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IMPACT OF DECENTRALIZED E-PROCUREMENT PLATFORMS ON TRANSPARENCY AND SUPPLIER PARTICIPATION IN COUNTY GOVERNMENTS IN KENYA

Lagat Kipng'etich Robert

Lecturer, Supply Chain Management at Kiriri Women's University of Science & Technology

Abstract

The evolution of public procurement in Kenya has been significantly shaped by the adoption of digital systems, particularly the decentralization of e-procurement platforms across county governments. This study examined the influence of platform accessibility and system efficiency—the two critical dimensions of decentralized e-procurement—on transparency and supplier participation in county-level procurement processes. Guided by the Technology Acceptance Model (TAM), Agency Theory, and Institutional Theory, the study focused on how digital reforms have enhanced (or hindered) fairness, openness, and inclusive supplier engagement in devolved public supply chains. The research adopted a descriptive cross-sectional survey design, targeting procurement officers and registered suppliers from four purposively selected counties in Kenya: Nakuru, Kisii, Makueni, and Uasin Gishu. Using stratified random sampling, data were collected from 217 respondents through structured questionnaires. Both descriptive and inferential statistical methods were used, including Pearson correlation and multiple linear regression to examine relationships among the variables. Descriptive results revealed that system efficiency was rated highest ($M = 3.84$), followed by platform accessibility ($M = 3.76$), while transparency and supplier participation scored a slightly lower mean ($M = 3.69$), suggesting persistent gaps in public trust and equitable supplier involvement. Correlation analysis showed moderate positive relationships between the independent and dependent variables ($r = 0.578$ to 0.645), indicating that improvements in platform design and operational speed were associated with better procurement outcomes. The multiple regression model was statistically significant ($F = 110.8$, $p < 0.001$), explaining 64.3% of the variation in transparency and supplier participation. Both platform accessibility ($\beta = 0.373$, $p < 0.001$) and system efficiency ($\beta = 0.419$, $p < 0.001$) had significant positive effects on the dependent variable. The study concluded that while decentralized e-procurement platforms have contributed to greater visibility and supplier inclusion, their impact is contingent on the usability and reliability of the systems deployed. The research recommends improving platform accessibility through user-friendly interfaces, supplier training, and mobile integration, as well as enhancing system efficiency through full automation and prompt communication tools. The findings offer practical implications for policymakers, procurement reform advocates, and technology developers working to enhance governance and competitiveness in Kenya's devolved procurement systems.

Keywords: e-procurement, platform accessibility, system efficiency, transparency, supplier participation, county governments, Kenya

Background of the Study

Public procurement plays a critical role in economic development, especially in developing countries where government spending constitutes a significant share of national expenditure. In Kenya, public procurement accounts for over 30% of the national budget, with county governments being major actors following the enactment of devolution under the 2010 Constitution (Public Procurement Regulatory Authority [PPRA], 2021). To promote efficiency, transparency, and inclusivity, the Kenyan government introduced the Integrated Financial Management Information System (IFMIS) and later decentralized e-procurement platforms to automate procurement processes at both national and county levels (World Bank, 2020).

E-procurement refers to the use of digital platforms to manage and streamline procurement activities such as tendering, bid submission, evaluation, and contract award (OECD, 2016). When effectively implemented, e-procurement has the potential to enhance transparency by reducing human contact, curbing corruption, and improving audit trails (Rotich & Okello, 2016). Furthermore, these platforms can improve supplier participation by lowering access barriers, increasing the visibility of tenders, and simplifying application procedures—especially for small and medium enterprises (SMEs) (UNCTAD, 2018).

Despite these potential benefits, the effectiveness of decentralized e-procurement in Kenya remains mixed, particularly at the county level. Studies have reported technical challenges, limited system interoperability, and inadequate capacity among procurement officers and suppliers (Ndolo & Njagi, 2014; Kimutai & Moronge, 2016). County governments, while legally empowered to handle procurement independently, often experience delays and irregularities, partly due to fragmented implementation of e-procurement platforms (Transparency International Kenya, 2021). Furthermore, evidence suggests that while e-procurement may increase visibility, actual supplier participation remains low, particularly among local SMEs, who cite challenges such as poor system usability, lack of timely notifications, and complexity of registration procedures (Mburu & Rotich, 2020).

Globally, similar trends have been observed. According to Neupane, Soar, and Vaidya (2014), e-procurement in developing countries tends to suffer from partial automation, poor stakeholder alignment, and failure to match system design with user capacity. These limitations reduce trust and limit supplier engagement, which in turn undermines the objectives of transparency and competition in public procurement.

Given the strategic importance of e-procurement in promoting good governance, inclusive economic participation, and efficient service delivery, it is necessary to empirically assess how the decentralization of these platforms is influencing procurement outcomes at the county level. Specifically, this study focuses on how key features of decentralized e-procurement—namely platform accessibility and system efficiency—impact transparency and supplier participation in county governments across Kenya.

Statement of the Problem

Despite significant investments in digital procurement platforms by the Government of Kenya, transparency and supplier participation in county-level procurement remain inconsistent and suboptimal. The e-procurement module under the Integrated Financial Management Information System (IFMIS) was introduced to reduce corruption, enhance efficiency, and broaden access to public tenders. However, data from the Public Procurement Regulatory Authority (PPRA, 2021) shows that only 47% of tenders at the county level were processed through e-procurement, indicating that over half still relied on manual or semi-digital processes prone to manipulation, delays, and limited oversight.

Furthermore, while decentralized e-procurement systems were expected to boost competitiveness by encouraging more suppliers to participate, particularly local SMEs, this

promise remains largely unmet. According to Transparency International Kenya (2021), more than 60% of public procurement opportunities at the county level attracted fewer than three bidders, with over 40% of tenders awarded to a small group of recurrent suppliers. Many small-scale suppliers cite system complexity, limited access to real-time bid opportunities, and lack of timely feedback as major barriers to participation (Mburu & Rotich, 2020).

In addition, the perception of corruption remains high in decentralized procurement. A survey by Afrobarometer (2022) found that 65% of Kenyans believe that public procurement at the county level is opaque, with tender favoritism and irregular direct awards being the most cited concerns. These findings suggest that the presence of e-procurement platforms alone is not sufficient to ensure accountability or inclusivity unless platforms are accessible, efficient, and fully adopted at all levels of the procurement process.

This gap between e-procurement platform implementation and the expected improvements in transparency and supplier inclusion forms the core problem this study sought to address. Specifically, the research investigates how the perceived accessibility and efficiency of decentralized e-procurement systems influence the outcomes of transparency and supplier participation within Kenya's county governments.

Objectives of the Study

General Objective

The general objective of the study was to examine the impact of decentralized e-procurement platforms on transparency and supplier participation in county governments in Kenya.

Specific Objectives

1. To assess the effect of platform accessibility on transparency and supplier participation in county government procurement processes in Kenya.
2. To examine the influence of system efficiency on transparency and supplier participation in county government procurement in Kenya.

Theoretical Review

Technology Acceptance Model (TAM)

This study was guided by the Technology Acceptance Model (TAM) developed by Davis (1989), which posited that a user's decision to adopt new technology was influenced by two key perceptions: usefulness (the degree to which a person believes that using the system will enhance their job performance) and ease of use (the degree to which a person believes that using the system will be free of effort). In the context of decentralized e-procurement in Kenya, the TAM provided a valuable lens through which to understand suppliers' and procurement officers' willingness to interact with digital platforms.

For many county-level suppliers, especially small and medium enterprises (SMEs), the perceived usefulness of e-procurement platforms lay in increased visibility of tender opportunities and faster bid submissions. However, barriers such as complicated login procedures, poor user interfaces, and unreliable platform performance negatively affected ease of use, which in turn limited adoption (Mburu & Rotich, 2020; World Bank, 2020). Similar conclusions were drawn in studies by Vaidya, Sajeev, and Callender (2006), who found that usability constraints were among the top reasons for limited engagement with e-procurement systems in developing countries. Thus, TAM directly supported the study's analysis of how platform accessibility influenced both transparency and supplier participation in county procurement.

Agency Theory

The study also applied Agency Theory, which explored the principal-agent relationship, particularly in settings where delegated authority may lead to conflicts of interest or opportunistic behavior (Eisenhardt, 1989). In public procurement, agency problems often emerged when procurement officers, acting as agents, failed to act in the best interests of the public (the principal) due to misaligned incentives, limited oversight, or lack of transparency. These behaviors typically manifested through restricted tendering, bid manipulation, or awarding contracts without merit (OECD, 2016).

Decentralized e-procurement systems were expected to mitigate these agency risks by automating procurement processes, standardizing workflows, and generating digital audit trails. According to studies by Neupane et al. (2014) and Rotich and Okello (2016), the digitalization of procurement had a demonstrable effect on minimizing corrupt discretion in award decisions. In this study, system efficiency—defined by indicators such as automation, real-time notifications, and minimal paperwork—was evaluated as a mechanism for reducing agent-driven opacity and thus enhancing procurement transparency. When counties had well-functioning platforms, agent misconduct was constrained by system accountability features, aligning their actions more closely with public expectations.

Institutional Theory

Finally, the study was anchored in Institutional Theory, which emphasized that organizational behavior is shaped not only by economic rationality but also by regulatory, normative, and cultural forces within its external environment (Scott, 2001). In the case of Kenyan county governments, the adoption and functionality of e-procurement platforms were strongly influenced by institutional pressures from national treasury directives, donor compliance requirements, and anti-corruption policies.

However, as noted by DiMaggio and Powell (1983), institutional conformity does not always translate into effective practice. Several counties implemented e-procurement platforms only superficially—sometimes to comply with policy mandates—without building adequate internal capacity or stakeholder engagement (Transparency International Kenya, 2021). Studies by Hunja (2003) and Ndolo and Njagi (2014) also observed that organizational resistance, limited IT skills, and a culture of non-compliance hindered the intended outcomes of public procurement reforms. Therefore, Institutional Theory provided critical insights into why decentralized e-procurement systems, though present, did not consistently lead to improvements in transparency or supplier inclusion. It helped contextualize these disparities by accounting for variations in county-level governance cultures, technological readiness, and enforcement rigor.

Conceptual Framework

A conceptual framework is defined as the establishment of a broad set of ideas and principles that have been organized from various sources and then used to present diagrammatically (Bhattacharya & Sinha Roy, 2018). It is a tool that researchers use to gain a better understanding and awareness of the situation under investigation. As a result, conceptual framework is very important when conducting research because it allows researchers to clearly establish the existing connection that normally exists between different research variables and it is conceptualized within the variable components and their indicators.

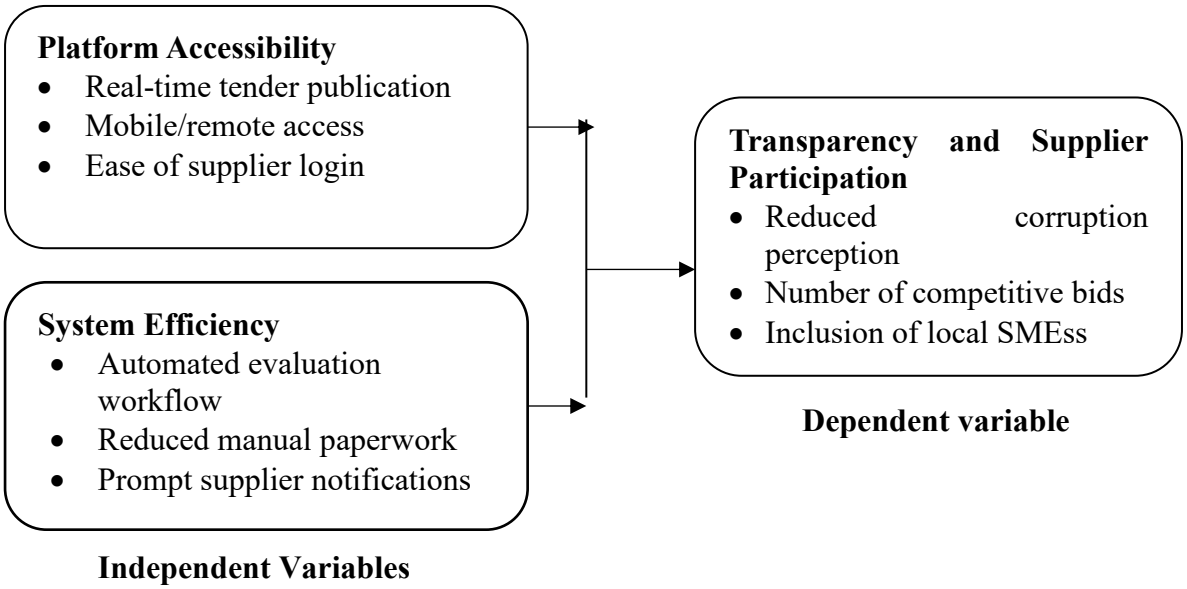

Figure 1: Conceptual Framework

Platform Accessibility

Platform accessibility referred to the degree to which users—especially suppliers—were able to easily access and use an e-procurement system to engage in public procurement activities. According to Vaidya, Sajeev, and Callender (2006), accessibility encompasses the availability, navigability, and responsiveness of digital procurement platforms. It includes features such as real-time tender publication, mobile compatibility, and user-friendly interfaces that enable suppliers to register, log in, and respond to tenders without needing physical access to procurement offices.

In Kenya's county governments, platform accessibility remained a challenge despite efforts to digitize public procurement through IFMIS. Mburu and Rotich (2020) noted that many small-scale suppliers lacked the digital infrastructure and literacy needed to interact with the system effectively. Moreover, poor internet connectivity and limited helpdesk support in rural counties further hindered timely access to procurement opportunities. The study conceptualized platform accessibility as a key independent variable, as it determined whether decentralized e-procurement systems truly broadened supplier participation and procurement transparency.

System Efficiency

System efficiency in e-procurement was defined as the extent to which the digital platform reduced delays, manual tasks, and human interference in the procurement process. According to Neupane, Soar, and Vaidya (2014), system efficiency involves automation of procurement stages (e.g., bid evaluation, notifications), standardized workflows, and reduction in paperwork—all of which enhance speed and minimize opportunities for manipulation. Efficient systems also provide audit trails, digital documentation, and prompt communication between buyers and suppliers.

In Kenyan counties, however, efficiency levels varied widely. Some counties used hybrid systems that combined manual processes with partial digital functions, undermining the purpose of automation (World Bank, 2020). According to Kimutai and Moronge (2016), this often resulted in tender processing delays, communication lapses, and a lack of real-time updates to suppliers. In this study, system efficiency was considered a second independent variable that could significantly influence both transparency (through reduced discretion) and supplier participation (by lowering transaction costs and uncertainty).

Transparency and Supplier Participation

Transparency was defined as the openness and visibility of the procurement process, enabling external stakeholders to access information about tenders, evaluation criteria, and contract awards. According to OECD (2016), transparency in public procurement increases accountability, reduces corruption, and enhances public confidence. In e-procurement, transparency is operationalized through audit trails, online publication of tender opportunities and results, and real-time tracking of procurement stages.

Supplier participation referred to the extent to which eligible suppliers, particularly small and medium enterprises (SMEs), actively engaged in the bidding process. As noted by UNCTAD (2018), inclusive supplier participation is essential for competitiveness, economic equity, and efficient market functioning. Participation is typically measured by the number of bids per tender, the diversity of suppliers involved, and the representation of local or marginalized groups.

Despite the rollout of decentralized procurement platforms in Kenya, Transparency International Kenya (2021) reported that only 39% of counties consistently published tender award information, and supplier concentration remained high. Many tenders attracted minimal competition due to either exclusionary practices or limited system accessibility. In this study, transparency and supplier participation were jointly treated as the dependent variable, as both represent core outcomes of effective, inclusive, and digitized procurement systems.

Empirical Review

Empirical research has confirmed that platform accessibility plays a crucial role in promoting transparency in public procurement. A study by Muriuki (2021) in the energy sector showed that the deployment of ICT tools like decentralized e-procurement increased transparency by enhancing access to tender notices, real-time communication, and simplified audit trails. However, the study also highlighted that limited ICT literacy among SMEs, coupled with poor internet infrastructure in rural counties, significantly hindered effective use of these platforms.

Similarly, Geoffrey and Paul (2021) found that while e-procurement systems in Kenyan counties were meant to improve transparency, inconsistent platform accessibility and frequent downtimes prevented suppliers from accessing real-time tender documents. Their study, which evaluated the performance of devolved procurement systems, concluded that accessibility gaps compromised transparency objectives—especially in counties with limited technical capacity or budget allocations for IT infrastructure.

System efficiency was also widely reported to influence supplier behavior. In their comparative assessment of Korea and Kenya's procurement systems, Nancy (2021) found that automated bid evaluation and instant supplier alerts significantly increased supplier engagement. Counties that adopted well-integrated e-procurement systems observed higher participation rates, particularly among new and regional suppliers.

Oteki (2019), in a study on sugar processing firms in Kenya, demonstrated that efficient e-procurement practices such as digital feedback systems and automated invoice tracking enhanced supplier retention and reduced cycle time. These systems reduced ambiguity in communication and allowed suppliers to better plan for order fulfillment and tender compliance. The findings support the view that well-designed platforms can reduce barriers to entry and foster sustained supplier engagement.

Comprehensive studies have explored how both accessibility and efficiency together influence procurement outcomes. In a 2021 study by Nyagosia and Nyile in counties within the Lake Region Economic Bloc, transparency, supplier trust, and bid diversity were positively associated with functional e-procurement platforms. Counties with stable, decentralized

systems saw an increase in competitive bidding, lower corruption perception, and higher award diversity.

Further, Jeptoo and Karanja (2017) found that governance structures supporting decentralized e-procurement significantly improved fairness in supplier selection and award reporting. However, they emphasized the importance of institutional enforcement mechanisms to sustain these benefits.

Research Methodology

Research Design

The study adopted a descriptive cross-sectional research design, which allowed for the collection of data at a specific point in time to examine relationships between e-procurement variables and procurement outcomes. This design was appropriate for evaluating perceptions of platform accessibility and system efficiency, and how they influenced transparency and supplier participation (Mugenda & Mugenda, 2003). A descriptive approach enabled the researcher to quantify responses and uncover patterns without manipulating any variables (Kothari, 2004).

Target Population and Sampling

The target population comprised procurement officers, ICT officers, and registered suppliers interacting with e-procurement systems in four purposively selected county governments in Kenya: Nakuru, Kisii, Makueni, and Uasin Gishu. These counties were chosen based on their levels of digitization, budget size, and procurement activity. The total target population was 580 respondents drawn from county procurement offices and county supplier registers. A stratified random sampling technique was employed to ensure representation across both public officials and private suppliers. Using Yamane's (1967) formula, a sample size of 232 respondents was determined. The strata consisted of procurement staff and suppliers, with proportional allocation to each subgroup.

Data Collection Instruments

Primary data were collected using a structured questionnaire with both closed and Likert-scale questions. The questionnaire was segmented into four sections: background information, platform accessibility, system efficiency, and transparency and supplier participation. The instrument was adapted from similar validated tools used in public procurement research (Neupane et al., 2014; Muriuki, 2021). To ensure content validity, the questionnaire was reviewed by two procurement experts and a university supervisor. A pilot test was conducted in Machakos County (which was not part of the final sample), and adjustments were made to improve clarity and question relevance.

Reliability and Validity

Reliability of the questionnaire was tested using Cronbach's Alpha, with a threshold of $\alpha \geq 0.70$ considered acceptable (Nunnally, 1978). All the key constructs—platform accessibility ($\alpha = 0.78$), system efficiency ($\alpha = 0.82$), and transparency and supplier participation ($\alpha = 0.85$)—met the reliability criterion. Validity was ensured through expert judgment and pre-testing, aligning questions with the theoretical framework and operational definitions of the study variables.

Data Analysis and Presentation

Quantitative data were coded and analyzed using Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics, including means and standard deviations, were used to summarize responses. Inferential analysis involved Pearson correlation and multiple linear

regression to examine relationships between independent and dependent variables. Regression assumptions such as normality, linearity, multicollinearity, and homoscedasticity were tested to ensure robustness of the results (Field, 2013). Findings were presented using tables and interpreted with reference to the study objectives and existing literature.

Ethical Considerations

Ethical clearance was obtained from the relevant university ethics committee. Permission to collect data was also obtained from county government procurement departments. Respondents were assured of confidentiality, voluntary participation, and the academic purpose of the study. No personally identifiable information was collected.

Research Findings and Discussion

Out of the 232 questionnaires distributed to procurement officers and registered suppliers across four county governments, a total of 217 responses were successfully received and analyzed. This yielded a response rate of 93.5%, which was considered excellent for survey-based research. According to Babbie (2004), a response rate above 70% is generally acceptable for ensuring representativeness in social science studies. The high rate in this study was attributed to prior engagement with county officials, in-person follow-ups, and the use of structured instruments that encouraged completion.

Descriptive Analysis of Study Variables

Descriptive statistics were used to examine the general perceptions of respondents regarding the main study variables—Platform Accessibility, System Efficiency, and Transparency and Supplier Participation. The results are summarized in Table 1.

Table 1: Descriptive Statistics of Study Variables (n = 217)

Variable	Mean	Standard Deviation
Platform Accessibility	3.76	0.82
System Efficiency	3.84	0.79
Transparency & Supplier Participation	3.69	0.86

The findings revealed that System Efficiency received the highest mean score (M = 3.84, SD = 0.79), indicating that respondents generally perceived the e-procurement systems as operationally effective in terms of automated workflows and reduced manual processes. This aligns with prior research by Neupane et al. (2014), who emphasized that digital automation improves consistency and speeds up procurement timelines, especially when properly integrated.

Platform Accessibility also received a favorable mean rating (M = 3.76, SD = 0.82), suggesting that respondents found the e-procurement platforms reasonably usable and accessible. However, variations in standard deviation indicated that some users—especially suppliers—experienced challenges, consistent with the findings of Mburu and Rotich (2020), who noted digital literacy gaps and infrastructural inequalities in rural counties.

The dependent variable, Transparency and Supplier Participation, recorded a moderate mean of 3.69 with a standard deviation of 0.86. This implies that while there were noticeable improvements in openness and supplier engagement, concerns still existed regarding fairness, award disclosure, and inclusion of local SMEs. Similar patterns were reported by Transparency International Kenya (2021), who observed inconsistencies in contract publication and bid diversity across county governments.

Correlation Analysis

Karl Pearson's coefficient of correlation was employed in this study to assess the linear association between the independent variables (Platform Accessibility and System Efficiency) and the dependent variable (Transparency and Supplier Participation). Pearson's correlation is a widely used statistical tool for measuring the strength and direction of linear relationships between continuous variables. According to Saunders, Lewis, and Thornhill (2009), a correlation coefficient (r) of +1 indicates a perfect positive linear relationship, while a value of -1 represents a perfect negative relationship. Coefficients between 0.9 and 0.7 suggest a strong positive correlation, 0.7 to 0.5 a moderate positive correlation, and values between 0 and 0.5 indicate a weak positive correlation. A correlation coefficient of 0 implies no linear relationship between the variables. The correlation coefficients among the three variables are presented in Table 2.

Table 2: Pearson's Coefficient of Correlation (n = 217)

	Platform Accessibility	System Efficiency	Transparency & Supplier Participation
Platform Accessibility	1.000		
System Efficiency	0.612	1.000	
Transparency & Supplier Participation	0.578*	0.645*	1.000

The results indicated a moderate positive correlation between Platform Accessibility and Transparency & Supplier Participation (r = 0.578). This suggests that as access to e-procurement platforms improves, there is a corresponding increase in supplier engagement and openness in procurement procedures. These findings align with prior studies by Mburu and Rotich (2020), who observed that counties with easier-to-use platforms experienced broader supplier involvement and better audit traceability.

Similarly, a moderate to strong positive correlation was observed between System Efficiency and Transparency & Supplier Participation (r = 0.645). This indicates that higher system efficiency—manifested through automated processes, prompt bid notifications, and reduced paperwork—was associated with greater transparency and broader supplier participation. These results support the conclusions of Neupane et al. (2014), who emphasized that automation reduces manipulation and improves procedural fairness.

In summary, the results confirm that both accessibility and efficiency of decentralized e-procurement platforms were positively associated with transparency and supplier participation, thus validating the study's conceptual framework.

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (platform accessibility and system efficiency) and the dependent variable (transparency and supplier participation) in county governments in Kenya.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.802	.643	.640	0.29517

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The R-squared value for the relationship between platform accessibility, system efficiency, and transparency and supplier participation was 0.643. This implied that 64.3% of the variation in the dependent variable could be explained

by the two independent variables. The remaining 35.7% was attributed to other factors not included in the model.

Table 4: Analysis of Variance (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	19.268	2	9.634	110.8	0.000
Residual	10.700	214	0.050		
Total	29.968	216			

a. Dependent Variable: Transparency and Supplier Participation
b. Predictors: (Constant), Platform Accessibility, System Efficiency

The ANOVA results were used to determine whether the model was a good fit for the data. The calculated F-value was 110.8 with a significance level of p = 0.000. Since the F-calculated was greater than the F-critical and the p-value was less than 0.05, the model was deemed a statistically significant fit for predicting the influence of the independent variables on transparency and supplier participation.

Table 5: Regression Coefficients

Predictor	B	Std. Error	t	Sig.
(Constant)	0.009	0.142	0.061	0.951
Platform Accessibility	0.373	0.027	14.007	0.000
System Efficiency	0.419	0.027	15.467	0.000

The regression model was as follows:

$$\mathbf{Y = 0.009 + 0.373X_1 + 0.419X_2 + \varepsilon}$$

Where:

Y = Transparency and Supplier Participation

X_1 = Platform Accessibility

X_2 = System Efficiency

ε = Error term

According to the results, platform accessibility had a statistically significant effect on transparency and supplier participation ($\beta = 0.373$, $p = 0.000$). The relationship was significant at the 0.05 level, indicating that improved access to e-procurement platforms positively influenced openness and supplier inclusion. This finding is consistent with the work of Mburu and Rotich (2020), who reported that real-time access and usability increased supplier competitiveness.

Similarly, system efficiency also had a significant effect on the dependent variable ($\beta = 0.419$, $p = 0.000$), suggesting that automation, prompt notifications, and reduced paperwork played a vital role in improving transparency and supplier engagement. These results support the conclusions of Neupane et al. (2014), who observed that efficient procurement systems reduce bias and increase stakeholder confidence.

Conclusions

The first objective sought to assess the effect of platform accessibility on transparency and supplier participation. The study concluded that accessibility—measured through real-time tender access, mobile usability, and ease of login—had a statistically significant positive effect. Respondents indicated that better platform interfaces and consistent access to tender documents led to more inclusive bidding and improved visibility of procurement activities. However,

inconsistencies in internet infrastructure and digital literacy posed barriers, particularly for rural SMEs.

The second objective focused on the influence of system efficiency on transparency and supplier engagement. The study found system efficiency to be the strongest predictor of procurement outcomes. Counties with automated evaluation, timely notifications, and reduced paperwork reported higher levels of competitive bidding and contract award transparency. These findings highlighted that not only the availability of digital platforms matters, but also how well they function in streamlining procurement tasks.

Recommendations

Based on the conclusions, several practical recommendations are offered to policymakers, county officials, and e-procurement system developers.

First, county governments should invest in improving platform accessibility by ensuring that e-procurement portals are mobile-friendly, easy to navigate, and capable of real-time tender updates. Capacity-building programs should be rolled out to train suppliers—especially small enterprises—on platform use, digital bidding procedures, and compliance documentation.

Second, there is a need to enhance system efficiency by automating all procurement stages, including evaluation, notifications, and supplier feedback. Counties should minimize hybrid systems that rely partly on manual processes, which increase the risk of bias and delay. Integration with national platforms like IFMIS should be improved to ensure consistency and centralized audit trails.

Third, national agencies such as the Public Procurement Regulatory Authority (PPRA) should conduct regular audits and usability reviews of county e-procurement systems. Counties that meet transparency and participation thresholds should be incentivized, while those failing to adhere to digital procurement standards should be held accountable.

Lastly, system designers should incorporate supplier-centered design features, such as SMS bid alerts, simplified registration workflows, and real-time support, to promote broader supplier participation and reduce digital exclusion.

Suggestions for Further Studies

While this study provided valuable insights, several areas remain open for further investigation. Future studies should consider using a longitudinal design to assess how changes in e-procurement platform features over time affect supplier behavior and transparency metrics. Additionally, comparative studies could be conducted between counties with high vs. low digital procurement maturity, to explore best practices and institutional factors driving successful implementation. Researchers could also investigate mediating variables, such as digital literacy, supplier experience, or organizational culture, to better understand the mechanisms linking e-platforms to procurement outcomes. Lastly, further research should examine the role of political interference and procurement governance in influencing how decentralized e-procurement systems are used or manipulated during county-level procurement cycles, particularly around election periods.

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