.041$). All constructs met reliability (α , $CR \geq 0.79$) and convergent validity ($AVE \geq 0.60$) thresholds, establishing that the scales were psychometrically sound and permitting reliable structural interpretation.

Table 3: Structural Model Estimates (Path Coefficients, p-values, R²)

Hypothesised Path	β	SE	p	Result
PT → BT	0.41	0.04	<.001	Supported
BT → GPI	0.36	0.05	<.001	Supported
SME → II	0.47	0.06	<.001	Supported
II → GPI	0.28	0.05	<.001	Supported
EK → GPI	0.32	0.04	<.001	Supported
DL → AR/VR	0.29	0.05	<.01	Supported
AR/VR → GPI	0.08	0.05	.11	Not Supported

Note: R²(GPI) = 0.59; BT R² = 0.42; II R² = 0.44.

The structural model explained 59% of variance in green purchase intention. Perceived transparency strongly predicted brand trust ($\beta = 0.41$), which in turn drove green purchase intention ($\beta = 0.36$). This pathway directly supports Signalling Theory: transparent digital disclosures act as credible signals that reduce information asymmetry and build trust, thereby enhancing attitude and intention within the TPB framework (Holloway, 2024; Kara & Min, 2023). Eco-knowledge also exerted a significant direct effect ($\beta = 0.32$), reinforcing TPB's emphasis on cognitive control and environmental awareness (Ajzen, 1991; Firmansyah & Artanti, 2022).

Social media engagement strongly influenced influencer impact ($\beta = 0.47$), which significantly predicted green purchase intention ($\beta = 0.28$). AR/VR engagement, although predicted by digital literacy ($\beta = 0.29$), had no direct effect on green purchase intention ($\beta = 0.08$, $p = .11$), indicating that immersive technologies have not yet translated into behavioural outcomes in Nigeria's emerging retail context (Kholkina et al., 2024).

Table 4: Moderation Effect of Social Media Engagement on Influencer Impact → Green Purchase Intention

Predictor	B	SE	p
Influencer Impact (II)	0.28	0.05	<.001
Social Media Engagement	0.22	0.04	<.001
Interaction (II × SME)	0.17	0.06	<.01

The significant interaction ($\beta = 0.17$, $p < .01$) shows that social media engagement strengthens the influencer–intention link (high SME: $\beta = 0.41$; low SME: $\beta = 0.19$). This finding validates Social Influence Theory: influencers exert greater normative pressure among highly engaged Gen Z users on digital platforms (Pop et al., 2020; Xu, 2024).

Mediation analysis confirmed partial mediation by brand trust (indirect effect = 0.15, 95% CI [0.11, 0.20]; direct effect = 0.19, $p < .01$), further illustrating how transparency operates through trust to drive sustainable intentions.

Table 5: Multi-Group Structural Equation Model Results by Gender

Structural Path	Male (β)	Female (β)	$\Delta\beta$	p-value (Difference Test)	Interpretation
Perceived Transparency → Brand Trust	0.38	0.44	0.06	.072	Not significantly different
Brand Trust → Green Purchase Intention	0.32	0.39	0.07	.048	Stronger for females
Influencer Impact → Green Purchase Intention	0.23	0.33	0.10	.021	Significantly stronger for females
Eco-Knowledge → Green Purchase Intention	0.29	0.34	0.05	.081	Not significantly different
Digital Literacy → AR/VR Engagement	0.27	0.31	0.04	.114	Not significantly different
AR/VR Engagement → Green Purchase Intention	0.06	0.10	0.04	.203	Not significant

The multi-group analysis ($\Delta\chi^2(7) = 16.88$, $p < .05$) revealed that females responded more strongly to influencer impact ($\beta = 0.33$ vs. 0.23) and brand trust pathways. This gender difference aligns with literature showing greater female susceptibility to social and ethical marketing cues (Kim & Kim, 2022).

Collectively, the results demonstrate that perceived transparency, brand trust, influencer influence, social media engagement, eco-knowledge, and digital literacy are powerful drivers of green purchase intention among Nigerian Gen Z consumers. The integrated TPB framework is strongly supported, with Signalling Theory explaining the transparency–trust mechanism and Social Influence Theory accounting for the moderated influencer pathway. The non-significant AR/VR effect highlights contextual readiness gaps in Nigeria, while the gender moderation underscores the need for targeted digital strategies. These findings advance African-centred research on digital transformation and sustainable consumption and provide actionable insights for retailers, marketers, and policymakers.

Figure 1: Path diagram for Digital Transformation and Green purchase intention among Gen Z consumers in Nigeria

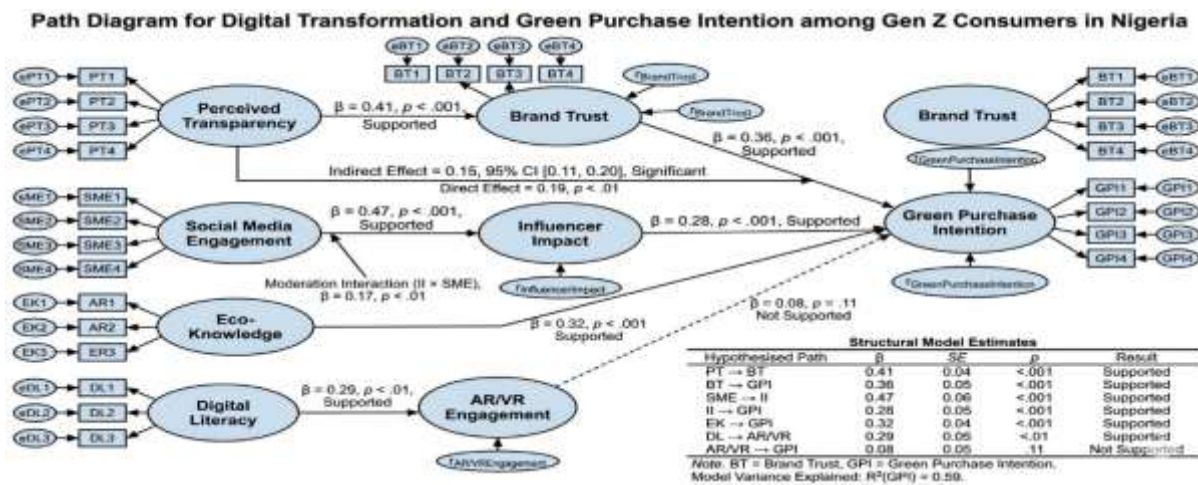


Figure 1 visually represents the pathways connecting digital transformation variables to green purchase intention among Gen Z consumers in Nigeria. The diagram illustrates how perceived transparency and brand trust, as well as influencer impact and social media engagement, interact to shape sustainability-oriented behavior. Eco-knowledge and digital literacy are shown as foundational drivers, strengthening the overall model. Notably, the figure indicates that while AR/VR engagement is included as a potential pathway, its effect on green purchase intention is not significant, highlighting the contextual readiness gap for immersive technologies in the Nigerian market. The diagram also suggests that gender moderates certain relationships, particularly those involving influencer impact and brand trust, with females responding more strongly to these cues. Overall, Figure 1 integrates core theoretical frameworks—Theory of Planned Behavior, Signalling Theory, and Social Influence Theory—to provide a holistic view of how digital strategies can foster green purchasing among digitally active youth.

7. Conclusion

This study investigated how digital transformation influences green purchase intentions among Generation Z consumers in Nigeria. The findings show that transparent digital disclosures, brand trust, influencer impact, social media engagement, eco-knowledge, and digital literacy play crucial roles in shaping sustainability-oriented behaviour. While AR/VR engagement did not significantly influence green purchase intention, the results overall highlight the importance of credible communication, social influence, and consumer capability in fostering sustainable purchase decisions. The study contributes valuable insights

for retailers, policymakers, and sustainability practitioners seeking to promote environmentally responsible consumption within digitally active youth populations.

8. Recommendations

Based on the findings, several actionable recommendations emerge for retailers, marketers, and policymakers in the Nigerian retail sector. First, retailers should strengthen digital transparency by providing verifiable sustainability information through blockchain-enabled traceability, QR codes, and detailed product life-cycle disclosures. Enhancing transparency will build trust and reduce scepticism among Gen Z consumers. Second, marketers should strategically collaborate with credible micro- and macro-influencers whose values align with sustainability principles. These influencers should deliver consistent, authentic, and evidence-based content to positively shape green purchase intentions. Third, retailers are encouraged to invest in digital literacy campaigns, particularly through youth-focused digital platforms, to help consumers better understand eco-labels, sustainability certifications, and environmental claims. Fourth, although AR/VR did not significantly influence purchase intentions in this study, retailers should continue exploring low-cost immersive experiences to support sustainability education, as adoption rates are expected to rise with improving technological access.

9. Implications for Further Studies

Future studies may expand this research by adopting longitudinal designs to capture changes in Gen Z behaviour as digital transformation evolves in Nigeria. Researchers could also incorporate qualitative approaches to gain deeper insights into

psychological drivers of green consumption. In addition, future studies may explore comparative analyses between Nigerian Gen Z and their counterparts in other African countries to determine whether cultural or infrastructural differences moderate digital sustainability behaviour. Further work could also examine the specific content characteristics of influencers that most strongly drive sustainable choices.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ameen, N., Tarhini, A., Reppel, A., & Anand, A. (2023). Generational differences in technology use and digital transformation: A systematic literature review. *Technological Forecasting and Social Change*, 188, Article 122334.
- Bhattacharjee, A. (2012). *Social science research: Principles, methods, and practices* (2nd ed.). University of South Florida Scholar Commons.
- Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.
- Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (3rd ed.). Routledge.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE.
- DeVellis, R. F. (2017). *Scale development: Theory and applications* (4th ed.). SAGE.
- Di Pillo, F., Palombi, G., & Strazzullo, S. (2025). Does greenwashing wash away Gen Z's green purchase intention? *Business Strategy and the Environment*. <https://doi.org/10.1002/bse.70064>
- Dobrowolski, Z., Drozdowski, G., & Sułkowski, Ł. (2022). Digital transparency and sustainability reporting: The role of blockchain in reducing information asymmetry. *Sustainability*, 14(12), Article 7334. <https://doi.org/10.3390/su14127334>
- Dharma, I. B. S., Hengky, H., Ching, L., Ni, L. Z., Yee, L. Z., Brayn, N. U., ... & Edeh, F. O. (2024). The effect of influencer marketing on Gen Z purchasing intentions in emerging economies. *Asian Pacific Journal of Management and Education*, 7(3), 1–15. <https://doi.org/10.32535/apjme.v7i3.3540>
- Filip, A., Stancu, A., Onișor, L.-F., Mogoș, O., Catană, Ș.-A., & Goldbach, D. (2025). Drivers of purchase intentions of Generation Z on eco-products. *Sustainability*, 17(2), Article 629. <https://doi.org/10.3390/su17020629>
- Firmansyah, M. A., & Artanti, Y. (2022). The effect of environmental knowledge and green perceived value on green purchase intention. *International Journal of Environmental Science and Technology*, 19(3), 2457–2468. <https://doi.org/10.1007/s13762-021-03221-4>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2020). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). SAGE.
- Harmon, E., Carpenter, D., & Davis, R. (2022). Social media engagement and consumer decision-making: The mediating role of digital communities. *Journal of Interactive Marketing*, 57, 56–70. <https://doi.org/10.1016/j.intmar.2021.12.005>
- Haruna Karatu, V. M., & Mat, N. (2015). Determinants of green purchase intention in Nigeria: The mediating role of green perceived value. *International Journal of Business and Management*, 10(8), 1–15.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.
- Holloway, S. (2024). Digital accountability and consumer trust in sustainable brands: A review of transparency technologies. *Journal of Retailing and Consumer Services*, 75, Article 103480. <https://doi.org/10.1016/j.jretconser.2023.103480>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55.
- Kara, A., & Min, S. (2023). Signalling sustainability: How credible environmental claims influence consumer behaviour. *Journal of Business Research*, 158, Article 113684. <https://doi.org/10.1016/j.jbusres.2022.113684>
- Khairul Haizat, N. M., & Ahmad, M. F. (2024). Digital habits shape sustainable online

- shopping decisions among Gen Z. *International Journal of Humanities and Social Sciences*, 11(6), 107–120.
- Kholkina, E., Nevskaya, Y., & Kuzmina, Y. (2024). Consumer adoption of AR/VR tools in retail: The role of digital literacy and immersive experience. *Technological Forecasting and Social Change*, 198, Article 122980. <https://doi.org/10.1016/j.techfore.2023.122980>
- Kim, H., & Kim, S. (2022). Gender differences in ethical consumption: The role of social influence and environmental concern. *Journal of Consumer Behaviour*, 21(4), 732–746. <https://doi.org/10.1002/cb.2035>
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.
- Ko, E., & Jeon, H. (2024). Generation Z and sustainable consumption: The role of digital influencers. *Journal of Retailing and Consumer Services*, 78, Article 103789.
- Nekmahmud, M., Naz, F., Ramkissoon, H., & Fekete-Farkas, M. (2022). Transforming consumers' intention to purchase green products: Role of social media. *Technological Forecasting and Social Change*, 185, Article 122067. <https://doi.org/10.1016/j.techfore.2022.122067>
- Orea-Giner, A., & Fusté-Forné, F. (2023). Immersive technologies in sustainable consumption: Insights from augmented and virtual reality applications. *Sustainability*, 15(4), Article 3174. <https://doi.org/10.3390/su15043174>
- Panopoulos, A. P., Poulis, A., Theodoridis, P. K., & Kalampakas, A. (2022). Influencing green purchase intention through eco labels and user-generated content. *Sustainability*, 15(1), Article 764. <https://doi.org/10.3390/su15010764>
- Pop, R.-A., Săplăcan, Z., & Alt, M. A. (2020). Social media influencers and sustainable consumption: A study of persuasive mechanisms. *Journal of Cleaner Production*, 268, Article 122151. <https://doi.org/10.1016/j.jclepro.2020.122151>
- Ramdhani, E. F., & Pradisti, L. (2025). Digital sustainability claims and consumer skepticism: A study of Generation Z's behavioral responses to MSMEs' green marketing on social media in Purwokerto, Indonesia. *The International Conference on Sustainable Economics Management and Accounting Proceeding*.
- Robichaud, B., & Yu, H. (2021). Digital transparency and consumer trust in sustainable brands. *Journal of Sustainable Marketing*, 2(1), 45–62.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.
- Sekaran, U., & Bougie, R. (2020). *Research methods for business: A skill-building approach* (8th ed.). Wiley.
- Sheth, J. N. (2021). New areas of research in marketing. *Journal of Marketing*, 85(1), 1–5.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7(4), 422–445.
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87(3), 355–374.
- Sun, X., & Fernandez, D. (2025). Consumer perception of virtual influencers: A study on trust, engagement, and purchase intention among Gen Z. *International Journal of Academic Research in Business and Social Sciences*, 15(7), 25679.
- Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics* (7th ed.). Pearson.
- Tass, M. A., & Malik, I. A. (2025). Driving environmental change: The impact of social media on Gen Z's sustainability efforts. *South Eastern European Journal of Public Health*. <https://doi.org/10.70135/seejph.vi.3639>
- Theocharis, D., & Tsekouropoulos, G. (2025). Sustainable consumption and branding for Gen Z: How brand dimensions influence consumer behavior and adoption of newly launched technological products. *Sustainability*, 17(9), Article 4124. <https://doi.org/10.3390/su17094124>
- Xu, X. (2024). Influencer credibility and green purchase behaviours: An integrative model of digital persuasion. *Computers in Human Behavior*, 150, Article 107982. <https://doi.org/10.1016/j.chb.2023.107982>