WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

The Effect of E-Procurement Implementation on Procurement Performance: A Case of Mbeya City Council

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ABSTRACT :

This study examined the effect of e-tendering system usage on organizational performance at Mbeya City Council. The study adopted a mixed-methods approach using a cross-sectional research design. The target population comprised 149 staff, from which a sample of 109 respondents was determined using Yamane's formula. Quantitative data were collected through structured questionnaires, while qualitative data were obtained through semi-structured interviews with key informants. Quantitative data were analysed using descriptive statistics and simple linear regression, while qualitative data were analysed thematically. The findings showed that respondents generally perceived e-tendering system usage positively. In particular, e-tendering reduced paperwork ($M = 4.19$, $SD = 0.97$), improved the timeliness of procurement processes ($M = 4.01$, $SD = 1.03$), and simplified the completion of tender processes ($M = 4.00$, $SD = 1.01$). The regression results revealed a strong positive relationship between e-tendering system usage and organizational performance ($R = 0.700$, $R^2 = 0.490$). The regression model was statistically significant, $F(1, 100) = 96.078$, $p < .001$, while e-tendering system usage had a positive and statistically significant coefficient ($B = 0.648$, $\beta = 0.700$, $p < .001$). The qualitative findings further indicated that e-tendering streamlined procurement activities, reduced administrative workload, improved access to procurement information, and strengthened transparency and accountability through electronic records and audit trails. The study concludes that effective utilization of e-tendering contributes positively to organizational performance at Mbeya City Council. The study recommends continued investment in ICT infrastructure, staff training, technical support, system maintenance, and continuous monitoring to strengthen the effectiveness and sustainability of e-tendering implementation.

Keywords: E-tendering system, e-procurement, organizational performance, procurement performance, electronic procurement

1. Introduction

Globally, electronic procurement (e-procurement) has become an important component of public procurement reform, as governments increasingly use digital technologies to improve the efficiency, transparency, accountability, and accessibility of procurement processes. Digital procurement systems can support the integration of procurement activities across the procurement lifecycle, facilitate access to tender information, reduce duplication and administrative burdens, and generate reliable data for monitoring and decision-making. The OECD (2025) notes that digital transformation can make public procurement more connected, efficient, transparent, and user-focused, although the benefits depend on effective system integration, adequate digital infrastructure, and users' digital capabilities. Similarly, the OECD (2024) emphasizes that digital transformation of procurement can improve transaction efficiency, transparency, competition, and the measurement of procurement outcomes. E-procurement systems can also improve the availability and reliability of procurement information by creating digital records that support monitoring and accountability throughout the procurement cycle (OECD, 2024).

In the African context, e-procurement has increasingly been adopted as part of efforts to modernize public procurement systems and address weaknesses associated with manual procurement processes. Evidence from the World Bank indicates that electronic government procurement (eGP) can help African public procurement organizations optimize public expenditure, improve supplier-market performance, enhance transparency, and reduce opportunities for corruption across the procurement lifecycle (Anderson et al., 2022). However, successful implementation requires appropriate institutional, technological, and organizational conditions, including adequate infrastructure, technical capacity, supportive regulations, and effective change management. The World Bank further emphasizes that eGP implementation differs across African countries because of variations in institutional readiness, digital infrastructure, procurement practices, and governance arrangements (Anderson et al., 2022). These differences suggest that the effects of e-procurement cannot be assumed to be uniform across public institutions, making context-specific empirical studies important for understanding its contribution to procurement performance.

In Tanzania, the government has progressively strengthened the digitalization of public procurement through the National e-Procurement System of Tanzania (NeST). The development of NeST commenced in July 2022, following a review and re-engineering of public procurement processes, with the system designed to improve efficiency, effectiveness, transparency, fairness, competition, accountability, and integrity in public procurement. The system includes modules such as e-registration, e-tendering, e-contract, e-catalogue, e-auction, and e-payment, although the development and implementation of the modules have occurred progressively (Public Procurement Regulatory Authority [PPRA], 2023). NeST was officially introduced as Tanzania's new e-procurement system in 2023 as part of public procurement reforms aimed at strengthening value for money and improving procurement processes (PPRA, 2023).

Recent evidence suggests that e-procurement is increasingly associated with procurement performance in Tanzania. Isango (2024), for example, examined e-tendering, e-informing, and e-payment practices and their relationship with organizational performance in Tanzania. Similarly, Mwalukasa (2024) examined e-sourcing, e-evaluation, and e-contract practices and reported their relevance to the performance of public entities. Swai and Musabila (2024) also found that staff competence and technological resources are important factors in the performance of e-procurement in the Tanzania Revenue Authority. More specifically, Kangungu et al. (2025), in a study conducted at Mbeya City Council, found that e-procurement transparency was associated with improved access to procurement information, real-time tracking, supplier participation, trust, and accountability. The study also identified the need for continued investment in training, technical support, and infrastructure to maximize the benefits of e-procurement.

The importance of examining e-procurement implementation in Tanzania has become even more evident as the use of NeST expands. A PPRA performance assessment reported in 2026 indicated that procurement conducted through NeST during the 2023/24 and 2024/25 financial years generated substantial cost savings and contributed to more efficient management of public expenditure. PPRA also reported that NeST had strengthened compliance with procurement laws and procedures, improved access to value-for-money opportunities, and enhanced transparency and fairness among bidders (PPRA, 2026). Nevertheless, evidence from Tanzania also indicates that the realization of e-procurement benefits depends on factors such as staff competence, technological resources, system utilization, and the capacity of procuring entities to adapt to digital procurement processes (Swai & Musabila, 2024; Mwalukasa, 2024). Therefore, examining e-procurement implementation at the level of individual local government authorities remains important because the effectiveness of a national digital procurement system may vary according to institutional capacity and implementation conditions.

Mbeya City Council provides an important context for examining the effect of e-procurement implementation on procurement performance because it operates within Tanzania's local government procurement environment and has experience with digital procurement processes. Although existing evidence indicates that e-procurement can improve transparency and other aspects of procurement performance, there remains a need to examine how the broader implementation of e-procurement translates into procurement performance within a specific local government setting. A recent study at Mbeya City Council focused particularly on e-procurement transparency, while other Tanzanian studies have examined individual components such as e-tendering, e-payment, e-sourcing, e-evaluation, and e-contracting. Consequently, this study seeks to examine the effect of e-procurement implementation on procurement performance at Mbeya City Council, thereby providing empirical evidence on the relationship between digital procurement implementation and procurement performance in a local government context.

1.1 Specific Objective of the Study

The Specific Objective of the Study was:

1. To assess the effect of e-tendering system usage on organizational performance at Mbeya City Council.

2. Literature Review

2.1 Theoretical Review

Digital Transformation Theory explains how organizations integrate digital technologies into their core processes to improve efficiency, service delivery, and organizational performance. The theory emphasizes that digital transformation involves more than technology adoption, as it also requires changes in organizational processes, capabilities, and practices (Vial, 2019; Warner & Wäger, 2019). In the context of this study, the theory explains how e-procurement can transform traditional procurement procedures into digitally enabled processes, potentially improving procurement efficiency, transparency, and cost effectiveness at Mbeya City Council.

The TOE Framework, developed by Tornatzky and Fleischer (1990), explains technology implementation through three contexts: technological, organizational, and environmental. The technological context includes system availability, compatibility, and functionality; the organizational context covers management support, staff competence, financial resources, and institutional readiness; while the environmental context includes regulations, government requirements, and stakeholder pressures (Baker, 2012). The framework is particularly relevant to this study because e-procurement implementation at Mbeya City Council depends on technological capabilities, organizational preparedness, and the regulatory environment. It therefore provides the main theoretical foundation for examining how e-procurement implementation relates to procurement performance.

The Information Systems Success Model developed by DeLone and McLean (2003) explains how system quality, information quality, service quality, system use, and user satisfaction contribute to organizational benefits. The model suggests that reliable and usable information systems, supported by quality information and adequate technical services, can generate positive organizational outcomes. In this study, the model helps explain how the quality and usability of e-procurement systems, accuracy of procurement information, and technical support may influence procurement efficiency, transparency, compliance, and cost effectiveness at Mbeya City Council.

The three theories provide complementary perspectives for understanding e-procurement implementation and procurement performance. Digital Transformation Theory explains the broader transformation of procurement processes, the TOE Framework explains the technological, organizational, and environmental conditions affecting implementation, while the Information Systems Success Model explains how system-related factors can generate organizational benefits. Among them, the TOE Framework is adopted as the principal theoretical foundation because it provides the broadest explanation of e-procurement implementation within the public-sector environment.

2.2 Empirical Literature Review

2.2.1 E-Tendering System Usage and Organizational Performance

Minja et al. (2025) examined the effect of electronic tendering on procurement function efficiency in public-sector organizations in Morogoro Municipality, Tanzania. The study used a quantitative approach and collected data from 108 respondents drawn from a population of 147 procurement, finance, and ICT personnel in five public organizations. Data were analyzed using descriptive statistics and multiple regression analysis. The findings showed that e-tendering had a significant effect on procurement function efficiency, demonstrating that the use of electronic tendering can contribute to improved efficiency in public procurement. The study recommended strengthening the use of e-tendering and suggested further investigation of other electronic procurement tools.

Mwalukasa (2024) investigated the effects of e-procurement practices on the performance of public entities in Tanzania, focusing on e-sourcing, e-evaluation, and e-contracting. The study adopted a cross-sectional mixed-methods design and involved 30 respondents from the Bank of Tanzania Academy. Quantitative data were analyzed using descriptive and inferential statistics, while qualitative data were analyzed thematically. The findings from multiple regression analysis showed that e-sourcing, e-evaluation, and e-contracting positively and significantly affected the performance of public entities. The study further emphasized the importance of technological infrastructure, staff and vendor training, interoperability, communication, and data security in supporting effective e-procurement implementation.

Baruti et al. (2025) examined the influence of the National e-Procurement System on employee performance in selected public institutions in Tanzania. The study involved 200 employees from the Government Procurement Services Agency and the Public Procurement Regulatory Authority and examined the use of the system in areas including e-tendering, e-payment, user registration, and e-contract administration. The findings indicated that e-tendering and e-payment were frequently used, while utilization of some other system functions remained comparatively limited. The study also found that supportive policies and information technology readiness facilitated system deployment and improved procurement efficiency and employee performance, whereas internal resistance negatively affected system adoption.

Feruzi et al. (2025) examined the effects of e-tendering practices on the performance of local government authorities using Iringa Municipal Council as a case study. The study employed a convergent mixed-methods design and involved 60 respondents selected from a population of 172. The findings indicated that e-advertisement improved supplier participation and confidence in procurement processes, while e-evaluation enhanced transparency, accountability, and merit-based decision-making. E-award practices were also associated with reduced administrative delays and improved efficiency and reliability of procurement activities. The study recommended continued investment in ICT infrastructure, user-friendly systems, and regular system upgrades to strengthen e-tendering implementation.

Assey (2025) investigated barriers affecting public procurement e-tendering procedures in Tanzania's Morogoro Region. The study examined three procurement entities using a descriptive research design, with 101 respondents participating through questionnaires and interviews. The findings identified challenges affecting the effective implementation of e-tendering procedures and highlighted the importance of addressing institutional and technological barriers to improve procurement performance. The study is relevant because it demonstrates that the benefits of e-tendering depend not only on the availability of electronic systems but also on the conditions under which those systems are implemented and used.

Kangungu et al. (2025) specifically examined the effect of an e-procurement system on public procurement performance at Mbeya City Council. The study found that e-procurement transparency was associated with improved access to procurement information, real-time tracking, open communication, supplier participation, trust, and accountability. The authors emphasized the importance of continuous training, technical support, infrastructure, and enforcement of regulatory requirements in maximizing the benefits of e-procurement. This study provides direct empirical evidence from Mbeya City Council; however, its focus was particularly on e-procurement transparency, whereas the present study examines e-procurement implementation more broadly and its effect on procurement performance.

The OECD (2025) reports that digital transformation is reshaping public procurement by integrating procurement processes, increasing the use of digital technologies and data, and supporting more transparent, efficient, and user-focused procurement. However, the report also identifies challenges including outdated infrastructure, fragmented systems, limited digital skills, and resistance to change. Similarly, the OECD (2024) emphasizes that digital transformation of public procurement should extend across the procurement lifecycle rather than simply replacing paper-based procedures with electronic processes. These findings suggest that e-tendering can improve procurement performance when it is supported by appropriate infrastructure, institutional capacity, system integration, and user competencies.

2.3 Knowledge Gap

Although previous studies have established that e-procurement and e-tendering can improve procurement efficiency, transparency, accountability, and organizational performance in public institutions (Mwalukasa, 2024; Minja et al., 2025; Baruti et al., 2025; Feruzi et al., 2025), limited evidence exists on the broader effect of e-procurement implementation on procurement performance within specific local government authorities. In particular, Kangungu et al. (2025) examined e-procurement at Mbeya City Council but focused mainly on e-procurement transparency and procurement performance. Moreover, existing studies have largely examined individual components such as e-tendering, e-sourcing, e-evaluation, and e-contracting rather than e-procurement implementation as an integrated process. Therefore, this study seeks to fill this contextual and empirical gap by examining the effect of e-procurement implementation on procurement performance at Mbeya City Council.

2.4 Conceptual Framework

A conceptual framework is a visual or written structure that explains the key concepts, variables, and relationships that guide a research study. It helps show how the researcher thinks the variables are connected, based on theory, literature, or prior studies (Ravitch & Riggan, 2016).

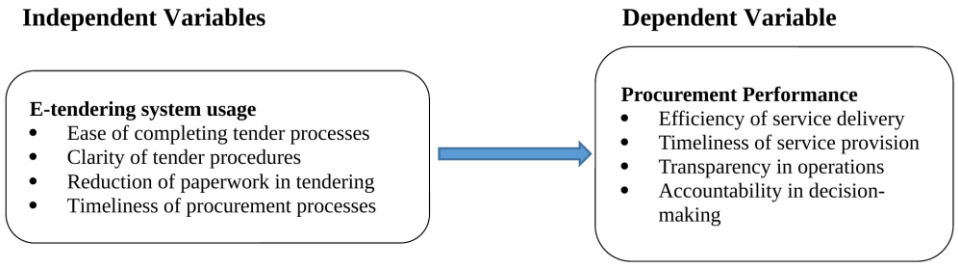


Figure 1: Conceptual Framework on Procurement Performance

Source: Researcher's own conceptualization (2026)

3. Research Methodology

This study employed a mixed-methods approach to examine the effect of e-procurement implementation on organizational performance at Mbeya City Council. The methodology covered the study area, research design, population, sampling, data collection, analysis, validity, reliability, and ethical considerations (Creswell & Creswell, 2018; Saunders et al., 2022).

The study was conducted at Mbeya City Council in Mbeya Region, Tanzania. The Council was selected because it uses electronic procurement systems in its procurement activities, making it an appropriate setting for assessing e-procurement implementation and organizational performance (OECD, 2025; Mwalukasa, 2024).

A mixed-methods approach was adopted to combine quantitative and qualitative evidence. Quantitative data enabled statistical examination of relationships among variables, while qualitative data provided detailed explanations of experiences and challenges related to e-procurement implementation (Creswell & Creswell, 2018; Bell et al., 2022). A cross-sectional design was used because data were collected from respondents at one point in time (Saunders et al., 2022).

The target population comprised 149 staff from five selected departments: Finance and Procurement (22), Planning and Coordination (30), Administration and Human Resources (45), Works/Engineering (20), and Health and Education (32). These departments were selected because of their involvement in procurement activities and service delivery.

Both purposive and simple random sampling techniques were employed. Purposive sampling was used to select five heads of departments as key informants because of their relevant managerial knowledge, while simple random sampling was used to select junior staff involved in e-procurement activities (Etikan & Bala, 2020; Taherdoost, 2022).

The sample size was determined using Yamane's formula, (n=N/[1+N(e)^2]), at a 5% margin of error. From the population of 149, a sample of 109 respondents was obtained. Questionnaires were administered to 104 junior staff, while five heads of departments participated in semi-structured interviews.

Primary data were collected using structured questionnaires and semi-structured interviews. Questionnaires captured information on e-tendering system usage, electronic supplier management, electronic procurement planning and monitoring, and organizational performance, while interviews provided contextual information on implementation experiences and challenges (Ganesha & Aithal, 2022; Jain, 2021).

Quantitative data were analyzed using SPSS version 27. Frequencies, percentages, means, and standard deviations were used for descriptive analysis, while Pearson correlation and multiple linear regression were used to examine relationships and effects among the study variables (Saunders et al., 2022). Qualitative data were analyzed thematically through coding, categorization, and development of themes.

Regression diagnostic tests included normality, multicollinearity, homoscedasticity, linearity, and autocorrelation. The Shapiro-Wilk test, tolerance and VIF statistics, Glejser test, test for linearity, and Durbin-Watson statistic were respectively applied. The results indicated that the regression assumptions were satisfied, with VIF values below 5 and a Durbin-Watson value of 1.924 (Tabachnick & Fidell, 2019).

Validity was assessed using KMO and Bartlett's Test of Sphericity, which produced a KMO value of 0.781 and a significant Bartlett's test ($\chi^2 = 462.318$, $df = 120$, $p < 0.001$). Reliability was assessed using Cronbach's Alpha, with coefficients ranging from 0.831 to 0.879, exceeding the recommended 0.70 threshold. Ethical principles were also observed through informed consent, voluntary participation, confidentiality, anonymity, and institutional authorization from the University of Iringa and Mbeya City Council (Resnik, 2020; Saunders et al., 2022).

4. Results and Discussion

4.1 Demographic Data of the Respondents

Table 1 presents the demographic characteristics of the 102 respondents in terms of gender, age, education, department/unit, work experience, and position. The information provides the background of respondents and establishes the diversity of participants involved in the study.

Table 1: Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage (%)
Gender of Respondent	Male	63	61.8
	Female	39	38.2
Age Group of Respondent	Below 30 years	18	17.6
	31–40 years	36	35.3
	41–50 years	28	27.5
	51–60 years	15	14.7
	Above 60 years	5	4.9
Highest Level of Education	Certificate	9	8.8
	Diploma	22	21.6
	Bachelor's Degree	48	47.1
	Master's Degree	21	20.6
	PhD	2	2.0
Department/Unit	Procurement Management Unit	18	17.6
	Finance and Accounts	24	23.5
	User Departments	38	37.3
	Internal Audit	10	9.8
	Management	12	11.8
Work Experience	Less than 5 years	20	19.6
	5–10 years	34	33.3
	11–15 years	29	28.4
	More than 15 years	19	18.6
Position of Respondent	Procurement Officer	17	16.7
	Accountant	21	20.6
	Head of Department	12	11.8
	Internal Auditor	10	9.8
	Other Staff	42	41.2

Source: Field Data (2026)

Regarding gender, 63 respondents (61.8%) were male, while 39 (38.2%) were female. The findings show that both genders were adequately represented, providing diverse perspectives on e-procurement implementation and organizational performance at Mbeya City Council. In terms of age, 18 respondents (17.6%) were below 30 years, 36 (35.3%) were aged 31–40 years, 28 (27.5%) were aged 41–50 years, 15 (14.7%) were aged 51–60 years, and 5 (4.9%) were above 60 years. The largest group was therefore respondents aged 31–40 years, indicating representation from different age groups.

Regarding education, 9 respondents (8.8%) held certificates, 22 (21.6%) had diplomas, 48 (47.1%) held bachelor's degrees, 21 (20.6%) had master's degrees, and 2 (2.0%) held PhDs. The findings indicate that most respondents had tertiary education, suggesting that they possessed an appropriate educational background for understanding and responding to questions concerning e-procurement. With respect to departmental affiliation, 18 respondents (17.6%) were from the Procurement Management Unit, 24 (23.5%) from Finance and Accounts, 38 (37.3%) from user departments, 10 (9.8%) from Internal Audit, and 12 (11.8%) from management. This distribution ensured that the study captured views from different functional areas involved in procurement, financial management, service delivery, monitoring, and decision-making.

Concerning work experience, 20 respondents (19.6%) had less than five years of experience, 34 (33.3%) had 5–10 years, 29 (28.4%) had 11–15 years, and 19 (18.6%) had more than 15 years. Thus, most respondents had five or more years of experience, indicating that a substantial proportion had sufficient institutional exposure to procurement processes and the implementation of electronic systems. Regarding respondents' positions, 17 (16.7%) were procurement officers, 21 (20.6%) accountants, 12 (11.8%) heads of departments, 10 (9.8%) internal auditors, and 42 (41.2%) occupied other positions. The representation of different job positions provided varied perspectives on the use of e-procurement and its relationship with organizational performance.

In addition, four key informants were purposively selected based on their managerial responsibilities, professional expertise, and direct involvement in e-procurement activities. They provided qualitative information on system implementation, utilization, ICT challenges, staff competencies, system reliability, and institutional support, thereby complementing the quantitative findings. The key informants' responses facilitated triangulation by providing institutional explanations for the quantitative results. Their views helped clarify the practical experiences, benefits, challenges, and areas requiring improvement in e-procurement implementation at Mbeya City Council.

4.2 Descriptive Analysis and Discussion of Study Variable

This section presents the descriptive analysis and discussion of the study variables based on respondents' perceptions. The analysis summarizes the responses using frequencies, means, and standard deviations to describe the extent of e-tendering system usage, electronic supplier management, electronic procurement planning, and organizational performance at Mbeya City Council.

4.2.1 E-Tendering System Usage

The first objective of the study was to assess the effect of e-tendering system usage on organizational performance at Mbeya City Council. Specifically, the analysis sought to establish respondents' perceptions regarding the extent to which the e-tendering system simplifies tender processes, provides clear procurement procedures, reduces paperwork, and improves the timeliness of procurement activities. These indicators were selected because they reflect key operational aspects of e-tendering implementation that contribute to procurement efficiency, transparency, and overall organizational performance. The findings of this objective are presented using descriptive statistics and supported by qualitative evidence from key informant interviews.

Table 2: E-Tendering System Usage

Statement	1	2	3	4	5	Mean	Std. DV
The e-tendering system makes it easy to complete tender processes.	3	8	14	38	39	4.00	1.01
Tender procedures in the e-procurement system are clear and understandable.	4	10	18	37	33	3.83	1.08
The use of e-tendering has reduced paperwork in procurement processes.	2	6	11	35	48	4.19	0.97
The e-tendering system improves the timeliness of procurement processes.	3	7	16	36	40	4.01	1.03

Source: Field Data (2026)

The findings show that 11 respondents (10.8%) either strongly disagreed or disagreed that the e-tendering system makes it easy to complete tender processes, while 14 respondents (13.7%) were neutral. However, the majority, 77 respondents (75.5%), agreed or strongly agreed with the statement. The mean score of 4.00 (SD = 1.01) indicates that respondents generally perceived the e-tendering system as facilitating the completion of tender processes. This finding is consistent with Minja et al. (2025), who found that e-tendering significantly improved procurement function efficiency in public organisations in Morogoro Municipality. It also agrees with Feruzi et al. (2025), who reported that e-tendering practices improved the performance of Iringa Municipal Council by reducing administrative delays and enhancing procurement efficiency.

The results further indicate that 14 respondents (13.7%) either strongly disagreed or disagreed that tender procedures in the e-procurement system are clear and understandable, while 18 respondents (17.6%) were neutral. Nevertheless, 70 respondents (68.6%) agreed or strongly agreed that the procedures are easy to understand. The mean score of 3.83 (SD = 1.08) suggests that respondents generally viewed the tender procedures positively. This finding is supported by Baruti et al. (2025), who found that effective software design and information technology readiness facilitated the implementation of Tanzania's National e-Procurement System (TANePS). The finding is also consistent with Shatta et al. (2024), who reported that e-tendering was positively associated with supply chain performance among procuring entities in Tanzania.

The reduction of paperwork emerged as the strongest aspect of e-tendering implementation. Only 8 respondents (7.8%) either strongly disagreed or disagreed that e-tendering had reduced paperwork, while 11 respondents (10.8%) were neutral. In contrast, 83 respondents (81.4%) agreed or strongly agreed that the system had reduced paper-based procurement activities. The statement recorded the highest mean score of 4.19 (SD = 0.97), indicating strong agreement that e-tendering has minimized manual documentation. This finding is supported by the Public Procurement Regulatory Authority (PPRA, 2026), which reported that the adoption of paperless procurement through NeST reduced reliance on traditional paper-based tendering and generated efficiency and cost-saving benefits. Feruzi et al. (2025) similarly found that e-tendering practices contributed to improved efficiency in local government procurement in Tanzania.

The analysis also reveals that 10 respondents (9.8%) either strongly disagreed or disagreed that the e-tendering system improves the timeliness of procurement processes, while 16 respondents (15.7%) were neutral. The remaining 76 respondents (74.5%) agreed or strongly agreed that the system enhances procurement timeliness. The mean score of 4.01 (SD = 1.03) suggests that respondents generally perceived e-tendering as facilitating faster procurement operations. This finding is consistent with Feruzi et al. (2025), who found that e-award practices reduced administrative delays and supported timely procurement activities. It is also supported by Salekwa et al. (2025), whose study of IRUWASA found that e-tendering reduced procurement cycle times and strengthened operational efficiency. Similarly, Minja et al. (2025) reported a significant effect of e-tendering on procurement function efficiency in public organisations in Morogoro Municipality.

A respondent from the Procurement Management Unit explained that the e-tendering system has transformed procurement operations by automating procurement activities that were previously handled manually. According to the respondent, the electronic platform has reduced the time required to prepare tender documents, advertise procurement opportunities, receive bids, and conduct evaluations. The respondent further noted that procurement officers are now able to monitor procurement progress more effectively, resulting in improved operational efficiency. The officer explained:

The e-tendering system has significantly improved our procurement operations. Activities that previously required several days because of manual documentation are now completed much faster through the electronic platform. This has enabled procurement officers to work more efficiently while ensuring compliance with procurement procedures. (Procurement Officer 1, 12/06/2026)

A key informant from the Information and Communication Technology (ICT) Unit emphasized that the electronic procurement platform has enhanced transparency and coordination by providing real-time access to procurement information for authorized users. The respondent explained that the centralized system has reduced information delays while enabling different departments to monitor procurement activities simultaneously. According to the officer, the electronic platform has also strengthened fairness because all bidders access procurement opportunities through the same system. The respondent stated:

The e-tendering platform has improved transparency because procurement information is available electronically and can be monitored at every stage. Every qualified bidder accesses the same information, making the procurement process more open, fair, and accountable than the previous manual system. (ICT Officer 2, 14/06/2026)

The interviews further revealed that e-tendering has substantially reduced paperwork and administrative workload across the Council. A respondent from the Finance Department explained that procurement documents are now prepared, submitted, approved, and archived electronically, reducing printing

costs, physical storage requirements, and the time spent retrieving procurement records. The respondent observed that the reduction in manual paperwork has enabled staff to dedicate more time to financial analysis and monitoring rather than administrative processing. The respondent explained:

The amount of paperwork has reduced considerably because procurement documents are managed electronically. Staff no longer spend excessive time filing documents or searching through physical records. Instead, information can be retrieved quickly, allowing employees to focus on other important financial responsibilities. (Finance Officer 3, 16/06/2026)

A respondent from the Internal Audit Unit highlighted that the e-tendering system has improved the timeliness of procurement activities while strengthening accountability through electronic audit trails. According to the respondent, procurement activities can now be monitored continuously, making it easier to identify delays and ensure compliance with procurement regulations. The respondent further explained that automatic recording of procurement transactions has reduced opportunities for irregularities and improved confidence in procurement decisions. The officer stated:

Every procurement transaction is electronically recorded, making it easier to monitor progress and verify compliance with procurement regulations. The system has improved accountability while ensuring that procurement activities are completed within the expected timelines. (Internal Audit Officer 4, 18/06/2026)

Based on both the quantitative and qualitative findings, it can be concluded that e-tendering system usage has positively influenced organizational performance at Mbeya City Council. The high mean scores across all indicators demonstrate that respondents perceive the system as effective in simplifying tender processes, improving the clarity of procurement procedures, reducing paperwork, and enhancing the timeliness of procurement activities. The interview findings reinforce these results by illustrating how automation has streamlined procurement operations, strengthened transparency, improved accountability through electronic audit trails, and facilitated timely decision-making. Notably, the reduction of paperwork recorded the highest level of agreement, suggesting that the transition from manual to electronic procurement has significantly improved operational efficiency. The evidence indicates that effective utilization of the e-tendering system has enhanced procurement performance and contributed to more transparent, efficient, and accountable service delivery at Mbeya City Council.

4.3 Simple Linear Regression Analysis

Simple linear regression analysis was conducted to examine the effect of E-Tendering System Usage (ETS) on Organizational Performance (OP) at Mbeya City Council. Unlike multiple linear regression, this analysis involved one independent variable and one dependent variable. The analysis included the model summary, ANOVA test, and regression coefficients.

4.3.1 Model Summary

The model summary was generated to assess the predictive ability of e-tendering system usage in explaining organizational performance. The results are presented in Table 4.7.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.700[a]	.490	.485	.52758	.490	96.078	1	100	.000

a. Predictors: (Constant), E-Tendering System Usage

Dependent Variable: Organizational Performance

Source: SPSS Output (2026)

The findings in Table 3 indicate a strong positive relationship between e-tendering system usage and organizational performance (R = 0.700). The R Square value of 0.490 indicates that 49.0% of the variation in organizational performance was explained by e-tendering system usage, while the remaining 51.0% was explained by other factors outside the model. The Adjusted R Square of 0.485 indicates that the model retained substantial explanatory power after adjustment. The significant F Change value of 96.078 ($p < .001$) further indicates that e-tendering system usage significantly contributed to explaining organizational performance.

4.3.2 ANOVA Test

The Analysis of Variance (ANOVA) was conducted to determine whether the regression model was statistically significant in explaining the relationship between e-tendering system usage and organizational performance. The results are presented in Table 4.

Table 4: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	26.743	1	26.743	96.078	.000[b]
Residual	27.835	100	.278		
Total	54.578	101			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), E-Tendering System Usage

Source: SPSS Output (2026)

The results in Table 4 show that the regression model was statistically significant, $F(1, 100) = 96.078$, $p < .001$. Since the significance value was below the 0.05 level, the null hypothesis that e-tendering system usage has no significant effect on organizational performance was rejected. The results demonstrate that e-tendering system usage significantly explained variations in organizational performance at Mbeya City Council.

4.3.3 Coefficients

The regression coefficients were examined to determine the direction and magnitude of the effect of e-tendering system usage on organizational performance. The results are presented in Table 5.

Table 5: Coefficients

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	.912	.244		3.738	.000
E-Tendering System Usage	.648	.066	.700	9.802	.000

a. Dependent Variable: Organizational Performance

Source: SPSS Output (2026)

The results in Table 5 indicate that e-tendering system usage had a positive and statistically significant effect on organizational performance (B = 0.648, β = 0.700, p < .001). The positive coefficient indicates that an increase in e-tendering system usage was associated with an increase in organizational performance. Specifically, a one-unit increase in e-tendering system usage was associated with a 0.648-unit increase in organizational performance. The standardized coefficient (β = 0.700) indicates a strong positive contribution of e-tendering system usage to organizational performance.

The fitted regression model was expressed as:

$OP = 0.912 + 0.648ETS + \varepsilon$

Where:

OP = Organizational Performance

ETS = E-Tendering System Usage

0.912 = Constant

0.648 = Unstandardized regression coefficient

ε = Error term

The regression results indicate that e-tendering system usage significantly and positively affected organizational performance at Mbeya City Council. The model explained 49.0% of the variation in organizational performance, indicating that e-tendering system usage was an important predictor of organizational performance.

5 Conclusions and Recommendations

5.1 Conclusion of the Study

The study concludes that e-tendering system usage has a positive and statistically significant effect on organizational performance at Mbeya City Council. The descriptive findings showed that respondents generally perceived the e-tendering system positively, particularly in relation to simplifying tender processes, clarifying procurement procedures, reducing paperwork, and improving the timeliness of procurement activities. The reduction of paperwork recorded the highest mean score (M = 4.19, SD = 0.97), indicating that the transition from manual to electronic tendering has substantially reduced administrative documentation.

The regression analysis further confirmed the positive contribution of e-tendering system usage to organizational performance. The model produced R = 0.700 and $R^2 = 0.490$, indicating that e-tendering system usage explained 49.0% of the variation in organizational performance. The regression model was statistically significant, F(1, 100) = 96.078, p < .001, while the coefficient for e-tendering system usage was positive and significant (B = 0.648, β = 0.700, p < .001). This demonstrates that increased utilization of e-tendering was associated with improved organizational performance at Mbeya City Council.

The qualitative findings complemented the statistical results by showing that e-tendering has streamlined procurement operations, improved access to procurement information, reduced paperwork and administrative workload, strengthened electronic audit trails, and facilitated timely monitoring of procurement activities. Key informants also indicated that the system has improved transparency and accountability by enabling procurement activities to be recorded and monitored electronically.

The study concludes that effective utilization of the e-tendering system is an important contributor to organizational performance at Mbeya City Council. However, since e-tendering explained 49.0% of the variation in organizational performance, the remaining 51.0% may be associated with other organizational, technological, financial, human-resource, and institutional factors that were not included in the model. Thus, improving e-tendering utilization should be accompanied by continued institutional and technological support to achieve sustainable improvements in procurement and organizational performance.

5.2 Recommendations

Based on the findings, Mbeya City Council should strengthen the utilization of e-tendering, electronic supplier management, and electronic procurement planning and monitoring to improve organizational performance. The Council should ensure that procurement activities are conducted electronically, provide regular training and technical support to staff and user departments, maintain accurate electronic supplier records, and improve communication with suppliers. It should also strengthen electronic procurement planning and monitoring through regular review of system-generated reports, performance indicators, and coordination among procurement, finance, planning, and user departments. Furthermore, investment in reliable ICT infrastructure, internet connectivity, system maintenance, cybersecurity, staff capacity development, internal audits, and continuous system performance assessment is recommended. Collaboration with PPRA and other relevant institutions should also be strengthened to ensure compliance with procurement regulations and continuous improvement of electronic procurement practices.

Future studies should expand beyond Mbeya City Council to include other local government authorities and public institutions in Tanzania to facilitate comparative assessment of electronic procurement implementation. Researchers should also examine additional factors such as ICT infrastructure, top management support, digital competencies, cybersecurity, and organizational culture, as well as the long-term effects of electronic procurement on procurement efficiency, cost savings, service delivery, and organizational sustainability. Mixed-methods and longitudinal research designs are further recommended to capture changes over time and provide deeper evidence on how e-tendering, electronic supplier management, and electronic procurement planning and monitoring contribute to sustainable organizational performance and public sector governance.

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