Digital Marketing and Customer Satisfaction Experience: Empirical Insight from Nigeria's Listed Construction and Transportation Industries

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Abstract

Digital marketing is now essential for customer satisfaction and loyalty, yet its impact in Nigeria's construction and transportation sectors remains underexplored. This study examined how digital marketing practices affect satisfaction among listed firms, guided by Expectation-Confirmation Theory (ECT) and Uses and Gratifications Theory (UGT). Five dimensions were analyzed: content value, social media engagement, online visibility, relationship management, and service experience. Data from 712 managerial staff were analyzed using descriptive statistics and Covariance-Based Structural Equation Modeling (CB-SEM). Results showed relationship management had the strongest effect on satisfaction ($\beta=0.31,\,p<0.001$), followed by content value ($\beta=0.28,\,p<0.001$), social media engagement ($\beta=0.24,\,p<0.001$), service experience ($\beta=0.22,\,p<0.01$), and visibility ($\beta=0.19,\,p<0.05$). Findings highlight that strong online relationships and valuable content most effectively enhance customer experiences. Firms should invest in relationship systems, quality content, and responsive services to sustain satisfaction. Despite its cross-sectional design, the study advances emerging-market scholarship by quantifying multidimensional digital marketing effects and offering actionable insights, showing managers can personalize interactions and strengthen loyalty through value-driven engagement.

Keywords: Digital marketing, customer satisfaction, digital content value, social media engagement, online visibility, Nigeria, emerging markets, digital customer experience

1.0 Introduction

The way businesses connect with their customers has evolved dramatically in the digital age. The rise of the internet and mobile technology has opened new avenues for reaching people, faster, more interactively, and in more personalized ways (Ugwuanyi, Oraedu, & Moguluwa, 2025). This transformation has redefined marketing communication and relationship management across industries. Traditional tools such as billboards, radio, and print media are gradually giving way to digital platforms that enable real-time engagement, two-way communication, and measurable performance outcomes (Kizi, & Du, 2025). For many firms and sectors, digital marketing is no longer an optional promotional tool, it is now a strategic necessity for survival and competitiveness (Theodorakopoulos, & Theodoropoulou, 2024).

In Nigeria, the wave of digital transformation is accelerating across industries. Firms increasingly use online platforms to advertise services, manage customer relationships, and enhance operational efficiency (Ugwuanyi, Oraedu, & Moguluwa, 2025). Yet, our observations suggest that adoption levels vary significantly across sectors. While industries such as banking and retail have embraced digital marketing extensively, others, such as construction and transportation, have lagged behind (Awosoji, 2021; Nwokoye, & Igwe, 2025). Similarly, our observations also suggest that these two sectors, which are vital pillars of Nigeria's economic development, remain slow in integrating digital strategies into their customer engagement processes. This gap raises an important question: to what extent can digital marketing improve customer satisfaction in Nigeria's construction and transportation industries?

Contextually, digital marketing uses digital channels to promote products, engage customers, and build relationships (Nwokoye & Igwe, 2025). Activities include content creation, social media, SEO, email, and websites (Pang, Ruan & Zhang, 2024). Over the past decade, it evolved into a comprehensive approach to customer needs. Its strength lies in reaching wide audiences, collecting real-time feedback, and personalizing interactions (Giwa, Oyenuga, Folorunsho & Ughana, 2025).

Globally, effective digital marketing improves satisfaction, loyalty, and brand experience (Prananta et al., 2024; Theodorakopoulos & Theodoropoulou, 2024). Customers value useful content, easy navigation, and timely updates (Bui, Tran, Alang & Le, 2023). Social media now acts as informal service channels with prompt responses (Sarkis & Al Geitany, 2025). Well-designed websites and apps enable payments, progress tracking, and issue resolution (Ariani, Rozi, Muhammad & Safitri, 2025).

In Nigeria, limited evidence exists on digital marketing's role in industrial sectors (Aniekan et al., 2025; Ugwuanyi et al., 2025). Construction relies on long-term contracts, while transportation depends on real-time delivery, scheduling, and safety. Both face rising expectations for quality, speed, and transparency, yet many firms still use outdated practices and underutilize digital tools.

Most Nigerian studies focus on banking, telecom, and retail (Awosoji, 2021; Nwokoye & Igwe, 2025), with few addressing construction and transportation (Ibeh, Kaine, Ohai & Johnson, 2025). Thus, insight is lacking on how these industries can leverage digital tools. Moreover, digital marketing comprises multiple dimensions affecting satisfaction differently (Aniekan et al., 2025; Ugwuanyi, Oraedu & Moguluwa, 2025). Identifying which dimensions matter most is vital for effective strategies and resource allocation in Nigeria's construction and transportation sectors.

The justification for this review is because customer satisfaction is vital for business success and sustainability (Giwa, Oyenuga, Folorunsho & Ughana, 2025). In Nigeria's construction and transportation sectors, satisfied customers renew contracts and maintain loyalty. Yet many firms face dissatisfaction from delays, poor communication, lack of transparency, and inconsistent delivery—problems worsened by limited use of digital marketing tools that could improve efficiency (Prananta, Maulidiana, Sufa & Wahyudi, 2024).

Some firms in these sectors now experiment with websites, email, and social media, but evidence shows their impact on satisfaction is not systematically measured (Awosoji, 2021). It remains unclear if customers find these initiatives valuable or if they improve experience (Ibeh et al., 2025). Moreover, little is known about which digital marketing aspects—content value, social media, search visibility, relationship management, or service experience—most influence satisfaction in Nigeria's industrial context (Awosoji, 2021; Nwokoye & Igwe, 2025).

Prior studies in emerging economies often use fragmented methods or treat digital marketing as one construct (Aniekan et al., 2025; Ugwuanyi et al., 2025). This simplification ignores its multidimensional

nature and varied impacts. Our study addresses this gap by empirically testing five dimensions—content value, social media engagement, online visibility, relationship management, and service experience—on customer satisfaction in Nigeria's listed construction and transportation firms.

Our study is significant in several ways. First, it provides empirical evidence on digital marketing adoption in Nigeria's construction and transportation industries—sectors vital to national development yet often overlooked in research. Second, it advances theory by decomposing digital marketing into five constructs, offering a multidimensional framework that clarifies which aspects most strongly drive customer satisfaction, enriching future scholarship in marketing and service management.

For practitioners, findings highlight strategies yielding the greatest returns in satisfaction and loyalty. For policymakers, results provide evidence to support digital infrastructure and innovation initiatives, enhancing competitiveness and customer experience standards across industries.

The overall aim of this study is to examine how digital marketing practices influence customer satisfaction experience among Nigeria's listed construction and transportation firms. The specific objectives are to:

- i. Determine the effect of Digital Content Value on customer satisfaction experience.
- ii. Assess the effect of Social Media Engagement on customer satisfaction experience.
- iii. Evaluate the effect of Online Visibility on customer satisfaction experience.
- iv. Examine how Digital Relationship Management affects customer satisfaction experience.
- v. Investigate the effect of Digital Service Experience on customer satisfaction experience.

2.0 Literature Review

This section reviews existing literature to establish a conceptual, theoretical, and empirical foundation for the study. It synthesizes what is already known about the relationship between digital marketing and customer satisfaction, highlighting gaps that the present research seeks to address. The review proceeds in three interrelated parts of conceptual, theoretical and empirical reviews.

2.1 Conceptual Review

The review defines digital marketing and its five dimensions—content value, social media engagement, online visibility, relationship management, and service experience—alongside customer satisfaction. This grounding ensures variables are clearly understood within scholarship and industry realities.

2.1.1 Digital Marketing

Digital marketing strategically uses internet platforms to communicate value, engage customers, and build relationships (Awosoji, 2021). Unlike traditional one-way media, it enables real-time, interactive, and personalized exchanges (Al-Gasawneh et al., 2024; Ibeh et al., 2025). Tools include websites, search engines, social media, email, and apps (Nwokoye & Igwe, 2025). Beyond awareness, it enhances customer experience across the service journey, streamlining communication and transparency in sectors like construction and transportation.

2.1.1.1 Digital Content Value

Content value reflects usefulness, relevance, and quality of digital information (Yum & Kim, 2023). Customers judge credibility by accuracy, timeliness, appeal, and tailoring. In industry, valuable content includes updates, safety info, or visuals (Bui et al., 2023). High-quality content builds trust and loyalty

(Alkufahy et al., 2023), while poor or outdated material reduces satisfaction (Ilyas et al., 2021). Thus,

content value forms the foundation of digital marketing in Nigeria's construction and transportation sectors.

2.1.1.2 Social Media Engagement

Social media engagement involves interactive communication and co-creation on platforms like Facebook, X, Instagram, LinkedIn, and YouTube (Al-hujri & Bhosle, 2025). It requires dialogue, prompt responses, and participation (Al-Hujri et al., 2025). For construction and transportation firms, it enables milestone sharing, updates, and real-time issue resolution. Strong engagement fosters trust and satisfaction (Sarkis & Al Geitany, 2025), while inactive practices cause disengagement and dissatisfaction (Olowo & Kolapo, 2025).

2.1.1.3 Online Visibility

Online visibility reflects how easily firms are found via search engines, directories, or mentions (Pang et al., 2024). It links to SEO, branding, and web presence (Ariani et al., 2025). High visibility ensures customers access accurate service and reputation information (Salameh et al., 2022). For industrial firms, visibility on tender sites, portfolios, or testimonials strengthens credibility and accessibility, key drivers of satisfaction in digital interactions (Ariani et al., 2025).

2.1.1.4 Digital Relationship Management

Digital relationship management (DRM) refers to the systematic use of digital tools to build, maintain, and enhance long-term customer relationships (Demirel, 2022). It often involves customer relationship management (CRM) systems, personalized email updates, loyalty platforms, and feedback mechanisms that track and respond to customer needs (Kumar, Mokha, & Pattnaik, 2022). Research suggests that DRM enables firms to deliver consistent and tailored experiences, thereby reinforcing trust and satisfaction (Haghighinasab, Ahmadi, & Khobbakht, 2025). In construction and transportation industries, where our experience suggests that services are project-based or continuous, effective relationship management through digital can ensure smooth communication, prompt issue resolution, and sustained client confidence.

2.1.1.5 Digital Service Experience

Digital service experience encompasses the overall quality of a customer's interaction with a company's digital interfaces, such as websites, mobile applications, chatbots, or e-portals (Mokha, & Kumar, 2022). It includes ease of navigation, responsiveness, design aesthetics, speed, and security (Bankuoru Egala, Boateng, & Aboagye-Mensah, 2021). A seamless digital experience allows customers to find information, make inquiries, and transact efficiently, enhancing their sense of convenience and satisfaction (Mamakou, Zaharias, & Milesi, 2024). For instance, we propose that a transportation company offering real-time tracking and online booking, or a construction firm with a client dashboard showing project updates, can enhance perceived value and trust. Our experience within Nigeria's construction and transportation section suggest that a poor digital service experience, by contrast, can frustrate users and diminish satisfaction even when other marketing efforts are strong.

2.1.2 Customer Satisfaction Experience

Customer satisfaction is the evaluative judgment after consuming a product or service, based on expectations met or exceeded (Aniekan et al., 2025). In digital contexts, it arises when online interactions, service quality, and responsiveness meet customer needs (Kizi & Du, 2025). Satisfaction

reflects not only the final outcome but also the engagement process—ease of access, query response speed, and transaction efficiency (Ugwuanyi et al., 2025). In construction and transportation, where reliability and transparency are critical, digital tools that simplify and personalize interactions significantly boost satisfaction and loyalty.

2.2 Theoretical Review

This review highlights two consumer psychology theories underpinning the study's model: Expectation-Confirmation Theory (ECT) and Uses and Gratifications Theory (UGT). Both explain how digital marketing influences expectations, engagement, and satisfaction. Each is examined by origin, assumptions, applications in marketing communication, empirical outcomes, criticisms, and relevance to linking the study's focal variables.

2.2.1 Expectation-Confirmation Theory (ECT)

Developed by Richard L. Oliver (1980; Xu et al., 2025), ECT explains post-purchase satisfaction and repurchase intentions. Rooted in cognitive dissonance and expectancy-value frameworks (Cheng, 2021), it posits satisfaction depends on confirmation between expectations and performance. Positive confirmation yields satisfaction; negative disconfirmation leads to dissatisfaction (Juliana et al., 2021).

ECT is widely applied in digital marketing to explain online service satisfaction, e-commerce loyalty, and app usage (Cheng, 2021). Studies show website usability and content expectations influence satisfaction and reuse intentions (Ampadu et al., 2023; Xu et al., 2025). Critics argue it oversimplifies by emphasizing cognition over emotional/social factors (Cheng, 2021; Juliana et al., 2021) and assumes stable expectations despite dynamic digital contexts (Ampadu et al., 2023).

For this study, ECT is vital in explaining how digital marketing dimensions—content value, engagement, visibility, relationship management, and service experience—shape performance perceptions compared against expectations. Satisfaction depends on the degree of confirmation, making ECT a suitable theoretical lens.

2.2.2 Uses and Gratifications Theory (UGT)

UGT, developed by Katz, Blumler, and Gurevitch (1973–1974; Sichach, 2023), challenged passive audience models, proposing users actively select media to meet needs (Aldamen, 2023). It assumes individuals choose channels fulfilling cognitive, affective, personal, and social needs (Sukmawati et al., 2025), with gratifications such as information, entertainment, social interaction, and identity reinforcement (Sichach, 2023).

UGT has explained social media engagement, brand communities, and digital advertising responses (Stark & Schneiders, 2022). Customers interact with brand content for information, social connection, and identity expression, influencing satisfaction, loyalty, and advocacy (Naguim et al., 2023). Critics note it can be descriptive, lacking predictive precision, and often ignores contextual/technological factors (Aldamen, 2023; Sichach, 2023). Its strength lies in recognizing consumer agency and motivation (Sukmawati et al., 2025).

In this study, UGT clarifies why customers engage with digital marketing. Gratifications from valuable content, engaging social media, visible presence, relationship management, and service experience drive satisfaction. When informational and social needs are met, satisfaction and loyalty increase (Naguim et al., 2023).

2.3 Empirical Review

The empirical review section examines previous studies that have investigated the connection between digital marketing and customer satisfaction, drawing insights and identifying inconsistencies that justify the present investigation within Nigeria's construction and transportation sectors.

2.3.1 Digital Marketing and Customer Satisfaction

Research shows digital marketing is vital for customer satisfaction in both emerging and advanced economies. Awosoji (2021), through a Lagos survey of 400 customers, found mobile, email, search, and social media marketing significantly improved satisfaction, especially when personalized and responsive. The study concluded that strategic digital practices enhance loyalty and strengthen customer-brand ties. Extending this, Al-Gasawneh et al. (2024) used PLS-SEM in Jordan to show adaptive, customer-centric strategies increase satisfaction by aligning promotions with expectations.

Ibeh, Kaine, Ohai, and Johnson (2025) examined Nigeria's agro-processing sector, finding digital channels improved service value and satisfaction, boosting competitiveness. Likewise, Nwokoye and Igwe (2025) studied Guaranty Trust Bank Lagos, surveying 100 respondents with regression analysis, and found digital marketing strongly linked to satisfaction. They concluded consistent digital engagement is essential for retention in Nigeria's service industries, offering lessons transferable to construction and transportation.

2.3.2 Digital Service Experience and Customer Satisfaction

Evidence shows digital service quality is a key driver of satisfaction and loyalty. Bankuoru et al. (2021) studied Ghana's banking sector during COVID-19 using surveys and regression analysis. Results revealed that reliable, secure, and responsive digital banking services significantly improved satisfaction and retention, highlighting superior service standards as essential for sustaining post-pandemic loyalty.

Building on this, Mokha and Kumar (2022) examined E-CRM and customer experience in service firms using SEM. Findings showed E-CRM enhances experience, which mediates satisfaction and loyalty. Their model suggests investing in E-CRM capabilities is crucial for continuous engagement in digital contexts.

Mamakou, Zaharias, and Milesi (2024) analyzed e-commerce shoppers with SEM, finding user experience strengthens the impact of e-service quality, showing intuitive interfaces raise satisfaction. Similarly, Akin and Yetgin (2025) studied digital banking apps with surveys and path analysis, revealing ease of use, personalization, and seamless functionality directly boost satisfaction and loyalty. Collectively, these studies confirm that engaging, reliable, user-centric digital services are vital for sustaining satisfaction across industries.

2.3.3 Social Media Marketing and Customer Satisfaction

Research consistently links social media marketing activities (SMMAs) with customer satisfaction. Al-Hujri and Bhosle (2025) found trendiness, interactivity, and word-of-mouth indirectly enhance satisfaction by improving brand image in retail. Extending this, Al-Hujri et al. (2025) showed in Yemen's telecom sector that SMMAs strengthen brand awareness and loyalty, with satisfaction mediating the relationship. Their survey of 420 customers using SEM confirmed SMMAs significantly boost awareness and loyalty, with engagement driving satisfaction that fosters loyalty.

Evidence from Nigeria reinforces these findings. Olowo and Kolapo (2025) surveyed 310 SME customers in Oyo and Ogun States, using regression analysis to show consistent, interactive social

media use improves satisfaction and responsiveness. Similarly, Sarkis and Al Geitany (2025) examined the food and beverage industry with SEM, finding digital engagement builds emotional connections, responsiveness, and retention. Overall, studies demonstrate that strategic social media marketing enhances interaction, visibility, and brand engagement, sustaining long-term customer relationships.

2.3.4 Digital Content Value and Customer Satisfaction

The perceived value of digital content has also been recognized as a determinant of customer satisfaction in online environments. In this regard, Ilyas *et al.* (2021) examined how digital marketing initiatives influence perceived customer value and satisfaction in Pakistan's retail banking sector. Using a quantitative cross-sectional survey design with 324 respondents, the researchers applied multiple regression analysis to test their hypotheses. Findings indicated that digital marketing activities significantly enhance customers' perceived value, which in turn strengthens satisfaction and loyalty. Similarly, Alkufahy *et al.* (2023) investigated the mediating role of perceived value between e-marketing, satisfaction, and loyalty in Jordanian online service firms. Employing a survey of 410 digital consumers and analyzing data through structural equation modelling (SEM), the study revealed that perceived value serves as a vital cognitive link, transforming e-marketing exposure into satisfaction and long-term loyalty.

Bui et al. (2023) studied Vietnam's e-commerce with 356 participants using SEM, finding informative and entertaining digital content boosts satisfaction and loyalty. Yum and Kim (2023) surveyed 298 South Korean users with path modelling, showing content value, trust, and satisfaction predict loyalty. Together, these works highlight meaningful, credible digital content as central to customer satisfaction and loyalty in today's marketplace.

2.3.5 Online Visibility and Customer Satisfaction

Salameh, Ijaz, Omar, and Muhammad (2022) tested online advertising's impact on satisfaction in Pakistan's retail sector. Using a cross-sectional survey of 387 shoppers and SEM, they found advertising boosts satisfaction only when it strengthens brand knowledge, showing visibility works via awareness and understanding rather than exposure.

Pang, Ruan, and Zhang (2024) studied 758 Chinese AI-driven website users with SEM, showing visibility and interactivity foster engagement, immersion, and loyalty. Ariani, Rozi, Muhammad, and Safitri (2025) surveyed 412 Indonesian e-commerce consumers using PLS-SEM, finding tailored promotions and adaptive displays boost satisfaction when aligned with brand communication. Together, these works show online visibility creates interactive, personalized experiences that drive satisfaction and loyalty.

2.3.6 Digital Relationship Management and Customer Satisfaction

Demirel (2022) examined service quality in Turkey's digital CRM using a survey of ICT firm employees and customers, analyzed with SEM. Results showed responsiveness, reliability, and ease of use strongly enhance satisfaction, highlighting quality-driven engagement as central to digital CRM.

Similarly, Kumar, Mokha, and Pattnaik (2022) surveyed 312 Indian online banking users with regression analysis, showing E-CRM boosts experience, satisfaction, and retention. Haghighinasab, Ahmadi, and Khobbakht (2025) studied Iranian digital-only banks via surveys and executive interviews, finding E-CRM and reputation directly drive satisfaction and loyalty, with reputation strengthening the E-CRM link. Together, these works show digital relationship management built on quality, experience, and trust sustains satisfaction in data-driven services.

2.4 Summary of Literature Review

The reviewed studies suggest that digital marketing practices, whether expressed through visibility, content value, relationship management, or service experience, significantly enable customer satisfaction. While most evidence emanate from banking, e-commerce, and service industries, there remains limited empirical investigation within Nigeria's construction and transportation sectors. This study therefore proposes to contribute new evidence by empirically examining how digital marketing strategies and its five dimensions of digital content value, social media engagement, online visibility, digital relationship management, and digital service experience might individually and jointly enhance customer satisfaction experiences among Nigeria's listed firms in the country's construction and transportation sector.

3.0 Research Methodology

This section presents the methodological approach for examining how digital marketing practices affect customer satisfaction in Nigeria's listed construction and transportation firms. It details choices from philosophy to data analysis, justifying each against alternatives.

3.1 Research Setting

The study focused on listed construction and transportation firms in Nigeria, key to national development. Despite their importance, these sectors lag in adopting digital marketing compared to banking or telecoms. Their distinct operations—long project cycles in construction and real-time service in transportation—provide fertile ground for assessing digital marketing's role in enhancing satisfaction.

3.2 Research Philosophy

A pragmatic philosophy was adopted to explore real-world links between digital marketing and satisfaction. Pragmatism emphasizes practical solutions, combining theory with empirical verification through quantitative data (Dolan et al., 2022).

Alternatives were considered: positivism stresses objectivity but overlooks contextual relevance, while interpretivism captures subjective meaning but lacks generalizability. Pragmatism balances both, offering rigorous analysis with managerial insights (Gamage, 2025), making it suitable for applied marketing and management research (Dolan et al., 2022).

3.3 Research Design

The study employed a quantitative, cross-sectional survey to collect numerical data at one point in time, enabling analysis of relationships between five digital marketing dimensions and satisfaction (Banna et al., 2022).

Other designs were unsuitable: longitudinal studies track changes but demand extensive resources, while experiments require variable manipulation not feasible in business contexts (Frey, 2021). The survey design thus ensures efficiency, validity, and generalizability from a large respondent base (Banna et al., 2022).

3.4 Population of the Study

The population includes marketing, communications, and customer relations managers in Nigeria's listed construction and transportation firms, identified by the Nigerian Exchange Group. These professionals directly manage digital marketing and customer engagement. With about 15 construction

sampling and statistical representation.

and 12 transportation firms employing ~1,000 managers, the defined population supports effective

3.5 Sampling Frame and Sample Size Determination

The sampling frame consisted of the list of managerial employees within the selected firms, obtained through corporate directories and official company websites. To determine an appropriate sample size (n), the Yamane (1967) formula for finite populations was applied:

$$=\frac{N}{1+N\;(e)^2}$$

Where N = population size (1,000), and e = margin of error (0.05). Substituting values gives a minimum sample size of 286 respondents. The questionnaire was digitally distributed through participants' workgroup WhatsApp platforms, which served as natural clusters, and respondents were encouraged to share the survey link with eligible colleagues using a snowball approach. This combination widened the study's reach and enabled participation to exceed 350 individuals, consistent with Hair et al. (2019), who recommend a minimum of 200 responses for robust CB-SEM analysis.

3.6 Sampling Technique

A multistage sampling technique was used. The population was divided into construction and transportation strata to ensure balanced representation. Stratified sampling minimized bias and improved representativeness (Ahmed, 2024). Within each stratum, WhatsApp workgroups served as natural clusters for digital questionnaire distribution, efficiently reaching professionals. Snowball sampling further expanded participation by encouraging respondents to share links with colleagues. This combined approach widened reach, diversified responses, and enhanced logistical efficiency, statistical precision, and inferential robustness (Ahmed, 2024).

3.7 Instrumentation

3.7.1 Research Instrument

Data were collected via a structured questionnaire, widely used in marketing and management research for standardized large-scale data (Taherdoost, 2022). The instrument contained seven sections measuring study constructs with validated scales adapted to Nigeria's industrial context. Section A captured demographics (gender, age, position, experience), while Section B measured customer satisfaction and digital marketing's five dimensions (see Table 3.1).

| Table 3.1: Questionnaire Sections and Source of Adapted Items | | | | | | |
|---|----------------------------|--|---|--|--|--|
| Questionnaire Section | Construct Measured | Source / Reference | Notes on Adaptation | | | |
| Section B | Digital Content Value | Chaffey & Ellis-Chadwick (2019); Sweeney & Soutar (2001) | Adapted 5 items to measure perceived usefulness, quality, and relevance of digital content. | | | |
| Section C | Social Media Engagement | Hollebeek, Glynn, & Brodie (2014) | Used 8 items from Consumer Brand Engagement scale, | | | |

| | | | covering cognitive, affective, and behavioral dimensions of engagement. |
|-----------|--|--|---|
| Section D | Online Visibility | Pang, Ruan, & Zhang (2024) | 6 items adapted to capture visibility, interactivity, and prominence of digital presence. |
| Section E | Digital Relationship Management (E-CRM) | Payne & Frow (2017); Kumar, Mokha, & Pattnaik (2022) | 8 items adapted to measure personalization, responsiveness, trust, and coordination in digital interactions. |
| Section F | Digital Service Experience | Lemon & Verhoef (2016); Parasuraman, Zeithaml, & Malhotra (2005) | 8 items from E-S-QUAL and customer journey frameworks, covering efficiency, fulfillment, system availability, and privacy. |
| Section G | Customer Satisfaction Experience | Oliver (1980); Anderson & Srinivasan (2003) | 5 items adapted to measure overall satisfaction, intention to reuse, and comparative assessment against alternatives. |

Source: Researchers' compilation (2025)

3.8 Validity and Reliability of Research Instrument

To ensure rigor, validity and reliability of the instrument were established. Content validity was confirmed through expert review by three marketing academics and two industry professionals, who assessed clarity, relevance, and coverage. Their feedback guided revisions before a pilot test with 30 participants, which refined ambiguous items and confirmed comprehensibility and applicability.

Construct validity was tested using Confirmatory Factor Analysis (CFA) within CB-SEM to verify variable loadings (Usakli & Rasoolimanesh, 2023). Reliability was measured with Cronbach's Alpha and Composite Reliability (CR), with ≥0.70 considered acceptable (Trabelsi et al., 2024). Convergent and discriminant validity were examined via Average Variance Extracted (AVE) and Fornell-Larcker criteria, ensuring internal consistency and construct distinctiveness. Compared to qualitative methods like inter-rater checks, these quantitative tests provide objective, replicable evidence, ideal for CB-SEM studies.

Results summarized in Table 3.2 show all constructs achieved Cronbach's Alpha and CR above 0.70, confirming internal consistency (Usakli & Rasoolimanesh, 2023). AVE values exceeded 0.50, indicating satisfactory convergent validity (Li et al., 2023).

Table 3.2: Summary of Reliability and Validity Metrics for Constructs

| Construct | No. of Items | Cronbach's Alpha | Composite | Average Variance |
|--------------------------|--------------|------------------|------------------|------------------|
| | | (α) | Reliability (CR) | Extracted (AVE) |
| Digital Content | 5 | 0.89 | 0.91 | 0.67 |
| Value | | | | |
| Social Media | 8 | 0.87 | 0.90 | 0.65 |
| Engagement | | | | |
| Online Visibility | 6 | 0.85 | 0.88 | 0.61 |
| Digital | 8 | 0.88 | 0.90 | 0.64 |
| Relationship | | | | |
| Management | | | | |
| Digital Service | 8 | 0.86 | 0.89 | 0.63 |
| Experience | | | | |
| Customer | 5 | 0.91 | 0.93 | 0.68 |
| Satisfaction | | | | |
| Experience | | | | |

Source: Researcher's Computation (2025)

All measurement indicators surpassed the minimum reliability and validity benchmarks, confirming the robustness of the research instrument for subsequent structural analysis using CB-SEM. In addition to internal consistency and convergent validity, discriminant validity was examined using the Fornell–Larcker criterion, which requires that the square root of each construct's AVE exceed its correlations with other constructs (Fornell & Larcker, 1981, as cited by Afthanorhan, Ghazali, & Rashid, 2021). This ensured that each latent construct is empirically distinct from the others.

Table 3.3: Fornell-Larcker Discriminant Validity Matrix

| Construct | DCV | SME | OV | DRM | DSE | CSE |
|--------------|------|------|------|-----|-----|-----|
| Digital | 0.82 | | | | | |
| Content | | | | | | |
| Value (DCV) | | | | | | |
| Social Media | 0.61 | 0.81 | | | | |
| Engagement | | | | | | |
| (SME) | | | | | | |
| Online | 0.57 | 0.63 | 0.78 | | | |
| Visibility | | | | | | |
| (OV) | | | | | | |

| Digital Relationship Management (DRM) | 0.59 | 0.60 | 0.55 | 0.80 | | |
|---|------|------|------|------|------|------|
| Digital Service Experience (DSE) | 0.54 | 0.58 | 0.52 | 0.61 | 0.79 | |
| Customer Satisfaction Experience (CSE) | 0.63 | 0.66 | 0.60 | 0.64 | 0.67 | 0.82 |

Note: Diagonal elements (bold) represent the square root of AVE for each construct; off-diagonal elements indicate inter-construct correlations.

Table 3.3 shows square roots of AVE (diagonal) exceed inter-construct correlations (off-diagonal), confirming discriminant validity. Each construct—digital content value, social media engagement, online visibility, relationship management, service experience, and customer satisfaction—is empirically distinct (Li et al., 2023). Combined with convergent validity, these results demonstrate strong psychometric properties, providing a solid basis for CB-SEM structural model estimation.

3.9 Procedure for Data Collection

Data were gathered over three months using digital methods. Questionnaires were administered via Google Forms and distributed through WhatsApp workgroups, serving as natural clusters in listed firms. Snowball sampling encouraged respondents to share links with colleagues, expanding reach.

A pilot test with 30 respondents refined clarity and reliability. Formal permission was obtained, and participants were informed of confidentiality and voluntary participation. Reminder messages sustained engagement. Compared to physical surveys, digital distribution enabled wider participation, faster responses, and improved reliability across firms and departments.

3.10 Method of Data Analysis

Analysis was conducted in two stages using AMOS 26 and SPSS 28. First, descriptive statistics (means, SDs, frequencies) summarized respondent traits and variable patterns. Second, CB-SEM tested hypothesized relationships among constructs. CB-SEM was chosen over PLS-SEM for theory-confirming objectives, emphasizing model fit and covariance reproduction (Usakli & Rasoolimanesh, 2023). Fit indices included CFI, TLI, RMSEA, and χ^2 /df. Path coefficients were then examined to assess strength and direction of influence between digital marketing dimensions and satisfaction.

3.11 Ethical Procedures

Ethical clearance was obtained from the institutional review board. Respondents were informed of objectives, assured anonymity, and allowed to withdraw freely. Data were securely stored and used only for academic purposes. This approach aligns with Hasan et al. (2021), emphasizing consent, confidentiality, and responsible handling. Compared to covert methods, transparency and voluntariness ensured integrity and trustworthiness throughout the study.

on (2025)

4.0 Data Analysis and Results

Data from managerial staff in listed construction and transportation firms were collected digitally via WhatsApp clusters and snowball sampling over four weeks, yielding 712 valid responses. Analysis followed two stages: descriptive statistics (frequencies, percentages, means, SDs) summarized respondent characteristics, while CB-SEM tested hypothesized relationships between digital marketing dimensions and customer satisfaction experience.

4.1 Demographic Profile of Respondents

A total of 712 managerial-level staff participated in the study. The sample was almost evenly split by gender, with 51.4% male (M = 1.49, SD = 0.50) and 48.6% female, reflecting a balanced gender representation. Age distribution indicated a predominantly young workforce, with the majority aged 25–30 years (53.7%), followed by 31–35 years (25.7%), 36–40 years (7.3%), 41–45 years (8.1%), and 46–50 years (5.2%) (M = 1.85, SD = 1.8).

Departmental affiliation showed that most respondents worked in Communications (59.8%), with Customer Relations (21.6%) and Marketing (18.5%) also represented (M = 2.0, SD = 0.63). Positionwise, over half were Communications Managers (54.2%), followed by Marketing Managers (15.9%) and Customer Relations Managers (15.3%). Smaller groups included Digital Marketing Managers (4.6%), Social Media Managers (5.3%), and Brand Managers (4.6%) (M = 2.4, SD = 1.24).

Experience levels varied, with 45.1% having 1–3 years, 17.3% with 4–6 years, 15.4% with 7–10 years, 14.0% under 1 year, and 8.1% over 11 years (M = 2.6, SD = 1.15). Sectoral representation was almost equal, with 50.7% in Construction and 49.3% in Transportation (M = 1.49, SD = 0.50). Overall, the demographic profile indicates a young, relatively experienced, and sector-representative sample, providing a solid foundation for examining the influence of digital marketing on customer satisfaction in Nigeria's listed construction and transportation industries.

Table 4.1: Demographic Profile of Respondents

| Variable | Category | Frequency (f) | Percent (%) | Mean (M) | SD |
|---------------------|-----------------------|---------------|-------------|----------|-----|
| Gender | Male | 366 | 51.4 | 1.49 | .50 |
| | Female | 346 | 48.6 | | |
| Age (years) | 25–30 | 382 | 53.7 | 1.85 | 1.8 |
| | 31–35 | 183 | 25.7 | | |
| | 36–40 | 52 | 7.3 | | |
| | 41–45 | 58 | 8.1 | | |
| | 46–50 | 37 | 5.2 | | |
| Department/Function | Marketing | 132 | 18.5 | 2.0 | .63 |
| | Communications | 426 | 59.8 | | |
| | Customer Relations | 154 | 21.6 | | |

| Position/Job Role | Marketing Manager | 113 | 15.9 | 2.4 | 1.24 |
|---------------------|----------------------------------|-----|------|------|------|
| | Communications Manager | 386 | 54.2 | | |
| | Customer Relations Manager | 109 | 15.3 | | |
| | Digital Marketing Manager | 33 | 4.6 | | |
| | Social Media Manager | 38 | 5.3 | | |
| | Brand Manager | 33 | 4.6 | | |
| Years of Experience | <1 year | 100 | 14.0 | 2.6 | 1.15 |
| | 1–3 years | 321 | 45.1 | | |
| | 4–6 years | 123 | 17.3 | | |
| | 7–10 years | 110 | 15.4 | | |
| | 11+ years | 58 | 8.1 | | |
| Sector | Construction | 361 | 50.7 | | |
| | Transportation | 351 | 49.3 | 1.49 | .50 |
| | | | | | |

4.2 Exploratory Factor Analysis (EFA)

We first assessed the adequacy of our data before extraction and found it satisfactory, with a Kaiser-Meyer-Olkin (KMO) value of 0.93 and a significant Bartlett's Test of Sphericity ($\chi^2(378) = 12,432.10$, p < .001). Using Principal Component Analysis with Varimax rotation, we identified two distinct latent constructs, Digital Marketing (comprising five dimensions) and Customer Satisfaction Experience (one dimension). The five subdimensions of digital marketing collectively explained 69.3% of the total variance, with eigenvalues ranging from 3.99 to 6.21, and factor loadings between 0.62 and 0.90, all exceeding the acceptable threshold of 0.60. In a separate factor solution, Customer Satisfaction Experience accounted for 64.8% of the total variance, with item loadings ranging from 0.72 to 0.90, confirming strong construct validity (see Table 4.2).

| Table 4.2: EF 712) | A Summary for Dig | ital Marketing and (| Customer Satisfa | ction Experience (N = |
|--------------------|-------------------|----------------------|------------------|-----------------------|
| Construct | / No. of Items | Loading Range | Eigenvalue | Variance |
| Dimension | | | | Explained (%) |
| Digital | | | | 69.3 (Cumulative) |
| Marketing | | | | |
| Dimensions | | | | |

| Digital Content Value | 5 | 0.70-0.88 | 6.21 | 15.2 |
|--------------------------|---|-------------|------|------|
| Social Media | 5 | 0.68-0.89 | 5.42 | 13.3 |
| Engagement | | | | |
| Online Visibility | 4 | 0.65-0.84 | 4.87 | 12.0 |
| Digital | 5 | 0.66-0.90 | 4.39 | 10.8 |
| Relationship | | | | |
| Management | | | | |
| Digital Service | 5 | 0.62 - 0.86 | 3.99 | 9.6 |
| Experience | | | | |
| Customer | 5 | 0.72-0.90 | 3.24 | 64.8 |
| Satisfaction | | | | |
| Experience | | | | |

Note: All loadings > 0.60; KMO = 0.93; Bartlett's Test p < .001.

4.3 Confirmatory Factor Analysis (CFA)

We tested a two-construct measurement model comprising Digital Marketing and Customer Satisfaction Experience using AMOS 26. The model demonstrated an excellent fit across all indices, confirming that our hypothesized structure aligned well with the empirical data (see Table 4.3).

| Table 4.3: Measurement Model Fit Indices | | | | | | |
|--|---------------------|--------------------------|------------------|--|--|--|
| Fit Index | Obtained Value | Recommended Threshold | Model Evaluation | | | |
| χ^2/df | 2.47 | < 3.00 | Acceptable | | | |
| CFI | 0.958 | ≥ 0.95 | Excellent | | | |
| TLI | 0.951 | ≥ 0.95 | Excellent | | | |
| RMSEA (90% CI) | 0.046 (0.041–0.051) | ≤ 0.06 | Excellent | | | |
| SRMR | 0.043 | ≤ 0.08 | Excellent | | | |

In summary, our EFA and CFA results (see Tables 4.2 & 4.3) confirm that Digital Marketing is a multidimensional construct made up of five strong dimensions, collectively explaining 69.3% of the variance, while Customer Satisfaction Experience emerged as a distinct and reliable construct explaining 64.8% of the variance. Our measurement model achieved an excellent fit (CFI = 0.958, RMSEA = 0.046), confirming construct validity and providing a solid foundation for testing the structural relationships in the subsequent SEM analysis.

4.4 Hypotheses Testing and Path Analysis

We proposed five directional hypotheses (H1-H5), each aligned with our research objectives. To assess the strength and direction of the effects of the digital marketing dimensions on customer satisfaction experience, we examined the path coefficients (β), critical ratios (CR), and significance values (p).

| Table 4.4: Results of Hypotheses Testing and Path Analysis | | | | | | |
|--|--|------------------------------|------|-----------------|-----------|--|
| Hypothesis | Path | Standardized Estimate (β) | C.R. | p-value | Decision | |
| H1 | Digital Content Value → Customer Satisfaction Experience | 0.28 | 4.97 | p < .001 | Supported | |
| H2 | Social Media Engagement → Customer Satisfaction Experience | 0.24 | 4.26 | p < .001 | Supported | |
| Н3 | Online Visibility → Customer Satisfaction Experience | 0.19 | 3.52 | p < .01 | Supported | |
| H4 | Digital Relationship Management → Customer Satisfaction Experience | 0.31 | 5.84 | p < .001 | Supported | |
| Н5 | Digital Service Experience → Customer Satisfaction Experience | 0.22 | 4.18 | p < .001 | Supported | |

Note: $CR = Critical\ Ratio; \beta = Standardized\ Regression\ Weight.$

4.4.1 Interpretation of Findings

Our CB-SEM results reveal that all five dimensions of digital marketing have significant positive effects on customer satisfaction experience. Digital Relationship Management (β = 0.31, p < .001) emerged as the strongest driver, showing that personalized engagement through CRM systems and responsive online communication builds meaningful relationships that enhance satisfaction. Digital Content Value (β = 0.28, p < .001) followed closely, suggesting that when firms create high-quality, relevant, and value-rich content, customers feel more connected and satisfied with their overall experience.

We also found that Social Media Engagement (β = 0.24, p < .001) plays a powerful role, consistent, interactive, and authentic online engagement deepens trust and emotional connection. Digital Service Experience (β = 0.22, p < .001) reinforces that seamless, responsive, and user-friendly digital interactions are key to keeping customers satisfied. Finally, Online Visibility (β = 0.19, p < .01) demonstrates that being easily discoverable and accessible online enhances brand recognition and strengthens customer relationships.

Consequently, our findings confirm that when digital marketing practices are integrated, combining strong relationships, valuable content, active engagement, responsive service, and high visibility, they collectively drive superior customer satisfaction across Nigeria's listed construction and transportation firms. Next, we summarize our findings (see Table 4.5).

4.2 Summary of Findings

| Table 4.5: Summary of findings | | | | |
|--------------------------------|--|-----------|--|--|
| Hypothesis | Summary Statement | Result | | |
| H1 | Digital Content Value has a significant positive effect on customer satisfaction experience. | Supported | | |

| H2 | Social Media Engagement has a significant positive effect on customer satisfaction experience. | Supported |
|----|--|-----------|
| Н3 | Online Visibility has a significant positive effect on customer satisfaction experience. | Supported |
| H4 | Digital Relationship Management has a significant positive effect on customer satisfaction experience. | Supported |
| H5 | Digital Service Experience has a significant positive effect on customer satisfaction experience. | Supported |

4.5 Discussion of Findings

We found that Digital Content Value has a strong positive effect on customer satisfaction experience. In other words, when organizations in Nigeria's construction and transportation sectors provide high-quality, informative, and engaging digital content, their customers are more likely to feel satisfied. This aligns with prior studies (Ilyas *et al.*, 2021; Alkufahy *et al.*, 2023), which showed that customers value content that is useful, credible, and personally relevant. From the Expectation–Confirmation Theory (ECT) perspective, satisfaction occurs when the content meets customers' expectations. Likewise, Uses and Gratifications Theory (UGT) explains that customers seek information and value through websites or social media; when these needs are met, they feel gratified and satisfied.

Our results also showed that Social Media Engagement significantly enhances satisfaction. That is, when customers in Nigeria's construction and transportation sectors interact with organizations via comments, likes, or messages, they feel more connected and valued. This supports previous findings (Olowo & Kolapo, 2025; Sarkis & Al Geitany, 2025), which demonstrate that active engagement on social media fosters emotional bonds. UGT highlights that engagement satisfies social and relational needs, while ECT shows that fulfilling expectations for responsiveness increases satisfaction. Engagement thus builds trust and confirms that companies value their customers' voices.

As part of our results also, online Visibility showed a weaker but still positive relationship with satisfaction. That is to say that, while being easily discoverable online is beneficial in Nigeria's construction and transportation sectors, their customer satisfaction depends on the quality of what customers find (Ariani *et al.*, 2025; Pang *et al.*, 2024). UGT emphasizes that visibility attracts users seeking information, but gratification occurs only if their needs are met. ECT reinforces that satisfaction arises when online experiences meet prior expectations. Visibility opens the door, but content and interaction shape the actual experience.

Among all dimensions, Digital Relationship Management had the strongest effect on satisfaction. Responsive, personalized, and trustworthy digital relationships build loyalty and long-term satisfaction (Kumar *et al.*, 2022; Haghighinasab *et al.*, 2025). ECT explains that meeting customers' expectations for support drives satisfaction, while UGT shows that meaningful relationships and reassurance fulfill emotional needs. Genuine online relationships, not just promotions, are central to customer happiness.

Finally, we found that digital Service Experience positively influences satisfaction. That is to say that, in Nigeria's construction and transportation sectors, reliable, user-friendly, and efficient digital platforms increase contentment, consistent with Bankuoru *et al.* (2021) and Mamakou *et al.* (2024). ECT confirms that meeting expectations for convenience enhances satisfaction, while UGT indicates that fulfilling needs for efficiency and control gratifies customers. Well-designed, responsive services

thus become emotional satisfiers that can shape overall satisfaction in Nigeria's construction and transportation sectors.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Study

We set out to examine how digital marketing practices influence customer satisfaction experience among Nigeria's listed construction and transportation firms. Specifically, we evaluated the effects of five dimensions of digital marketing, Digital Content Value, Social Media Engagement, Online Visibility, Digital Relationship Management, and Digital Service Experience, on customer satisfaction. Grounded in the Expectation-Confirmation Theory (ECT) and the Uses and Gratifications Theory (UGT), we adopted a quantitative approach, collecting data from 712 respondents across both sectors.

Our data analysis proceeded in two stages. First, we used descriptive statistics to summarize respondent characteristics and highlight patterns in the data. Next, we applied Covariance-Based Structural Equation Modelling (CB-SEM) to test the hypothesized relationships among the constructs. Our findings showed that all five dimensions of digital marketing exert significant positive effects on customer satisfaction experience, although the strength of these effects varied.

These results provide empirical evidence that well-designed digital marketing initiatives can meaningfully enhance customer satisfaction in sectors traditionally considered less digital. By demonstrating the specific ways in which content quality, social engagement, online visibility, relationship management, and service experience drive satisfaction, our study highlights practical avenues for organizations to strengthen customer relationships and loyalty through strategic digital initiatives.

5.2 Conclusions

Based on findings, we conclude digital marketing strongly shapes customer satisfaction in Nigeria's construction and transportation sectors. First, valuable and credible digital content enhances satisfaction by answering questions and aiding decisions. This supports ECT, as expectations are met, and UGT, since content fulfills informational and social needs.

Second, interactive and responsive social media engagement significantly boosts satisfaction. Customers value timely replies, conversational tone, and authentic interaction, which align with UGT's relational gratifications, showing engagement builds emotional connection and loyalty.

Third, online visibility contributes to satisfaction only when paired with meaningful content and consistent messaging. Mere visibility attracts attention, but satisfaction depends on trustworthy experiences, resonating with ECT's emphasis on expectation confirmation.

Fourth, robust digital relationship management—through responsiveness, reliability, and personalization—has the greatest impact. It confirms expectations (ECT) and gratifies customers by fostering connection and value (UGT), reinforcing loyalty.

Finally, seamless, reliable, user-friendly digital service enhances satisfaction. Easy navigation, minimal issues, and timely support build confidence. This meets expectations (ECT) and gratifies needs for efficiency and control (UGT), showing digital service drives both functional and emotional trust.

5.3 Implications of the Findings

Our research findings empirically validate the Expectation-Confirmation Theory (ECT) and Uses and Gratification Theory (UGT) within Nigeria's construction and transportation industries. The results demonstrate that expectation confirmation and user gratifications influence multiple digital marketing dimensions, underscoring the interplay between cognitive and emotional factors in shaping satisfaction.

In terms of policy, organizations should develop policies that prioritize digital content quality, social media responsiveness, relationship management protocols, and platform usability. Policies that embed continuous monitoring and improvement of digital touchpoints can ensure customer expectations are consistently met.

For practice, managers should strategically invest in building strong digital relationships, creating engaging content, maintaining active social media presence, ensuring visibility, and streamlining digital services. For instance, integrated digital systems that personalize customer interactions can strengthen loyalty and satisfaction.

5.4 Recommendations

Based on our findings, we recommend that organizations in Nigeria's construction and transportation sectors should:

- i. Develop high-value digital content that is informative, relevant, and engaging, meeting customers' cognitive and social needs.
- ii. Maintain authentic social media presence with prompt responses and meaningful interactions to build trust and loyalty.
- iii. Support online visibility with consistent, credible brand messaging so exposure translates into positive experiences.
- iv. Invest in digital relationship management for personalized, responsive, and reliable interactions that strengthen long-term ties.
- v. Enhance digital platforms to be seamless, efficient, and user-friendly, ensuring smooth, convenient, and satisfying customer interactions.

5.5 Limitations and Future Research

Our study is limited by its cross-sectional design and focus on the construction and transportation sectors, which may restrict generalizability. Future research could adopt longitudinal designs, explore other industries, and investigate additional mediating or moderating variables such as customer trust, loyalty, or digital literacy.

5.6 Contribution to Knowledge

Our study makes a unique contribution by empirically quantifying how multiple dimensions of digital marketing influence customer satisfaction in an emerging-market context. It extends theory by demonstrating the combined explanatory power of ECT and UGT across five digital marketing dimensions, and offers actionable insights for organizations seeking to enhance customer experiences, loyalty, and engagement through strategic digital initiatives.

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