E-COMMERCE PAYMENT COMPATIBILITY AND CUSTOMER SATISFACTION IN HIGH-TECH FIRMS IN SOUTHWEST NIGERIA

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Abstract
The rapid evolution of digital technologies has transformed organizational processes, particularly within high-tech industries, where firms increasingly rely on e-commerce to enhance customer experiences. This study examines the effect of e-commerce payment compatibility on customer satisfaction in high-tech firms in Southwest Nigeria, grounded in the Unified Theory of Acceptance and Use of Technology. The study adopted a quantitative cross-sectional survey design. The population of the study comprised active internet users in Southwest Nigeria as of the first quarter of 2024, totaling 45,734,074 users across Lagos, Oyo, Ogun, Osun, Ondo, and Ekiti States, where high-tech firms are more dominant. A sample size of 2,400 respondents was derived using Taro Yamane's formula, and a stratified random sampling technique was adopted. The study utilized primary data collected through structured questionnaires. Descriptive statistics, correlation, and linear regression analyses were employed to test the hypothesis at a 0.05 significance level. The findings revealed that the null hypothesis was rejected, indicating that e-commerce payment compatibility has a positive and significant effect on customer satisfaction in high-tech firms ($\beta = 0.840$, $t = 72.643$). The study found a positive and significant relationship between e-commerce payment compatibility and customer satisfaction in high-tech firms in Southwest Nigeria. Therefore, the study recommends that high-tech firms should ensure that their e-commerce payment systems are compatible with commonly used devices, operating systems, and digital wallets, as this reduces transaction errors, builds customer trust, and promotes customer satisfaction.
Keywords: E-commerce; Compatibility; Customer Satisfaction; High-tech Firms.

Introduction

The global diffusion of e-commerce has fundamentally transformed how firms create and deliver value. As digital platforms proliferate, competition has shifted from mere online presence to the quality of user experience delivered through platform design and functionality. In this context, customer satisfaction has become a critical post-adoption outcome, influencing repeat purchases, loyalty, and long-term performance. Digital payment platforms play a pivotal role by enhancing efficiency, security, and accessibility in cross-border trade (Nguyen & Mutum, 2021). In developed economies, firms leverage digital payments to improve customer experiences, reduce transaction times, and increase profitability. These platforms are central to global online retail giants such as Amazon and Alibaba Group, highlighting e-commerce's impact on business performance (OECD, 2021). High-tech firms increasingly recognize the value of e-commerce adoption, integrating technologies that enhance operational scalability, automate transactions, secure digital infrastructures, and boost performance (UNCTAD, 2024). Online retail now accounts for approximately 25–30% of total transactions in digitally advanced economies, though physical stores are projected to remain relevant through 2029 (UNCTAD, 2024; Forrester, 2024).

The seamless online shopping experience depends heavily on high technology that develops and optimizes key platform attributes, particularly system compatibility across devices, operating systems, and payment infrastructures. This integration of technology and enterprise strategy drives innovation and reshapes customer experiences. Smartphones have become central to accessing financial tools and participating in online transactions, serving as key gateways for digital payments that enable smooth, personalized, and instant services (OECD, 2021). Blockchain

technology, with its decentralized and secure architecture, enhances supply chain transparency, strengthens trust, and improves transaction reliability (Tapscott & Tapscott, 2021).

In this rapidly evolving digital landscape, consumer behaviour continues to drive innovation, as demands for speed, personalization, and instant service fuel the development of advanced payment technologies (Broby, 2021). In such environments, compatibility between platforms and users' technological ecosystems is essential for seamless transactions and positive user experiences. Prior empirical studies on e-commerce have extensively examined adoption drivers, trust, perceived usefulness, logistics efficiency, and service quality across various sectors. For example, Fatonah et al. (2018) emphasized security and reliability in e-commerce payment systems, while Onikoyi et al. (2022) found that e-commerce applications enhance operational efficiency and customer engagement in online retail enterprises. Adeniran et al. (2022) highlighted delivery reliability and accessibility as key determinants of e-commerce logistics adoption in Nigeria. Similarly, Nwabuatu (2024) reported that technological readiness influences innovation adoption among SMEs in Rivers State, and Ezennia and Marimuthu (2022) identified perceived usefulness and trust as predictors of e-commerce adoption among professionals in Lagos. Studies by Ayo et al. (2016) and Agwu and Murray (2015) further emphasized infrastructure readiness, trust, and perceived ease of use as major adoption determinants in developing economies. Despite these contributions, much of the existing literature focuses on adoption intentions and general performance outcomes rather than post-adoption evaluations such as customer satisfaction. Moreover, prior studies largely emphasize broad determinants such as trust, security, and perceived usefulness, with limited empirical attention to foundational platform attributes like compatibility that directly shape user experience during transactions.

Research Questions

To achieve the aim of this study, the following research question is addressed:
How does the compatibility of e-commerce payment platforms affect customer satisfaction in high-tech firms in Southwest Nigeria?
What is the level of compatibility of e-commerce payment platforms among high-tech firms in Southwest Nigeria?

Research Hypothesis

H_0: Compatibility of e-commerce payment platforms has no significant effect on customer satisfaction in high-tech firms in Southwest Nigeria.

Literature Review

This literature review is organized into three sections: Conceptual, Theoretical and Empirical findings, providing a comprehensive understanding of the existing relationship between Compatibility and Customer Satisfaction in High-Tech firms. E-commerce, or electronic commerce, refers to the buying and selling of goods and services over the internet (Laudon & Traver, 2021). It utilizes digital platforms such as websites, mobile applications, and social media to facilitate transactions, including online shopping, digital payments, supply chain management, and customer relationship management (Chaffey & Smith, 2022; Chopra & Meindl, 2019). These functionalities form the strategic backbone of modern firms, shaping how businesses interact with customers and deliver value. However, challenges such as weak platform integration, security concerns, and customer skepticism can limit the effectiveness of e-commerce systems.

E-commerce operates through several models, including Business-to-Consumer (B2C), Business-to-Business (B2B), Consumer-to-Consumer (C2C), and Consumer-to-Business (C2B). Among these, B2C dominates the digital marketplace by enabling direct engagement between firms and consumers through online platforms, while B2B supports trade and procurement among firms. C2C and C2B models further expand market participation through peer-to-peer and service-based exchanges (Laudon & Traver, 2021). Information technology enhances operational efficiency, sales performance, and customer satisfaction by enabling seamless communication and data exchange during transactions (Chaffey & Smith, 2022). For high-tech firms, such digital integration is critical, as customers expect fast, reliable, and seamless online interactions. The growth of internet usage and technological innovation has further expanded the scale and profitability of online commerce (Brynjolfsson & McAfee, 2014; UNCTAD, 2021). Overall, e-commerce has transformed traditional business models by integrating digital tools and innovative platforms to enhance operational efficiency, customer engagement, and market reach. In high-tech business environments, platform compatibility across devices, operating systems, and payment infrastructures plays a crucial role in shaping customer satisfaction and post-purchase experiences.

Compatibility refers to the extent to which e-commerce platforms align with an organization's existing systems, processes, and technological infrastructure. Firms must adopt solutions that integrate effectively with accounting software, customer relationship management systems, and inventory management tools to optimize operational performance (Sabherwal et al., 2018). Research indicates that compatibility significantly influences technology adoption and utilization (Rogers, 2003; Tornatzky & Klein, 1982) and, in post-adoption contexts, contributes to seamless shopping experiences, reduced technical disruptions, and enhanced customer satisfaction and loyalty (Mittal et al., 2023). Compatibility also affects the stability, reliability, and performance of e-commerce platforms. Systems that integrate effectively with existing organizational processes minimize errors, conflicts, and service interruptions, generating positive user attitudes and outcomes (Rogers, 2003; Venkatesh et al., 2003). In high-tech firms, where customers expect efficiency and technological sophistication, compatibility directly influences perceived service quality and overall user experience (Parasuraman et al., 2005). Even minor misalignments-such as payment gateway failures or device incompatibility-can delay transactions or disrupt service delivery, negatively shaping customer perceptions and satisfaction. Information systems research further indicates that technological alignment improves user satisfaction and continued usage intentions (DeLone & McLean, 2003). Strategically, compatibility strengthens internal efficiency and data consistency, enabling firms to respond quickly to market changes and customer demands. By ensuring that e-commerce platforms function seamlessly across devices, operating systems, and payment channels, high-tech firms can enhance trust, convenience, and overall customer satisfaction. Thus, compatibility is not merely a technical feature but a critical driver of customer satisfaction and sustained competitive advantage in high-tech firms (Sabherwal et al., 2018; DeLone & McLean, 2003).

For decades, customer satisfaction has been recognized as a key success factor for profit-oriented organizations, influencing market share, retention, and long-term performance. Satisfied customers are less influenced by competitors, less price-sensitive, and more likely to remain loyal to a brand (Mittal et al., 2023). They often become repeat buyers, and their satisfaction strongly predicts loyalty intentions (Mittal et al., 2023; Yalçınkaya & Çataldaş, 2025), whereas dissatisfied customers are more likely to seek alternatives (Cheng & Shen, 2025). Moreover, satisfied customers generate positive word-of-mouth, which contributes to the acquisition of new customers and strengthens organizational reputation (Mittal et al., 2023; Al-Ghazali, 2024). Customer satisfaction tends to be higher when service efficiency, operational effectiveness, and product or service quality meet or exceed customer expectations. In the context of e-commerce, platform attributes such as compatibility with devices and software, as well as efficient checkout processes, directly influence user satisfaction by reducing friction, delays, and errors

during transactions. Thus, customer satisfaction is both a post-adoption outcome and a strategic metric, driving retention, loyalty, repeat purchases, and overall competitive advantage in high-tech firms (Mittal et al., 2023; Yalçınkaya & Çataldaş, 2025). Conceptually, satisfaction reflects an individual's overall positive evaluation of an experience when outcomes meet or exceed expectations. In high-tech e-commerce environments, this evaluation is strongly shaped by platform usability, technological alignment, and transaction convenience, linking satisfaction directly to the effectiveness of compatibility features. In today's rapidly evolving digital landscape, high-tech firms play a central role in driving innovation, economic growth, and the adoption of advanced technologies, particularly within the e-commerce sector. A high-tech firm is formally defined as an organization whose primary operations rely on advanced, knowledge-intensive technologies, substantial R&D investment, and continuous innovation to develop new products, services, or processes (Nowotny, 2006; Zawislak et al., 2018). These firms operate in technology-intensive industries, characterized by substantial R&D and the integration of advanced technologies to develop innovative products and services (Brynjolfsson & McAfee, 2014; Laudon & Traver, 2021). They leverage emerging technologies including artificial intelligence (AI), blockchain, and the Internet of Things (IoT) to transform industries and create value (Davenport et al., 2022). Characterized by high technological intensity and strong innovation capabilities (Zawislak et al., 2018), these firms operate across computing, telecommunications, software, digital electronics, cloud services, and e-commerce platforms. Their reliance on automation and digital tools enhances operational efficiency, optimizes customer interactions, and supports scalable online services, making them key drivers of e-commerce adoption and customer satisfaction.

This study is grounded in the Unified Theory of Acceptance and Use of Technology, which explains how system characteristics influence user perceptions, usage, and satisfaction in digital environments. The theory identifies performance expectancy, effort expectancy, facilitating conditions, and social influence as key determinants of technology acceptance and post-adoption outcomes (Venkatesh et al., 2003). In e-commerce payment systems, facilitating conditions reflect the availability of compatible infrastructure such as mobile devices, banking applications, payment gateways, and internet connectivity that enable seamless transactions. Payment compatibility aligns with facilitating conditions by ensuring that platforms integrate smoothly with users' existing technologies, reducing technical barriers and transaction errors. When payment systems function reliably across devices and financial platforms, users experience greater convenience and confidence, leading to higher customer satisfaction. Thus, UTAUT provides a suitable framework for explaining how e-commerce payment compatibility influences customer satisfaction in high-tech firms. Several studies have examined the role of platform compatibility in enhancing customer satisfaction in e-commerce contexts. Olubiyi et al. (2023) conducted a study titled The Influence of E-Commerce Platform Compatibility on the Performance of High-Tech Firms in Lagos State, Nigeria. *T*he study aimed to determine how well platforms aligned with users' existing systems and technologies to enhance operational efficiency. A total of 250 high-tech firms were surveyed using stratified random sampling, with data collected through structured questionnaires. Regression analysis revealed that platform compatibility increased operational efficiency by 34%, with platforms that seamlessly integrated with workflows performing better. The study concludes that platform compatibility is a strategic enabler for operational efficiency in high-tech firms.

Similarly, Rahman et al. (2022) in their study, an empirical analysis of cashless payment systems for business transactions, investigated the antecedents of cashless payment adoption among businesses in Malaysia. A seven-factor model based on the TOE framework was developed and tested, and data from 200 business entities were analyzed using partial least squares (PLS). The results indicated that compatibility and technological competence have significant relationships with the adoption of cashless payment systems. The study concludes that technology

alignment and competence are key drivers of cashless payment adoption. In a related context, Rahman and Alam (2020) examined the role of compatibility in e-commerce adoption within the bangladeshi tech sector. The study explored how alignment with local languages and payment systems influences customer satisfaction and sales. Using purposive sampling, 310 e-commerce users participated, with data collected through semi-structured interviews and questionnaires. Mixed-method analysis combining thematic content analysis and ANOVA revealed that compatibility increased customer satisfaction, resulting in a 28% growth in sales. The study's gap lies in its limited attention to infrastructural barriers that hinder compatibility in rural and underdeveloped areas. Collectively, these studies highlight that e-commerce payment platform compatibility is crucial for both operational efficiency and customer satisfaction, establishing a strong empirical foundation for investigating its role in high-tech firms in Southwest Nigeria.

Methodology

This study adopted a quantitative research design to examine the relationship between e-commerce payment compatibility and customer satisfaction in high-tech firms in Southwest Nigeria. The population consisted of active internet users across Lagos, Oyo, Ogun, Osun, Ondo, and Ekiti States, totaling approximately 45,734,074 users (NBS, 2024, Q1). A sample size of 2,400 respondents was determined using Yamane Sample Size Formula. A stratified random sampling technique was employed to ensure adequate representation of respondents across the six states. Of the 2,400 questionnaires distributed, 2,208 were returned and found usable, representing a response rate of 92%. Data were collected using a structured Likert-scale questionnaire administered online via Google Forms. The instrument was subjected to expert review and pilot testing to ensure content validity and reliability. The unit of analysis was at the individual (micro) level. Data analysis involved descriptive statistics to summarize respondents' demographic characteristics and key variables, while inferential statistics, including Pearson correlation and linear regression analysis, were used to test the study hypothesis at a 0.05 significance level. Multicollinearity was assessed using the Variance Inflation Factor (VIF), with values ranging from 2.841 to 6.263, indicating moderate collinearity but not severe enough to distort the regression estimates. The reliability of the measurement scales was evaluated using Cronbach's Alpha, and all constructs exceeded the recommended threshold of 0.70, indicating acceptable internal consistency.

Results

Table 1: Distribution of Demographics of the respondents

Variables (n=2208)	Categories	Frequency	Percentage (%)
Locations	Ekiti	381	17.3
	Lagos	442	20
	Ogun	362	16.4
	Ondo	313	14.2
	Osun	336	15.2
	Oyo	374	16.9
	Total	**2,208**	**100**
Age	18 – 29	248	11.2
	30 – 40	1520	68.8
	41 – 60	416	18.8
	61 and Over	24	1.2
	Total	**2,208**	**100**
Occupation Status	Government	1317	59.6
	Private	291	13.2
	Self-Employed	496	22.5
	Unemployed	104	4.7
	Total	**2,208**	**100**
Gender	Female	842	38.1
	Male	1366	61.9
	Total	**2,208**	**100**
Income level	10,001 -50,000	90	4.1
	100,001 - 150,000	652	29.5
	150,001 - 200,000	806	36.5
	200,001 - 250,000	350	15.9
	250,001 - 300,000	130	5.9
	50,001 - 100,000	172	7.8
	Less than 10,000	8	0.3
	Total	**2,208**	**100**

Source: Researcher *(2025).*

The socio-demographic and economic characteristics of the 2,208 respondents across the six Southwestern states were summarized narratively. Lagos State recorded the highest number of respondents (442), followed by Ekiti State (381) and Oyo State (374), while Ogun State, Osun State, and Ondo State accounted for 362, 336, and 313 respondents, respectively. The mean age was 36 years, with most respondents aged 30–40, about one-fifth aged 41–60, slightly over one-tenth aged 18–29, and few above 60. More than half were government employees (1,316), followed by the self-employed (497), private-sector employees (292), and the unemployed (103). The sample

showed a male-to-female ratio of approximately 3:2. Median monthly income clustered within ₦150,001–₦200,000, with few respondents earning below ₦50,000 or above ₦250,000. Overall, the respondents were predominantly middle-aged, government-employed males with moderate incomes, reflecting a profile consistent with active e-commerce users in Southwest Nigeria.

Hypothesis1: There is no significant effect of compatibility on customer satisfaction in high-tech firms in Southwest Nigeria.

Table 2: Coefficients for Compatibility (COM)

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	1.808	.100		18.141	.000
COM	.804	.011	.840	72.643	.000

a. Dependent Variable: CS

The regression results show that compatibility has a positive and statistically significant effect on customer satisfaction ($\beta = 0.840$, $t = 72.643$, $p < 0.001$). On this basis, the null hypothesis was rejected. The result indicates that compatibility significantly influences customer satisfaction, thereby underscoring the relevance of system alignment and user-system fit within e-commerce operations.

Discussion

Compatibility is a critical determinant of customer satisfaction, as it ensures that e-commerce platforms align with users' technological preferences, organizational practices, and existing IT infrastructures. When payment gateways, shopping interfaces, and mobile applications integrate seamlessly with users' devices and routines, transactions become smoother and more reliable, thereby enhancing overall satisfaction. The findings of this study reveal that compatibility has a positive and statistically significant effect on customer satisfaction ($\beta = 0.840$, $t = 72.643$, $p < 0.001$), indicating that technological alignment between e-commerce systems and user environments strengthens trust, encourages repeated usage, and improves the overall online shopping experience. This result supports earlier studies which identify compatibility as an important factor influencing technology usage and system performance. For instance, Paul A. Pavlou and Michael Fygenson (2006) identified compatibility as a major predictor of e-commerce adoption, while studies by Kapoor et al. (2018) and Boateng and Amankwaa (2016) show that technological fit enhances operational efficiency and user experience. Within the context of Southwest Nigeria, platforms that integrate effectively with existing IT systems and provide familiar payment options such as USSD services, bank transfers, and mobile-based payments help reduce transaction failures, user frustration, and perceived risk (Ahmad et al., 2015; Kumar & Ayedee, 2021; Boateng et al., 2019).

The findings are further explained by the Unified Theory of Acceptance and Use of Technology, which highlights facilitating conditions and effort expectancy as key determinants of technology usage and continued engagement. Compatibility functions as a facilitating condition by ensuring that e-commerce platforms operate effectively within users' existing technological ecosystems. When systems align with users' established routines and devices, the perceived effort required to complete transactions decreases, thereby enhancing ease of use and strengthening behavioural intentions toward continued platform usage (Venkatesh et al., 2003). As a result, users develop greater confidence in the reliability of digital payment systems, which contributes to higher levels of customer satisfaction.

Contextual factors also reinforce the significance of compatibility in the Nigerian digital environment. The widespread use of mobile devices, varying levels of digital literacy, and diverse consumer payment preferences make platform compatibility particularly important for delivering seamless online transactions. When e-commerce platforms are mobile-friendly, adaptable to local transaction habits, and capable of supporting multiple payment channels, they are more likely to achieve higher levels of customer retention, loyalty, and successful transaction completion (Awa et al., 2015; Lal & Soni, 2023; Abtahi et al., 2024). Overall, compatibility extends beyond a technical attribute; it represents a strategic capability that aligns digital platforms with user expectations, improves transaction reliability, and ultimately strengthens customer satisfaction among high-tech firms in Southwest Nigeria.

This study contributes to existing literature by extending the application of the Unified Theory of Acceptance and Use of Technology to explain the role of e-commerce payment compatibility in shaping post-adoption outcomes such as customer satisfaction. While many previous studies have focused primarily on technology adoption intentions, this research demonstrates that compatibility also significantly influences users' post-usage evaluations and experiences. By empirically establishing a strong relationship between payment platform compatibility and customer satisfaction among high-tech firms in Southwest Nigeria, the study advances theoretical understanding of how technological alignment with users' devices, operating systems, and payment infrastructures enhances user experience and satisfaction in digital commerce environments. The findings of this study provide valuable insights for managers of high-tech firms that rely on e-commerce platforms to interact with customers. Specifically, firms should prioritize the development and deployment of payment systems that are compatible with widely used devices, operating systems, and digital payment channels to ensure seamless transactions and minimize technical disruptions during online purchases. By improving compatibility across platforms, firms can enhance transaction efficiency, reduce payment failures, and increase customer trust and satisfaction. Consequently, organizations that strategically invest in compatible and user-friendly payment infrastructures are more likely to strengthen customer loyalty, and maintain a competitive advantage in the rapidly evolving digital marketplace. From a policy perspective, the findings highlight the need for supportive regulatory frameworks and digital infrastructure that facilitate seamless e-commerce payment compatibility. Policymakers and financial regulators should promote standards that ensure interoperability among digital payment platforms, banking systems, and financial technologies to enable secure and efficient transactions for users. Strengthening internet infrastructure, enhancing cybersecurity regulations, and supporting innovation in digital payment technologies will further improve the reliability and accessibility of e-commerce systems. Such initiatives will not only improve customer satisfaction but also foster the growth of the digital economy and encourage wider participation in e-commerce activities in Nigeria.

Conclusion

This study examined e-commerce payment compatibility and customer satisfaction in high-tech firms in Southwest Nigeria. The findings show that payment platforms that aligned with users' devices, payment methods, and technological preferences enhance satisfaction by fostering trust, reducing transaction difficulties, and ensuring smooth digital payments. High-tech firms that prioritize payment compatibility are better positioned to retain customers, build loyalty, and achieve improved customer satisfaction in the competitive digital marketplace.

Recommendations

Based on the findings of the study:

i. High-tech firms should ensure that their e-commerce payment systems are compatible with commonly used devices, operating systems, and digital wallets. This reduces transaction errors, builds customer trust, and promotes customer satisfaction.
ii. Firms should periodically review and update their payment platforms to maintain seamless integration with emerging technologies and new payment channels. This ensures reliability, minimizes technical disruptions, and sustains customer satisfaction.

References

Abtahi, A. T., Shafique, T., Al Haque, T., Siam, S. A. J., & Rahman, A. (2024). *Exploring consumer preferences: The significance of personalization in e-commerce*. Malaysian E-Commerce Journal, 8(1), 1–7

Ahmad, S. Z., Abu Bakar, A. R., Faziharudean, T. M., & Mohamad Zaki, K. A. (2015). An empirical study of factors affecting e-commerce adoption among small- and medium-sized enterprises in a developing country: Evidence from Malaysia. *Information Technology for Development, 21*(4), 555–572. https://doi.org/10.1080/02681102.2014.899961

Awa, H. O., & Ojiabo, O. U. (2016). A model of adoption determinants of ERP within T-O-E framework. *Information Technology & People, 29*(4), 901–930. https://doi.org/10.1108/ITP-03-2015-0068

Boateng, H., Kosiba, J. P. B., & Okoe, A. F. (2019). Determinants of consumers' participation in the sharing economy: A social exchange perspective within an emerging economy context. *International Journal of Contemporary Hospitality Management, 31*(2), 718–733. https://doi.org/10.1108/IJCHM-11-2017-0726

Broby, D. (2021). Financial technology and the future of banking. *Financial Innovation, 7*, Article 47. https://doi.org/10.1186/s40854-021-00264-y

Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies.* W. W. Norton & Company.

Chaffey, D., & Smith, P. R. (2022). *Digital marketing excellence: Planning, optimizing, and integrating online marketing* (6th ed.). Routledge.

Cheng, T., & Shen, Y. (2025). Understanding customer switching behaviour: An empirical examination of mobile financial services. *Social Sciences & Humanities Open, 11*, Article 101270. https://doi.org/10.1016/j.ssaho.2024.101270

Chopra, S., & Meindl, P. (2019). *Supply chain management: Strategy, planning, and operation* (7th ed.). Pearson.

Davenport, T. H., Guha, A., Grewal, D., & Bressgott, T. (2022). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science, 50(2)*, 267–285. https://doi.org/10.1007/s11747-021-00782-7

DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems, 19(4)*, 9–30. https://doi.org/10.1080/07421222.2003.11045748

Ezennia, C. S., & Marimuthu, M. (2022). Factors that positively influence e-commerce adoption among professionals in Surulere, Lagos, Nigeria. *Cogent Business & Management, 9*(1), 2054236.

Hassan, T. (2025). *Eventful year marred by poor infrastructure, unfriendly policies*. *New Telegraph*. https://newtelegraphng.com/eventful-year-marred-by-poor-infrastructure-unfriendly-policies/?

Kapoor, R. (2018). Ecosystems: Broadening the locus of value creation. *Journal of Organization Design*, **7**(1), 1–16. https://doi.org/10.1186/s41469-018-0035-4

Kostakis, V., Pazaitis, A., & Liarokapis, M. (2023). Beyond high-tech versus low-tech: A tentative framework for sustainable urban data governance. *Big Data and Society, 10*(1). https://doi.org/10.1177/20539517231180583

Kumar, A., & Ayedee, N. (2021). Technology adoption and the COVID-19 pandemic: A case study of e-commerce in India. *International Journal of Research in Engineering, Science and Management, 4*(9), 1–5. https://doi.org/10.47607/ijresm.2021.1204

Lal, P., & Soni, G. (2023). Mediating role of cybersecurity in e-commerce performance: Evidence from developing economies. *Electronic Markets*, *33*(1), 85–101.

Laudon, K. C., & Traver, C. G. (2021). *E-commerce 2021: Business, technology, society* (17th ed.). Pearson.

Mittal, V., Han, K., Frennea, C., Blut, M., Shaik, M., & Sridhar, S. (2023). Customer satisfaction, loyalty behaviours, and firm financial performance: what 40 years of research tells us. *Marketing Letters*, 34, 171–187.

NCC Report. (2022). *Broadband and digital infrastructure in Nigeria.* Nigerian Communications Commission.

Nguyen, T., & Mutum, D. S. (2021). The role of digital payment adoption in e-commerce growth and consumer satisfaction. *Journal of Electronic Commerce Research, 22*(3), 183–201.

Nowotny, H. (Ed.). (2006). *Cultures of Technology and the Quest for Innovation.* Berghahn Books.

Nwabuatu, E. N. (2024). *Innovation and Technology Adoption Among SMEs in Rivers State, Nigeria: Challenges and Opportunities.World Journal of Innovation and Modern Technology, 8*(6), 76–92. https://doi.org/10.56201/wjimt.v8.no6.2024.pg76.92

OECD. (2021). *The digital transformation of SMEs*. OECD Studies on SMEs and Entrepreneurship. OECD Publishing. https://doi.org/10.1787/bdb9256a

Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce, 7*(3), 101–134.

Pavlou, P. A., & Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: An extension of the theory of planned behaviour. *MIS Quarterly, 30*(1), 115–143. https://doi.org/10.2307/25148720

Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research, 7*(3), 213–233. https://doi.org/10.1177/1094670505276687

Rahman, M., Ismail, I., Bahri, S., & Rahman, M. K. (2022). An empirical analysis of cashless payment systems for business transactions. *Journal of Open Innovation Technology Market Complexity, 8*(4), 213.

Rogers, E. M. (2003). *Diffusion of innovations* (4th ed.). Free Press.

Sabherwal, R., Sabherwal, S., & Havakhor, T. (2018). How does strategic alignment affect firm performance? The roles of information technology and environmental uncertainty. *MIS Quarterly, 43*(2), 453–474.

Tapscott, D., & Tapscott, A. (2021). *Blockchain revolution: How the technology behind bitcoin and other cryptocurrencies is changing the world*. Penguin.

Tornatzky, L. G., & Klein, K. J. (1982). Innovation characteristics and innovation adoption–implementation: A meta-analysis of findings. *IEEE Transactions on Engineering Management, EM-29*(1), 28–45. https://doi.org/10.1109/TEM.1982.6447463

UNCTAD. (2021). *Digital economy report 2021: Cross-border data flows and development*. United Nations Conference on Trade and Development. https://unctad.org/webflyer/digital-economy-report-2021

UNCTAD. (2024). *Business e-commerce sales and the role of online platforms: UNCTAD Technical Notes on ICT for Development, No. 1* (UNCTAD/DTL/ECDE/2024/3). UNCTAD

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425–478. https://doi.org/10.2307/30036540

Yalçınkaya, Ö., & Çataldaş, D. (2025). Determinants of customer satisfaction and loyalty in the Turkish e-commerce sector. *Frontiers in Communication, 10*, Article 1603554. https://doi.org/10.3389/fcomm.2025.1603554

Zawislak, P. A., Fracasso, E. M., & Tello-Gamarra, J. (2018). Technological intensity and innovation capability in industrial firms. *Innovation & Management Review*, 15(2), 189–208. (https://www.redalyc.org/journal/5375/537559106005/html/