

Appraising Adoption of E-Procurement Practice in Some Tertiary Institutions in Gombe State

Bilal Abdulmumini^{1*}, Mukhtar Musa Muhammad², Adekunle Moshood Abioye²,
Ogunsanya Raphael^{1,3}

¹Admin Department, Shehu Umar Garbai Secretariat Complex,
Bayo Local Government Area, Borno State, Nigeria

²Sustainable Procurement, Environmental and Social
Standards Enhancement (SPESSE), Abubakar
Tafawa Balewa University, Bauchi, Nigeria

³Procurement Department, Nigerian Institute of Mining and Geosciences, Jos

*Corresponding author: bilala0122@gmail.com

<https://doi.org/10.56201/jpaswr.v11.no9.2026.pg56.67>

Abstract

Public e-procurement is increasingly promoted as a means of improving transparency, efficiency, and accountability in the procurement operations of public institutions, yet its adoption in Nigerian tertiary institutions remains empirically under-examined. This study assessed the impact of digitization on the adoption of a public e-procurement portal among procurement officers, tender board committee members, and procurement department staff in eight tertiary institutions in Gombe State, Nigeria, using the Technology Acceptance Model (TAM) as the theoretical framework. A descriptive survey design was adopted, and a total enumeration (census) technique was used to draw a sample of 104 respondents. Primary data were collected using a structured, five-point Likert-scale questionnaire administered via Google Forms, yielding 104 valid responses (100% response rate). Data were analyzed using descriptive statistics, Cronbach's alpha reliability testing, Pearson correlation, and multiple/simple linear regression in SPSS version 25.0. The research instrument demonstrated high internal consistency (Cronbach's alpha = 0.835-0.885 across constructs; overall alpha = 0.960). Regression results showed that Perceived Usefulness ($\beta = 0.630, p < .001$) and Perceived Ease of Use ($\beta = 0.390, p < .001$) jointly explained 81.9% of the variance in Attitude Towards Use; Perceived Ease of Use explained 57.8% of the variance in Perceived Usefulness ($\beta = 0.589, p < .001$); Attitude Towards Use ($\beta = 0.513, p < .001$) and Perceived Usefulness ($\beta = 0.403, p < .001$) jointly explained 83.2% of the variance in Behavioral Intention; and Behavioral Intention explained 33.2% of the variance in Actual System Use ($\beta = 0.570, p < .001$). All six hypothesized paths were supported at the 5% significance level. The findings confirm that TAM provides a robust framework for explaining e-procurement adoption in a Nigerian tertiary-education setting and indicate that usability and demonstrable usefulness are the most critical levers for sustaining adoption. The study recommends continued investment in portal usability, regular capacity-building for procurement staff, and strengthened institutional policy support, and calls for future studies to extend TAM with facilitating-condition and trust constructs.

Keywords: Digitization; E-Procurement; Technology Acceptance Model; Adoption; Tertiary Institutions; Gombe State, Nigeria

1. Introduction

Digitization has become a defining trend in virtually every sphere of contemporary life, reshaping how organizations transact, communicate, and deliver services. In the public sector, digitization has increasingly been extended to procurement, giving rise to public e-procurement systems designed to enhance transparency, efficiency, and accountability in the acquisition of works, goods, and services (Chan & Owusu, 2022). Governments across the world, from Italy, New Zealand, and Australia to Kenya, Rwanda, and Tanzania, have implemented e-procurement platforms as part of broader public financial management reforms, with documented gains in efficiency, cost savings, and anti-corruption control (Boafo et al., 2020; MINECOFIN, 2015).

Within Nigeria, public tertiary institutions occupy a strategic position as both major consumers of public funds and custodians of accountability in the education sector. Despite the potential benefits of digitization, procurement practices in many Nigerian tertiary institutions remain largely manual, a condition associated with delays, weak transparency, resource mismanagement, and inadequate service delivery (Ibem et al., 2016; Okoro et al., 2023). While a number of studies have examined e-procurement adoption in the Nigerian construction industry (Odulana & Oyewobi, 2019; Mobayo & Makinde, 2021) and in the wider Nigerian public sector (Musa et al., 2024), comparatively little empirical attention has been devoted to the adoption of public e-procurement within the tertiary education sector, and fewer still have applied a validated technology-acceptance framework using a full-population (census) sample. This study addresses that gap by assessing the impact of digitization on the adoption of a public e-procurement portal among procurement officers in eight tertiary institutions in Gombe State, Nigeria, drawing on the Technology Acceptance Model (TAM) developed by Davis (1989).

1.1 Objectives and Hypotheses

The study was guided by the objective of appraising the adoption of public e-procurement practice in tertiary institutions in Gombe State using TAM, disaggregated into the assessment of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), the examination of Attitude Towards Use (ATU), the determination of Behavioral Intention (BI), and the investigation of Actual System Use (AU), together with the relationships among these constructs. Six hypotheses, derived directly from the TAM causal chain, were formulated and tested:

- H1: Perceived Usefulness has a significant positive influence on Attitude Towards Use.
- H2: Perceived Ease of Use has a significant positive influence on Attitude Towards Use.
- H3: Perceived Ease of Use has a significant positive influence on Perceived Usefulness.
- H4: Attitude Towards Use has a significant positive influence on Behavioral Intention.
- H5: Perceived Usefulness has a significant positive influence on Behavioral Intention.
- H6: Behavioral Intention has a significant positive influence on Actual System Use.

2. Literature Review

2.1 Conceptual Review

Public e-procurement refers to the application of internet-based information technology by government ministries, departments, agencies, and public institutions to conduct procurement transactions, comprising at minimum e-tendering, e-purchasing, and e-contract management (Chan & Owusu, 2022). The adoption of public e-procurement denotes the institutional process through which a public organization transitions from manual, paper-based procurement to electronic systems, a process shown in the literature to be shaped by an interplay of technological, organizational, institutional, and individual factors. Technological factors such as digital

infrastructure, automation, and digital systems provide the enabling environment for adoption (Ibem et al., 2016); organizational factors such as staff competence and management support determine institutional capacity to deploy and sustain the technology (Vaidya et al., 2006); and individual factors, principally the perceived usefulness and ease of use of the system, shape the willingness of procurement staff to adopt the technology (Adebayo & Evans, 2015; Okoro et al., 2023).

2.2 Theoretical Framework: The Technology Acceptance Model

This study was anchored on the Technology Acceptance Model (TAM), developed by Davis (1989) to explain and predict user acceptance of information technology. TAM posits that an individual's behavioral intention to use a technology is determined by their attitude towards using it, which is in turn shaped by two central beliefs: perceived usefulness (the degree to which a person believes a technology will enhance job performance) and perceived ease of use (the degree to which a person believes using the technology will be free of effort). The model further assumes that perceived ease of use exerts a direct influence on perceived usefulness, since a system that requires less effort frees cognitive resources for other productive purposes. TAM has been widely applied beyond its original information-systems context to e-government and public-sector technology adoption (Shore et al., 2018; El Kheshin & Saleeb, 2020), and was considered the most appropriate framework for this study because its five constructs (PU, PEOU, ATU, BI, and AU) map directly onto the study's objectives and hypotheses. The model is not without limitations: it relies on self-reported perceptual measures, excludes facilitating-condition and social-influence variables incorporated in extensions such as UTAUT, and offers limited insight into the antecedents of the beliefs it models (Davis, 1989); these limitations are revisited in the discussion of findings below.

2.3 Empirical Review

A substantial body of empirical work links digitization and TAM constructs to e-procurement outcomes. Bauer and Göbl (2019), surveying procurement departments across Europe, found that a higher degree of digitalization was associated with greater efficiency and reduced administrative burden. In the Nigerian construction sector, Odulana and Oyewobi (2019) linked effective e-procurement implementation to a reduction in corrupt and unethical procurement practices, while Ibem et al. (2016) identified implementation cost, ICT infrastructure availability, awareness, and personnel competence as key adoption factors. Applying TAM directly, Singh et al. (2017) found that perceived usefulness, ease of use, and trust significantly influenced e-procurement adoption among Indian public-sector organizations, and Musa et al. (2024), in a study of Nigerian public-sector employees, found that perceived usefulness and ease of use significantly shaped employees' attitudes towards public e-procurement systems; although that study, unusually, reported a negative effect of ease of use on adoption intention. Danieli (2026), examining forty public agencies in Tanzania, linked digital transformation to reduced public spending and shortened procurement cycles, while identifying insufficient infrastructure and low technical expertise as persistent constraints. In the Nigerian tertiary-education sector specifically, Eyo et al. (2023) found that e-procurement and related sustainable procurement practices significantly affected the organizational performance of institutions in Bayelsa State, though without examining the underlying user-perception mechanisms that TAM makes explicit. Taken together, these studies indicate consistent support for the PU-PEOU-ATU-BI-AU causal chain across diverse contexts, while also underscoring that infrastructural and organizational constraints (power supply, ICT

reliability, and training) can weaken the translation of favorable intention into actual system use (Yandiswa et al., 2023; Zaruk et al., 2023; Makoba et al., 2017).

2.4 Research Gap

Relatively few empirical studies have examined the adoption of public e-procurement within Nigerian tertiary institutions specifically through a TAM lens. Existing Nigerian e-procurement research has concentrated predominantly on the construction industry (Odulana & Oyewobi, 2019; Mobayo & Makinde, 2021), while TAM-based studies of Nigerian public-sector employees (Musa et al., 2024) have not focused on the tertiary-education context. Moreover, prior studies have generally relied on stratified or purposive sampling of a subset of a larger population. This study addresses these gaps by applying TAM to a total-enumeration (census) sample of procurement personnel across eight tertiary institutions in Gombe State, Nigeria, thereby providing a methodologically robust and context-specific empirical contribution.

3. Methodology

3.1 Research Design and Population

The study adopted a descriptive survey research design, appropriate for capturing the characteristics, perceptions, and attitudes of respondents regarding e-procurement practice. The target population comprised 104 procurement officers, tender board committee members, and procurement department staff drawn from eight tertiary institutions in Gombe State, Nigeria: Gombe State University, Federal University of Kashere, Gombe State Polytechnic Bajoga, Federal College of Horticulture Dadinkowa, Federal Polytechnic Kaltungo, College of Education Billiri, Gombe State College of Health Technology Kaltungo, and Federal College of Education (Technical), Gombe. Because the population was relatively small and manageable, a total enumeration (census) technique was adopted, whereby all 104 members of the target population constituted the sample, eliminating sampling error.

3.2 Instrumentation and Data Collection

Primary data were collected using a structured, five-point Likert-scale questionnaire (1 = Strongly Disagree to 5 = Strongly Agree), administered electronically via Google Forms to allow respondents to participate from any location and device. The instrument comprised two sections: Section A captured demographic information (academic qualification, years of experience, and institutional affiliation), while Section B contained five items each for the five TAM constructs (Perceived Usefulness, Perceived Ease of Use, Attitude Towards Use, Behavioral Intention, and Actual System Use) for a total of 25 substantive items. Content validity was established through review by three lecturers in the Department of Procurement Management, and instrument consistency was confirmed through pilot (test-retest) administration prior to full deployment. Of 105 responses received, one was discarded as incomplete, leaving 104 valid responses and a response rate of 100% of the target population.

3.3 Method of Data Analysis

Data were analyzed in SPSS version 25.0. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to profile respondents and summarize construct-level perceptions. Internal consistency of the instrument was assessed using Cronbach's alpha, with a threshold of 0.70 taken as acceptable. Pearson product-moment correlation was used to examine bivariate relationships among the five constructs prior to hypothesis testing. The six hypotheses

were tested using multiple and simple linear regression analysis at the 5% (0.05) level of significance, with a hypothesis accepted where the associated p-value was less than 0.05.

4. Results

4.1 Response Rate and Demographic Profile

All 104 targeted respondents returned valid, completed questionnaires, yielding a 100% response rate. Table 1 shows that most respondents (77.9%) held an HND/BSc/BTech qualification, 12.5% held an MSc/MBA, 6.7% held a National Diploma, and 1.0% held a Ph.D., indicating that respondents were sufficiently literate to engage meaningfully with the research instrument. In terms of experience, 49.0% of respondents had between one and five years of working experience, 25.0% had six to ten years, 19.2% had above fifteen years, and 6.7% had eleven to fifteen years, suggesting a reasonably experienced respondent pool. Respondents were drawn from across all eight institutions, with the highest representation from the Federal College of Education (Technical), Gombe (26.9%).

Table 1. Highest Academic Qualification of Respondents

Qualification	Frequency	Percentage (%)
National Diploma (ND)	7	6.7
HND/BSc/BTech	81	77.9
MSc/MBA	13	12.5
Ph.D.	1	1.0
Not indicated	2	1.9
Total	104	100.0

Table 2. Years of Working Experience of Respondents

Years of Experience	Frequency	Percentage (%)
1 - 5 years	51	49.0
6 - 10 years	26	25.0
11 - 15 years	7	6.7
Above 15 years	20	19.2
Total	104	100.0

4.2 Reliability of the Research Instrument

Internal consistency was assessed using Cronbach's alpha (Table 3). All five constructs recorded coefficients above the 0.70 acceptability threshold, ranging from 0.835 (Perceived Usefulness) to 0.885 (Attitude Towards Use), while the overall 25-item instrument recorded a Cronbach's alpha of 0.960, indicating a highly reliable and internally consistent instrument.

Table 3. Reliability of the Research Instrument (Cronbach's Alpha)

Construct	Items	Cronbach's α	Remark
Perceived Usefulness (PU)	5	0.835	Reliable
Perceived Ease of Use (PEOU)	5	0.849	Reliable
Behavioral Intention (BI)	5	0.880	Reliable
Attitude Towards Use (ATU)	5	0.885	Reliable
Actual System Use (AU)	5	0.870	Reliable
Overall instrument	25	0.960	Reliable

4.3 Descriptive Analysis of Research Variables

Composite construct scores (Table 4) all fell in the "Strongly Agree" band (4.21-5.00), ranging from 4.25 (Perceived Ease of Use) to 4.42 (Perceived Usefulness), with relatively low standard deviations (0.56-0.72) indicating consistent, favorable perceptions of the public e-procurement portal across respondents.

Table 4. Mean and Standard Deviation of Research Variables

Construct	Mean	SD	Remark
Perceived Usefulness (PU)	4.42	0.56	Strongly Agree
Perceived Ease of Use (PEOU)	4.25	0.72	Strongly Agree
Behavioral Intention (BI)	4.38	0.59	Strongly Agree
Attitude Towards Use (ATU)	4.34	0.65	Strongly Agree
Actual System Use (AU)	4.37	0.59	Strongly Agree

4.4 Correlation Analysis

Pearson correlation coefficients (Table 5) show that all constructs were positively and significantly correlated at the 0.01 level. Perceived Usefulness correlated strongly with Behavioral Intention ($r = 0.866$) and Attitude Towards Use ($r = 0.861$); Perceived Ease of Use correlated strongly with Attitude Towards Use ($r = 0.835$) and Behavioral Intention ($r = 0.818$); and Actual System Use showed moderate correlations with the other constructs ($r = 0.480$ to 0.667), providing preliminary support for the hypothesized TAM relationships.

Table 5. Correlation Matrix of Research Variables

Construct	PU	PEOU	BI	ATU	AU
PU	1.000				
PEOU	0.760	1.000			
BI	0.866	0.818	1.000		
ATU	0.861	0.835	0.892	1.000	

Construct	PU	PEOU	BI	ATU	AU
AU	0.480	0.667	0.576	0.569	1.000

Note. All correlations significant at $p < .01$ (2-tailed), $n = 104$.

4.5 Test of Hypotheses

The six hypotheses were tested using multiple and simple linear regression analysis at the 5% level of significance. Results are summarized in Tables 6-9.

Table 6. Regression Result: Attitude Towards Use (ATU) on PU and PEOU

Variable	β	SE	t	p	Decision
(Constant)	-0.104	0.222	-0.467	0.641	-
PU	0.630	0.077	8.229	0.000	H1 Accepted
PEOU	0.390	0.059	6.570	0.000	H2 Accepted

Note. $R^2 = 0.819$, Adjusted $R^2 = 0.816$, $F(2, 101) = 228.8$, $p < .001$.

Table 7. Regression Result: Perceived Usefulness (PU) on PEOU

Variable	β	SE	t	p	Decision
(Constant)	1.912	0.215	8.906	0.000	-
PEOU	0.589	0.050	11.820	0.000	H3 Accepted

Note. $R^2 = 0.578$, Adjusted $R^2 = 0.574$, $F(1, 102) = 139.7$, $p < .001$.

Table 8. Regression Result: Behavioral Intention (BI) on ATU and PU

Variable	β	SE	t	p	Decision
(Constant)	0.377	0.193	1.948	0.054	-
ATU	0.513	0.073	7.058	0.000	H4 Accepted
PU	0.403	0.085	4.717	0.000	H5 Accepted

Note. $R^2 = 0.832$, Adjusted $R^2 = 0.829$, $F(2, 101) = 250.7$, $p < .001$.

Table 9. Regression Result: Actual System Use (AU) on BI

Variable	β	SE	t	p	Decision
(Constant)	1.872	0.353	5.298	0.000	-
BI	0.570	0.080	7.119	0.000	H6 Accepted

Note. $R^2 = 0.332$, Adjusted $R^2 = 0.325$, $F(1, 102) = 50.7$, $p < .001$.

Table 10. Summary of Hypothesis Testing

Hypothesis	Path	p-value	Decision
H1	PU $\rightarrow$ ATU	0.000	Accepted
H2	PEOU $\rightarrow$ ATU	0.000	Accepted

Hypothesis	Path	p-value	Decision
H3	PEOU → PU	0.000	Accepted
H4	ATU → BI	0.000	Accepted
H5	PU → BI	0.000	Accepted
H6	BI → AU	0.000	Accepted

In sum, all six hypotheses were accepted at the 5% level of significance, indicating that Perceived Usefulness and Perceived Ease of Use significantly and positively influenced Attitude Towards Use; Perceived Ease of Use significantly and positively influenced Perceived Usefulness; Attitude Towards Use and Perceived Usefulness significantly and positively influenced Behavioral Intention; and Behavioral Intention significantly and positively influenced Actual System Use of the public e-procurement portal.

5. Discussion of Findings

The first major finding was that Perceived Usefulness and Perceived Ease of Use significantly and positively influenced procurement officers' Attitude Towards Use of the public e-procurement portal, jointly explaining 81.9% of its variance. This is consistent with the original TAM formulation (Davis, 1989) and corroborates Musa et al. (2024) and Singh et al. (2017), who similarly found perceived usefulness and ease of use to be significant drivers of attitude towards e-procurement systems. Notably, the strength of this relationship exceeded typical findings in the literature, likely reflecting the generally favorable perceptions recorded across all constructs (means above 4.20). Interestingly, whereas Musa et al. (2024) reported a negative effect of ease of use on adoption intention in the Nigerian federal public sector, the present study found a significant positive effect, suggesting that the e-procurement portal used across the sampled Gombe State institutions had attained a level of usability that converted ease of use into a genuine driver of favorable attitudes. The second finding, that Perceived Ease of Use significantly influenced Perceived Usefulness, explaining 57.8% of its variance which directly corroborates Davis's (1989) proposition that ease of use frees cognitive resources that enhance perceived usefulness, and aligns with Hallikas et al. (2021) and Nandankar and Sachan (2020), who linked digital-tool usability to procurement performance outcomes. This implies that investment in portal usability is likely to have compounding benefits, reinforcing the adoption process from its earliest stage.

Third, both Attitude Towards Use and Perceived Usefulness significantly influenced Behavioral Intention, jointly accounting for 83.2% of its variance, consistent with Malhotra and Galletta (1999), McKechnie et al. (2006), and Ra'ed et al. (2023). This suggests that procurement officers who developed favorable attitudes towards the portal were strongly predisposed to form an intention to use it, reinforced by their belief in its capacity to improve the speed, accuracy, and accountability of procurement duties. Fourth, Behavioral Intention significantly predicted Actual System Use, though it explained a comparatively smaller share of variance (33.2%) than in the preceding relationships. This is consistent with a recognized limitation of TAM, its exclusion of facilitating-condition variables such as management support, training, and infrastructural reliability, which other studies (Yandiswa et al., 2023; Zaruk et al., 2023) have shown to constrain actual system use even where intention is favorable. This finding suggests that, in the Gombe State context, the translation of intention into consistent actual use may be bottlenecked by factors outside the core TAM chain, such as internet reliability or institutional facilitating conditions, and warrants attention in future adoption-support strategies.

Taken together, the results confirm that adoption of the public e-procurement portal among the sampled institutions follows the perception-behavior chain postulated by TAM (from perceived usefulness and ease of use, through attitude and behavioral intention, to actual use) and that this chain is empirically robust in the Nigerian tertiary-education context. The findings also resonate with Eyo et al. (2023), who linked e-procurement practice to improved organizational performance in Nigerian tertiary institutions, suggesting that the favorable adoption behavior observed here is likely to translate into the transparency, efficiency, and accountability benefits documented elsewhere in the literature (Boafo et al., 2020; Danieli, 2026).

6. Conclusion and Recommendations

This study concludes that digitization has a significant and positive impact on the adoption of public e-procurement among the sampled tertiary institutions in Gombe State, Nigeria, and that the Technology Acceptance Model provides a robust and reliable framework for explaining this adoption process. Perceived Usefulness and Perceived Ease of Use emerged as the most critical antecedents of attitude and behavioral intention, while Behavioral Intention was confirmed as the immediate predictor of Actual System Use, albeit one whose explanatory power was moderated by factors outside the core model. Based on these findings, the study recommends that: (i) tertiary institutions continue to invest in improving the functionality and usefulness of the public e-procurement portal, given its strong influence on adoption; (ii) institutional management organize regular training and capacity-building programs for procurement officers to enhance perceived ease of use; (iii) institutions design user-friendly interfaces and provide adequate technical support to reduce the effort required to operate the portal; (iv) policymakers and heads of procurement departments institute periodic performance monitoring and incentive mechanisms to sustain procurement officers' behavioral intention; (v) government and institutional authorities strengthen the policy and regulatory framework guiding e-procurement adoption; and (vi) institutions organize sensitization programs to improve procurement officers' attitudes towards the portal, given its central mediating role in the adoption chain. This study extends the application of TAM to the context of public e-procurement adoption in Nigerian tertiary institutions, provides empirical evidence on six hypothesized TAM relationships in this setting, and offers a validated 25-item research instrument (overall Cronbach's alpha = 0.960) that may be adapted in similar public-sector contexts.

6.1 Limitations and Directions for Future Research

The study was limited to procurement personnel in eight tertiary institutions in Gombe State, and findings should be generalized to other states or sectors with caution. The study relied on TAM alone and did not incorporate extended constructs such as trust, facilitating conditions, or social influence, which the literature suggests also shape e-procurement adoption (Zaruk et al., 2023; Yandiswa et al., 2023). The cross-sectional design further limited the ability to observe how perceptions and usage evolve over time. Future research should extend this study to other states and public-sector contexts, incorporate additional constructs such as trust and facilitating conditions within an extended TAM or UTAUT framework, adopt longitudinal designs to track adoption trajectories, and undertake comparative studies across tertiary institutions and other public-sector entities.

References

- Adebayo, V. A., & Evans, R. D. (2015). Adoption of e-procurement systems: A Nigerian public sector perspective. *Journal of Public Procurement*, 15(3), 355-378.
- Bauer, F., & Göbl, M. (2019). The influence of digitalisation on procurement efficiency. *Journal of Applied Leadership and Management*, 7, 50-65.
- Boafo, N. D., Ahudey, E., & Darteh, A. O. (2020). Evaluating e-procurement impact in the public sector. *Archives of Business Research*, 8(5), 235-247.
- Brandon-Jones, A., & Kauppi, K. (2018). Examining the antecedents of the technology acceptance model within e-procurement. *International Journal of Operations & Production Management*, 38(1), 22-42.
- Chan, A. P. C., & Owusu, E. K. (2022). Evolution of electronic procurement: Contemporary review of adoption and implementation strategies. *Buildings*, 12(1), 89.
- Danieli, G. (2026). Digital transformation and public procurement performance: Analysing its roles, challenges and opportunities in developing countries. *Journal of Public Sector Management*, 12(1), 1-19.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, 22(14), 1111-1132.
- El Kheshin, N., & Saleeb, N. (2020). Applying the technology acceptance model to e-government adoption. *International Journal of Electronic Government Research*, 16(2), 1-18.
- Eyo, U., Out, F., & Mrambaifa, M. (2023). Sustainable procurement practices and organizational performance of tertiary institutions in Bayelsa State, Nigeria. *International Journal of Procurement Management*, 16(4), 401-419.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Addison-Wesley.
- Gurgun, A. P., Kunkcu, H., Koc, K., Arditi, D., & Atabay, S. (2024). Challenges in the integration of e-procurement procedures into construction supply chains. *Buildings*, 14(2), 512.
- Hallikas, J., Immonen, M., & Brax, S. (2021). Digitalizing procurement: The impact of data analytics on supply chain performance. *Supply Chain Management: An International Journal*, 26(5), 629-646.
- Ibem, E. O., Aduwo, E. B., Tunji-Olayeni, P., Ayo-Vaughan, E. A., & Uwakonye, U. O. (2016). Factors influencing e-procurement adoption in the Nigerian building industry. *Construction Economics and Building*, 16(4), 54-67.
- Iheaka, C., Duru, C., Eze, U., Nwachukwu, F., & Onyenawuli, C. (2026). Determinants of e-procurement adoption in Nigerian public institutions. *Nigerian Journal of Procurement and Supply Chain Management*, 4(1), 33-51.
- Jean, N. (2018). The impact of e-procurement on the performance of public institutions in Rwanda: A case of the Ministry of Finance and Economic Planning. *East African Journal of Business and Economics*, 1(1), 1-15.
- Kellermanns, F. W., & Islam, M. (2004). Power distance and technology acceptance: A cross-cultural perspective. *Journal of International Business Studies*, 35(6), 490-506.
- Khalil Mesbah, S. (2009). Attitude, intention, and behaviour in technology acceptance research. *Journal of Information Technology Management*, 20(3), 45-56.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.

- Leo Sun, K. (2019). Challenges of e-procurement adoption in the Ghana public sector: A survey of the Ministry of Finance. *Scholarly Journal of Arts and Humanities*, 1(2), 45-58.
- Makoba, W., Mwakalobo, A., & Tundui, C. (2017). E-procurement adoption in the construction sector of Tanzania: Risks and challenges. *African Journal of Public Administration*, 5(2), 88-101.
- Malhotra, Y., & Galletta, D. F. (1999). Extending the technology acceptance model to account for social influence: Theoretical bases and empirical validation. *Proceedings of the 32nd Hawaii International Conference on System Sciences*.
- McKechnie, S., Winklhofer, H., & Ennew, C. (2006). Applying the technology acceptance model to the online retailing of financial services. *International Journal of Retail & Distribution Management*, 34(4/5), 388-410.
- Ministry of Finance and Economic Planning [MINECOFIN]. (2015). Business-to-business e-procurement: Success factors and challenges to implementation. Government of Rwanda.
- Mobayo, R., & Makinde, O. (2021). E-procurement practices among construction professionals in Abuja, Nigeria. *Journal of Construction Business and Management*, 5(1), 41-52.
- Musa, U., Jaafar, M., & Raslim, F. M. (2024). E-procurement adoption in Nigeria: Perceptions from the public sector employees. *Arab Gulf Journal of Scientific Research*, 42(1), 55-70.
- Nandankar, S., & Sachan, A. (2020). Electronic procurement adoption, usage and performance: A literature review. *Journal of Advances in Management Research*, 17(1), 17-39.
- Odulana, A. A., & Oyewobi, L. O. (2019). E-procurement and corruption in the Nigerian construction industry. *Journal of Engineering, Design and Technology*, 17(6), 1147-1163.
- Okoro, C., Nmecha, T., & Akujuobi, L. (2023). Factors affecting the adoption of e-procurement in the Nigerian public sector. *Journal of Public Procurement and Supply Chain*, 8(2), 112-129.
- Public Accounts Committee. (2014). Strategic use of green public procurement in the bus sector: Challenges and opportunities. UK Parliament.
- Ra'ed, M., Al-Qirim, N., & Hussein, R. (2023). Determinants of behavioural intention to use electronic bidding: A structural equation modeling approach. *International Journal of Information Management*, 68, 102567.
- Saleh, K. (2011). Technology acceptance and attitude formation: A review. *International Journal of Business and Management*, 6(9), 234-241.
- Sharif, M., Rahman, A., & Yusuf, N. (2011). Behavioural intention and technology acceptance among public sector employees. *International Journal of Business and Social Science*, 2(15), 210-218.
- Shore, L., Power, K., de Eyto, A., & O'Sullivan, L. (2018). Technology acceptance and user-centred design of assistive exoskeletons for older adults. *Wearable Technologies*, 2, e1.
- Singh, H., Kumar, R., & Sharma, S. (2017). Perceived usefulness, ease of use, and trust in e-procurement adoption: Evidence from Indian public sector organizations. *International Journal of Public Sector Management*, 30(6/7), 617-633.
- Taylor, Y. (n.d.). The future of public procurement in the era of digitalization. World Bank Blogs. <https://blogs.worldbank.org/en/governance/future-public-procurement-digitalization>
- Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), 144-176.
- Thompson, R. L., Higgins, C. A., & Howell, J. M. (1991). Personal computing: Toward a conceptual model of utilization. *MIS Quarterly*, 15(1), 125-143.

- Vaidya, K., Sajeev, A. S. M., & Callender, G. (2006). Critical factors that influence e-procurement implementation success in the public sector. *Journal of Public Procurement*, 6(1/2), 70-99.
- Wang, Y.-S. (2002). The adoption of electronic tax filing systems: An empirical study. *Government Information Quarterly*, 20(4), 333-352.
- Yandiswa, N., Mafini, C., & Dhurup, M. (2023). Procurement digitalization in the South African defence sector: A qualitative study. *Journal of Transport and Supply Chain Management*, 17, a808.
- Zaruk, D., Owusu-Manu, D.-G., & Edwards, D. J. (2023). ICT-related challenges to e-procurement implementation in the Ghanaian public sector. *Journal of Financial Management of Property and Construction*, 28(1), 1-19.