E-PROCUREMENT PROCEDURES AND PERFORMANCE IN THE COUNTY GOVERNMENT OF NYAMIRA, KENYA

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ABSTRACT

E-procurement is important and no longer an optional but rather mandatory in the modern world. It is today's business environment and highly competitive. However, the application of e-procurement continues to face challenges. The purpose of the study was to assess the effect of e-procurement procedures on performance of County Government of Nyamira. The specific objectives were; to find out the influence of e-sourcing and e-tendering on performance of County Government of Nyamira. The study was guided by technology acceptance model and innovation diffusion theory. The study used descriptive research design as it enabled the researcher to describe the real time information without manipulation. The target population for the study was 202 employees of the selected County Government of Nyamira employees. A sample size of 148 respondents was drawn from the target population. The researcher used purposive and stratified sampling methods to sample the human resource, CECMs, Chief Officers, Director for procurement, Deputy Director, Procurement staffs and Accounts staff members. The study used primary data that was collected using structured questionnaires. The findings of this study indicate that E-tendering exerts the strongest and most statistically significant positive effect on organizational performance. This suggests that organizations which effectively implement electronic sourcing are more likely to experience improvements in accuracy, processing speed, cost reduction, and transparency, which collectively enhance overall performance. E-Tendering shows a strong and statistically significant relationship with organizational performance. Its contribution highlights the critical role it plays in ensuring procurement efficiency and promoting transparency and accountability in public procurement processes. To enhance the effectiveness of e-procurement practices and improve organizational performance, County governments and public institutions should prioritize the adoption, integration, and optimization. Future studies could explore qualitative dimensions such as user perceptions, system usability, organizational culture, supplier readiness, and the role of ICT infrastructure.

INTRODUCTION

E-procurement, or electronic procurement, refers to the use of digital tools and platforms to facilitate the purchasing process within organizations. This approach has evolved significantly over the past few decades, driven by advancements in technology and the increasing need for efficiency in procurement processes. The transition from traditional procurement methods to

e-procurement systems has been influenced by the desire to reduce costs, improve transparency, and enhance the overall effectiveness of purchasing activities. Global studies have highlighted the successful implementation of e-procurement in countries like the United States and the United Kingdom, where government agencies have reported substantial cost savings and improved service delivery. In contrast, regional studies in Africa and Asia reveal a mixed picture, where challenges such as inadequate infrastructure and lack of training hinder the full potential of e-procurement systems. County governments that have adopted e-procurement platforms often report better tracking of expenditures and enhanced transparency, which are critical for public trust and accountability.

The performance of county governments can significantly impact the quality of life for residents, as they are responsible for implementing policies and programs that address local needs. County governments often collaborate with neighboring counties and municipalities to address issues that transcend local boundaries. This collaboration can enhance the efficiency and effectiveness of service delivery, particularly in areas such as transportation, environmental management, and emergency services. Performance is often evaluated based on the ability of county governments to work together to create comprehensive plans that benefit the entire region, demonstrating a commitment to sustainable development and resource management. The performance of county governments at both the regional and local levels is vital to the overall effectiveness of governance in the United States. By focusing on collaboration, community engagement, and innovative solutions, county governments can address the challenges they face and improve the quality of life for their residents. Heijboer, (2012) defines E-procurement as using "internet technology in the purchasing process" (E-ordering, E-tendering, E-sourcing, E-information, E-reverse auction). In connection with this, the usage of information technology in e-procurement systems is considered to be an innovation strategy action. E-procurement enables purchasers to buy goods and services through the use of internet facilities in a variety of forms for instance, through online tendering. This enhances participation among suppliers. Tools and solutions are used to deliver a range of options that will facilitate improved purchasing and supply management (Steinberg., 2013). E-sourcing is the process of using the internet to find new, reliable suppliers for a business. The company uses the internet for procurement operations such as purchasing products and services in an effort to draw in more qualified vendors. E-sourcing is a process whereby supply manager use a set tools to streamline leverage technology in order to meet organizational needs. According to Alomar and De-Visscher (2017), the sourcing method is traditionally very time-consuming and laborious, making it unable to manage large amounts of data. However, as e-sourcing became popular in businesses, this idea has evolved over time. Doherty (2013) describes the term "e-invoicing" as the process of receiving electronic invoices from suppliers and using the Bank Automated Clearing System to make electronic payments to different vendors. By using e-invoicing, it has made a positive impact on performance because information can be entered straight into the system, it has aided in speeding up the processing of invoices as well as the time they take to arrive in the mail. Scholes (2016) therefore says using e-invoicing increases the efficacy and efficiency of procurement procedures. Its use makes it easier for the business to keep track of the invoice's current status.

Olagunju and Obademi, (2015) Organizational performance is referred to as how well a firm uses its resources to meet its goals and objectives. It is the process of assessing the actual outcomes of firm's policies and operations against its defined goals and objectives. Organizational performance is used to assess firm's total financial and non-financial well-being over a certain period of time, similarly may be used to measure or compare comparable organizations across industries, or sectors of the same industry. Poor performance on its part contributes to rising of inefficiency as well as costs and competitiveness of the procurement function. According to Mwanagi and Asienyo (2018) Ineffective procurement performance raises costs for the procurement function and contributes to inefficiency. Poor performance causes a drop-in profitability, which makes it difficult to achieve organizational development as it causes delivery delays, a rise in faults, and low-quality products and services. In commercial and public sector, low procurement performance comes as a consequence of failure to accept e-procurement, while we continue to employ conventional procurement techniques.
Government regulations through e-sourcing that allow free competition for procurement opportunities without favoritism are necessary to provide value for money in all public procurement whereby potential and qualified suppliers are picked for services. The major goals of government policy are to guarantee economic development, the decrease of poverty, and the effective and efficient delivery of services to Kenyan inhabitants. Large sums of tax payer money have recently been wasted in Kenya as a result of public procurement procedures; this is because organizational culture, the environment, and the involved staff lack ethical standards (Kangogo and Kiptoo, 2013). In order to foster positive behavior and cultural shifts that result in a collaborative and cost-effective procurement strategy, senior management responsible for procurement has to understand the need of developing and continuously changing management plans. The benefits of this include better contracts, improved supplier relationships, increased efficiency and effectiveness in administration, and the supply of highest-value contractual products and services to customers (internal and external). Rethinking interactions between procurement staff and government projects as well as agency operations is necessary due to cultural shifts (Valle and Plant, 2018).

Statement of the Problem

The ideal implementation of E-procurement Procedures, including e-sourcing and e-tendering is expected to significantly enhance performance within the Nyamira County Government. However, the current situation reflects a stark contrast, as the county government is experiencing poor performance. This includes delays in timely delivery, low levels of customer satisfaction, inefficient internal processes, and inadequate real-time responses to client inquiries. According to the Auditor General's report for the financial year 2019-2020, Nyamira County was ranked the worst in managing e-procurement issues, highlighting the urgent need for improvement in these areas.

Wanyama (2010) highlights that manual procurement systems cause inefficiencies, necessitating ICT adoption for improved functionality. The Ministry of Finance introduced IFMIS and e-procurement to enhance public sector procurement. However, in Nyamira County, performance issues persist despite adopting e-procurement. Problems include delayed deliveries, poor-quality goods, inefficiency, and inaccurate tendering. The Auditor General's

2019/2020 report rated Nyamira's e-procurement implementation as poorly executed, warranting further study.

revious studies reveal key gaps that this study aims to address. Gathima (2018) examined e-tendering and organizational performance using diffusion and transaction cost theories but omitted the Technology Acceptance Model (TAM), which this study will apply. Ochari and Kwasira (2016) studied e-sourcing in Nakuru County using simple random sampling, while this study will use both purposive and random sampling for deeper insights. Despite government efforts, Nyamira County still faces poor service delivery and low-quality procurement outcomes. This highlights the need to investigate e-procurement procedures and assess their effect on the performance of Nyamira County Government.

Objectives of the Study

General Objective

The general objective of this study was to establish the effect of e-procurement procedures and performance of County government of Nyamira in Kenya.

Specific Objectives

The following specific objective guided the researches to establish the effect of e-procurement procedures and performance of County government of Nyamira.

i. To find out the effect of e-sourcing on procurement performance of county government of Nyamira, Kenya
ii. To establish the effect of e-tendering on procurement performance of county government of Nyamira, Kenya

Research Hypotheses

$H0_1$: E-sourcing has no statistical significantly effect on the performance of county government of Nyamira.

$H0_2$: E-tendering has no statistical significantly effect on the performance of county government of Nyamira.

LITERATURE REVIEW

Theoretical review

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is an information systems theory developed by Davis (1989) and later refined in 2000. It explains how users come to accept and use new technology in their work environment. According to the model, two primary factors Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) influence users' decisions about adopting a new system. Davis (2000) proposed that unless users perceive a technology as beneficial and easy to operate, it is unlikely to be embraced, regardless of its technical sophistication. The model emphasizes that for any technological innovation to enhance organizational effectiveness, user acceptance is essential.

TAM assumes that when individuals perceive a specific technology as useful and easy to use, they are more likely to adopt it. Dillon and Morris (2001) reinforced this idea by noting that user perceptions positively affect behavioral intentions to use technology. In the context of organizational settings, this suggests that employees are more willing to integrate a system into their workflow if they believe it will simplify their tasks and improve performance. The model further assumes a rational decision-making process, where users evaluate the benefits of the technology before adopting it.

Despite its wide application, TAM has several limitations. One major critique is its focus solely on technological features while ignoring important contextual factors such as organizational culture, user competence, time constraints, and environmental influences (Olumide, 2016). Additionally, the model has limited explanatory power when applied to complex environments, as it neglects social, political, and institutional dimensions. Scholars such as Benbasat and Barki (2007) argue that repeated modifications of TAM by different researchers have created confusion and diluted its theoretical clarity. Other critiques include its failure to consider heuristic values and its tendency to create an illusion of progress in knowledge acquisition while diverting attention from broader and more critical research questions.

Despite these limitations, TAM remains highly relevant in understanding user behavior toward e-procurement systems. The model provides a useful framework for assessing how procurement staff in county governments perceive new technologies and the likelihood of system adoption. Barki and Benbasat (2017) assert that TAM is instrumental in improving procurement performance, as it links user perceptions with operational outcomes such as accuracy in the tendering process, improved stock control, and enhanced efficiency in service delivery. By applying TAM, this study explores the critical role user acceptance plays in the successful implementation of e-procurement procedures in the County Government of Nyamira, offering valuable insights into how technological acceptance influences supply chain and procurement performance.

Empirical Literature Review

E-sourcing and Performance

Fozia, et al. (2016), studied about effect of e-sourcing on supplier management procedures on the implementation of preferred regulations on state corporations in Kenya. The main objectives was to analyse the influence of e-sourcing on supplier management procedures on implementation of preferred regulations on State Corporation, the target population was 131 employees in state corporations and a sample size of 76 was used by use of random sampling and their findings were that employees electronically search for new suppliers in the market where supplier prequalification is done electronically together with confirmation of new supplier’s reference. It was not fully established whether new suppliers interact with employees online.

The study conducted by Ochari and Kwasira (2016) examined the impact of e-sourcing on the procurement function's performance in Nakuru County. The study's target population, 168

respondents, was chosen using a descriptive research approach. A questionnaire was utilised to gather data for the research, and 118 participants were chosen at random to participate in the sampling process. According to the report, e-sourcing has been embraced by Nakuru County's procurement department, but it hasn't been properly executed, leaving most counties without a complete understanding of e-sourcing. According to this empirical analysis, e-sourcing improved organisational performance

Rotich (2016) conducted a research that examined the impact of e-sourcing on performance within Kericho County. The target population was made up 163 county workers who worked in finance, IT, and procurement. They used purposive sampling from those employees though a questionnaire, the results showed that e-sourcing significantly and favourably affects performance. E-sourcing refers to the use of technologies to control the flow of various documents, such as those that are created automatically or that are sent electronically to suppliers.

Studies from the United States provide further insights into e-procurement and e-sourcing adoption. For instance, Neupane and Shrestha (2018) examined e-procurement implementation in U.S. public sector agencies and found that factors such as user training, technological infrastructure, and management support significantly influence adoption success. Their study emphasized that while e-procurement can enhance transparency and reduce procurement cycle times, challenges such as resistance to change and technical issues remain barriers.
Similarly, Walker et al. (2019) analyzed the impact of e-sourcing on supply chain performance in several U.S. manufacturing firms. They found that e-sourcing improved supplier collaboration, cost savings, and overall supply chain agility. The study highlighted the role of real-time data sharing and electronic negotiations in enhancing procurement outcomes, demonstrating that firms leveraging e-sourcing technology experienced measurable performance gains.

Moreover, Johnson and Whang (2020) explored how digital procurement systems affect public sector efficiency in the U.S. Their findings indicated that integration of e-procurement with financial management systems reduces corruption and increases accountability. However, they noted that the success of such systems depends heavily on continuous user engagement and robust change management practices. These U.S.-based studies complement the Kenyan research by providing broader perspectives on the benefits and challenges of e-procurement and e-sourcing adoption. They underscore the importance of organizational readiness, technological infrastructure, and user acceptance in realizing the full potential of e-procurement systems, reinforcing the need for localized research in counties like Nyamira to address unique contextual factor.

E- tendering and Performance

Gathima,et al. (2018) studied effects of e-tendering on organization performance in public sector; A case of Nairobi city county government, the aim of the study was to examine the effect of e-tendering on the performance of county government of Nairobi. The study was guided by innovation diffusion theory and transaction cost theory. The target population 750

respondents from finance, payment and information technical departments and a sample size of 75 respondents selected from the 3 departments using stratified random sampling technique. Descriptive research design was used and data was collected using structured questionnaires to the selected sample. Data was analysed through descriptive statistics. The findings was that e-tendering practices has a positive and significant relationship with performance in county government of Nairobi, but it was noted that a lot of attention has not been put in adopting and implementing various aspects of e-tendering to ensure that its activities remained improved.
Rotich, (2013) studied on the effects of e-tendering and procurement performance among county government in Kenya. The study aimed at examining the relationship between e-tendering and procurement performance of county government in Kenya. The target population was employees of Kericho County government while the sample size was purposively selected to constitute 120 employees working in procurement, Finance, IT and Accounts departments of Kericho County government. Data was collected using structured questionnaires and stratified sampling was used to determine sample size with the sample elements selected through simple random sampling. Data was analyzed using descriptive statistics and inferential statistics. The findings were that e-tendering has a positive relationship with performance of county governments in Kenya.

Wanyonyi (2015) examined the effect of the e-tendering process on the procurement function and performance at the Public Technical Training Institute in Kisumu County, Kenya. The study targeted 135 procurement department employees. Its main objective was to determine whether the e-tendering process influences procurement performance in the institute. Primary data were collected using questionnaires and analyzed through descriptive statistics. The study concluded that staff competency and access to information about e-tendering significantly affected the institute's ability to effectively perform e-procurement functions. However, it was also found that staff were inadequately trained in information technology, which hindered optimal use of the system.

Qualifications for products and services, registration, selection, and effective administration are the four primary operating tenets. E-tendering, according to Croom, O. (2006), aids businesses in cutting costs and enhancing operations. Online technologies and procurement are integrated via e-tendering, which allows procurement teams to create contracts and invite private bidders to submit online bids. Hawking and Stein (2004) state that local, regional, and contracting authorities may readily access various electronic applications for public procurements via the e-tendering platform. When it comes to e-tendering, authorities have the ability to electronically publish bids for participation, produce reports, and distribute them. Companies or organisations may electronically sign papers and submit their requests to join.

Conceptual Framework

A conceptual framework is a set of fundamental structures that illustrate the organised features of a system under consideration. It was used to illustrate research results, such as how study variables relate to one another. However, there is a cause-and-effect link in the conceptual framework. The objects or traits that the cause-and-effect connection describes are known as

variables. The independent variables are e-sourcing, e-tendering, as shown in the image below. Performance inside the organisation will be the dependent variable.

Independent variable (e-procurement procedures)

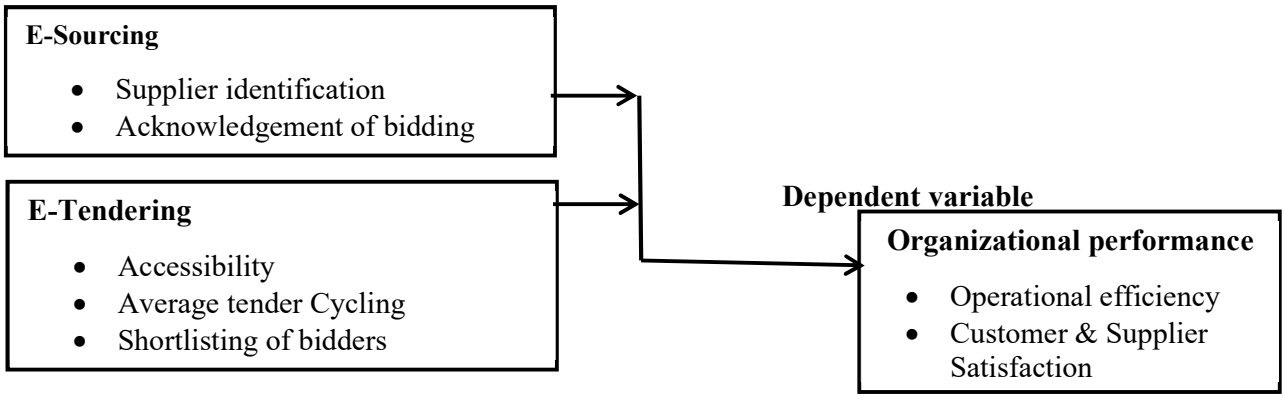

Figure 2.1: Conceptual Framework
Source: (Researcher 2024)

A conceptual framework provides an example of how these factors interact to provide a true knowledge of the phenomena of distribution. The study was to find out the county government of Nyamira's performance and was determined by several independent variable related to e-procurement, including e-sourcing and e-tendering. The dependent variable included employee efficacy and efficiency, timely delivery of goods and services, stock management control, and accuracy of tendering.

RESEARCH METHODOLOGY

Mugenda and Mugenda (2017) stated that in order to assist researchers find features in their specific group that can be detected, observed, and assessed to support decision-making, the study utilised a descriptive research methodology. The researcher adopted a descriptive survey approach because it facilitates factual analysis, enabling a comprehensive understanding of the study topic. The 202 workers were the study's target population. Employees at the Nyamira County Government who interact with procurement services were the target demographic. This group included management (County Eexecutive Ccommittees), Chief offices, the director of procurement, the deputy director of procurement, procurement staffs and accounts staff members. The study's population was selected based on its homogeneity and participation in procurement activities. The table illustrates the staffing composition across various departments within the county government, focusing on key roles such as County Executive Committee members (CECs), Chief Officers, Procurement Staff, and Accountants. In total, there are 202 employees distributed among these roles.

The Finance, ICT, and Economic Planning department has the largest workforce, with 64 employees. This includes 1 CEC, 2 Chief Officers, 51 Procurement Staff, and 10 Accountants, indicating a strong focus on procurement activities within this department. The Health Service department follows, employing 21 staff members across the specified roles. Other sizable departments include Roads, Transport, Public Works and Disaster, and Lands, Housing and Urban Development, each with 17 employees.

Smaller departments such as Education and Vocational Training, Trade, Tourism and Cooperative Development, and the Municipality have between 11 and 12 employees each. Overall, the table reveals that procurement staff form the largest group with 111 individuals, reflecting the critical role procurement plays in the county government operations. There are 11 CECs and 13 Chief Officers distributed among the departments, alongside 67 Accountants, highlighting the administrative and financial management support in these sectors. This staffing distribution provides insight into how human resources are allocated across departments, emphasizing on procurement in Table 3.1.

Table 1: Target Population

Department	**CECs**	**Chief Officers**	**Procurement Staff**	**Accountants**	**Total**
Finance, ICT and Economic Planning	1	2	51	10	64
Education and Vocational training	1	1	5	4	11
Trade, Tourism and Cooperative Development	1	1	4	5	11
Public Service Management	1	1	6	7	15
Roads, Transport, Public works and Disaster	1	1	7	8	17
Lands, Housing and Urban Development	1	1	10	5	17
Health Service	1	1	9	10	21
Environment Water Energy Mining and Natural Resource	1	2	5	4	12
Agriculture, Livestock and Fisheries	1	1	4	4	10
Gender, Youth, Sports, Culture and Social Services	1	1	5	5	12
Municipality	1	-	5	5	11
Total	**11**	**13**	**111**	**67**	**202**

Source: HR Department, County Government of Nyamira (2023)

A sample is a sub-set of objects selected from a larger population in order to assess and make conclusions about the population as a whole. Tuovila (2020) defines sampling as the procedure of extracting a pre-specified number of observations from a bigger population. Sampling is used to provide precise empirical data at a fraction of the expense of investigating every

scenario that may arise Mbanya (2018). because the research only included the population that was of a particular interest, purposive sampling was used in this investigation.

A sample is a portion of a larger population that is used for study purposes. The sample size was determined using Yamane's 1967 formula. Out of the 202 targeted workers, 148 was chosen as the study's sample size.

$$\mathrm{n} = \frac{\mathrm{N}}{1 + Ne^2}$$

n=required sample size

N is the target population.

e=Error margin n = 0.05

n = 134

The Nilima (2017) algorithm was used to account for non-response. n=N/(1% of non-responders)

$$n = \frac{\mathrm{N}}{1 - 10\%}$$

n=final Sample magnitude

N is for the Effective Sample Size = 134

10% of responses of non-responses

n=134/(1-0.1)

n = 148

The sample size for each department in the study was determined using proportionate stratified sampling. According to Orodho (2009), this approach is appropriate because it ensures that every respondent within each stratum has an equal chance of selection, thereby minimizing sampling bias. Additionally, purposive sampling was employed to select specific participants relevant to the research objectives.

To calculate sample size for each stratum, the following formula was used.

$$nh = \frac{\mathrm{Nh}}{\mathrm{N}}\ n$$

Where;

nh Sample size for stratum h

Nh is the population size for stratum h,

N is the entire population size, n is the total sample size.

Table 2: Sample Size

Department	**CECs**	**Chief Officers**	**Procurement Staff**	**Accountants**	**Total**
Finance, ICT and Economic Planning	1	2	20	9	32
Education and Vocational training	1	1	4	5	11

Trade, Tourism and Cooperative Development	1	1	4	4	10
Public Service Management	1	1	4	5	11
Roads, Transport, Public works and Disaster	1	1	5	4	11
Lands, Housing and Urban Development	1	1	6	4	12
Health Service	1	1	5	5	12
Environment Water Energy Mining and Natural Resource	1	2	7	4	14
Agriculture, Livestock and Fisheries	1	1	5	3	10
Gender, Youth, Sports, Culture and Social Services	1	1	5	4	11
Municipality	1	-	7	5	13
Total	**11**	**13**	**72**	**52**	**148**

Source: HR Department County Government of Nyamira, (2023)

Structured questionnaires created by the researcher were used as a data collecting method to gather primary data. Mugenda and Mugenda (2017) claims that questionnaires are efficient because they are quick to complete and easy to administer, providing reasonably objective data. The survey was distributed to county government workers using a drop-and-pick procedure. According to Wanjohi (2010), researcher-developed questionnaires were used to gather primary data since questionnaires are a common tool for data collecting due to their relative convenience and cost-effectiveness.

FINDINGS AND DISCUSSIONS

Response Rate

A total of 148 structured questionnaires were distributed to procurement service providers in Nyamira County. The responses were analysed and summarized in Table 4.1.

Table 4.1 Response rate

Type of response	Frequency	Percent
Response	131	88.50
No response	17	11.5
Total	148	100.0

The study recorded a respobse rate of 88.5% (131 out of 148 questionnaires), while 11.5% (17 questionnaires) did not receive responses. This response rate is considered very high in social science research, where response rates above 70% are often regarded as sufficient for valid analysis (Mugenda & Mugenda, 2003).

An 88.5% response rate implies that the data collected is highly representative of the target population procurement service providers in Nyamira County. This increases the generalizability of the findings to similar settings or populations. Since only 11.5% did not respond, the risk of non response bias is significantly minimized. This ensures that the characteristics and opinions of the respondents likely reflect those of the entire population.

Descriptive analysis of variables

In this section, the researcher present the descriptive analysis of the variables used in the study. Descriptive statistics such as mean, standard deviation, minimum, and maximum values are calculated to provide an overview of the data and assess the central tendency and dispersion of respondents' perceptions.

E-Sourcing

The first variable analysed is e sourcing, which evaluates the effectiveness and efficiency of the supplier selection process through electronic systems. Table 4.2 presents the descriptive statistics for various aspects of e-sourcing in the County Government of Nyamira.

Table 4.2 E-Sourcing

	N	Minimum	Maximum	Mean	Std. Deviation
The supplier identification process is faster with electronic systems	131	1.00	5.00	3.7481	1.52590
Acknowledgement of bidding platforms provide access to a broader supplier base	131	1.00	5.00	4.4656	1.04732
Supplier information is accurately captured and stored in our e-sourcing system	131	1.00	5.00	4.4351	1.05319
All bids submitted through the e-sourcing platform are automatically acknowledged	131	1.00	5.00	3.8168	1.45074
Our e-sourcing system allows for systematic pre-qualification of suppliers	131	1.00	5.00	3.8397	1.42945
Pre-qualification criteria are clearly defined and accessible on the platform	131	1.00	5.00	3.8550	1.25344
Valid N (listwise)					1.29334
	Grand mean			4.026717	

The descriptive statistics for E-Sourcing reveal a generally upbeat perception regarding the effectiveness of electronic systems in procurement, as shown by the mean scores across various statements. Most of these statements scored above 3.5, suggesting that respondents have a favorable view of e-sourcing. The mean score of 4.4656 was noted for the statement "Acknowledgement of bidding platforms provide access to a broader supplier base," indicating strong agreement among respondents that e-sourcing indeed broadens the supplier pool. This is backed up by a standard deviation of 1.04732, which points to moderate variability in the responses. The minimum score of 1.00 shows that some respondents strongly disagree with this perspective, while the maximum score of 5.00 indicates that others are in strong agreement. In a similar vein, the statement "Supplier information is accurately captured and stored in our e-sourcing system" garnered a mean score of 4.4351, reflecting a positive sentiment towards the e-sourcing system's capability to keep supplier data accurate and organized. The standard deviation for this statement is 1.05319, suggesting that while most respondents share a common view, there is still some variability in perceptions. The range of responses, from a minimum of 1.00 to a maximum of 5.00, further illustrates the spectrum of opinions, from strong disagreement to strong agreement.

The statement "All bids submitted through the e-sourcing platform are automatically acknowledged" achieved a mean score of 3.8168, indicating moderate agreement regarding the functionality of bid acknowledgments. However, the relatively high standard deviation of 1.45074 points to greater variability in responses. The minimum score of 1.00 suggests that

some respondents do not experience automatic bid acknowledgment, while the maximum score of 5.00 shows that others are very much in favor of the system's efficiency.

For the statement "Our e-sourcing system allows for systematic pre-qualification of suppliers," the mean score was 3.8397, indicating a generally positive view of the system's capabilities. The statement "Pre-qualification criteria are clearly defined and accessible on the platform" received an average score of 3.8550, which indicates that most people agree that the criteria are clear and easy to find. The standard deviation of 1.25344 shows there's a moderate range of opinions, with scores ranging from 1.00 to 5.00. This suggests that people have different views on how well the criteria are communicated and made accessible. While most respondents seem to have a favorable opinion of e-sourcing especially when it comes to supplier access and data accuracy there's still some disagreement. The variability in responses, highlighted by the standard deviations and the range of scores, points to the fact that, overall, the system is seen as effective. However, there are definitely areas that could use some work, particularly in speeding up the process and ensuring consistent features, like bid acknowledgment and pre-qualification.

E-Tendering

Table 4.3 showed the descriptive statistics for E-Tendering, offering insights into how effective and efficient the electronic tendering platform is in Nyamira County. The mean scores, standard deviations, and the range of minimum and maximum values paint a clear picture of how respondents feel about different aspects of e-tendering.

Table 4.3 E-tendering

	N	Minimum	Maximum	Mean	Std. Deviation
The e-tendering platform is accessible to all qualified suppliers without restrictions	131	1.00	5.00	3.6489	1.53885
Tender documents are available for download at any time during the tendering window	131	1.00	5.00	4.0611	1.23883
the average number of days to complete a tender has decreased due to e-tendering	131	1.00	5.00	3.8931	1.29051
Notifications and reminders reduce delays in the tender lifecycle	131	1.00	5.00	3.1756	1.47534
Shortlisting is performed objectively with minimal manual interference	131	1.00	5.00	3.1679	1.43126

All shortlisted bidders are notified electronically in a timely manner	131	1.00	5.00	3.9542	1.28220
Valid N (listwise)	131			3.650133	1.376165

The average scores for E-Tendering show that people generally have a positive outlook on the electronic tendering system, although there are some differences in how respondents feel. The statement "Tender documents are available for download at any time during the tendering window" received the highest average score of 4.0611, indicating that most respondents strongly agree that e-tendering platforms provide flexible access to tender documents. The standard deviation for this statement is 1.23883, which suggests there's a moderate range of opinions, with some respondents not agreeing as strongly as others. The scores for this statement range from 1.00 to 5.00, reflecting a wide array of views, from strong disagreement to strong agreement.

Another encouraging response comes from the statement "The average number of days to complete a tender has decreased due to e-tendering," which has an average score of 3.8931. This suggests that respondents generally feel that e-tendering has made the tendering process quicker. The standard deviation here is 1.29051, indicating a moderate variation in responses, meaning that while many believe the process has sped up, some may not notice a significant change. The minimum score of 1.00 and maximum score of 5.00 further illustrate the range of opinions on this matter.

The statement "Notifications and reminders reduce delays in the tender lifecycle" scored an average of 3.1756, which is the lowest rating among all the items. This indicates that while some respondents believe that notifications and reminders do help in minimizing delays, there are others who aren't so sure about their effectiveness. The standard deviation of 1.47534 is quite high, showing a significant variation in responses; some people feel that notifications hardly make a difference in reducing delays. The minimum and maximum scores of 1.00 and 5.00 further illustrate the wide range of opinions on this matter.

For the statement "Shortlisting is performed objectively with minimal manual interference," the average score is 3.1679, suggesting that respondents have mixed feelings about how objective and automated the shortlisting process really is. The standard deviation of 1.43126 indicates considerable variability in the responses, which might reflect different experiences regarding the fairness and automation of the process. Once again, the scores range from 1.00 to 5.00, emphasizing the diversity of perspectives.

Lastly, the statement "All shortlisted bidders are notified electronically in a timely manner" received a mean score of 3.9542, which points to generally positive feedback about the promptness of notifications sent to shortlisted bidders. The standard deviation of 1.28220 shows moderate variability in responses, suggesting that while most respondents agree with this statement, there are still some who hold differing opinions.

The study indicated that it seems that most respondents have a pretty positive view of e-tendering, especially when it comes to accessing tender documents and speeding up the tender process. However, there are some inconsistencies worth noting, particularly around how effective the notifications are and how fair the shortlisting process feels. The standard deviations really point out these differences, suggesting that if one could improve certain areas of e-tendering like creating better notification systems and automating the shortlisting process a bit more, one could make the whole system work even better and more efficiently.

This table 4.4 showed the essential statistics for the regression model that evaluates how e-procurement processes –Sourcing and E-Tendering impact Organizational Performance.

Table 4.4 Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.945[a]	.894	.890	.15988

a. Predictors: (Constant), E-Sourcing, E-Tendering

The regression model reveals a strong connection between the predictors and how well the organization performs, showing an R-value of 0.945. This suggests a strong positive relationship. The R Square value of 0.894 shows that the model accounts for 89.4% of the differences in organizational performance, emphasizing how much the e-procurement processes affect performance outcomes. Even the Adjusted R Square value of 0.890, which takes into consideration the number of predictors, confirms that the model still explains a significant effect of the variance in performance after adjustments. With a Standard Error of the Estimate at 0.15988, it indicates that the model's predictions are quite accurate, showing only slight deviations from the actual data points. All in all, this model fits the data really well, highlighting that e-procurement variables are driving organizational performance.

This table 4.5 showed the regression coefficients, which reveal how strong and in what direction each independent variable (e-procurement processes) relates to the dependent variable (Organizational Performance).

Table 4.5 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.640	.156		4.091	.000
	E-Sourcing	.069	.027	.078	2.557	.012
	E-Tendering	.221	.098	.252	2.246	.026

a. Dependent Variable: Organizational Performance

$Y= \beta_0 + \beta_1X_1+\beta_2X_2 +\varepsilon$
Established model of $Y= .640 + .069X_1+.221X_2$

The constant value of 0.640 serves as the baseline for organizational performance when all e-procurement processes are at zero. The coefficient for E-Sourcing stands at 0.069, with a standardized Beta value of 0.078, which shows a positive and statistically significant link (p-value = 0.012) between E-Sourcing and organizational performance. Likewise, E-Tendering has a coefficient of 0.221 and a Beta of 0.252, indicating a positive effect on organizational performance, also statistically significant (p-value = 0.026). Overall, the findings suggest that E-Sourcing and E-Tendering all positively affect organizational performance.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

E-Sourcing demonstrates a modest yet still significant positive effect on organizational performance. While its impact is not as strong as that of E-Tendering, its significance underscores its supportive role in enhancing procurement outcomes. E-Sourcing contributes to better supplier engagement, increased market reach, and improved procurement planning, all of which support operational efficiency. E-Tendering shows a strong and statistically significant relationship with organizational performance. Its contribution highlights the critical role it plays in ensuring procurement efficiency and promoting transparency and accountability in public procurement processes. E-Tendering systems help reduce human error, increase competition, and speed up the tendering process, which translates into better service delivery and organizational effectiveness.

Recommendations

The findings from this study highlight just how important e-procurement processes are, especially E-Tendering and E-Sourcing also play a positive role, and make a significant difference in this study. To enhance the effectiveness of e-procurement practices and improve organizational performance, several recommendations can be drawn from the study. County governments and public institutions should prioritize the adoption, integration, and optimization. Invest in e-tendering systems: E-tendering has demonstrated a strong influence on organizational performance and should therefore be enhanced through investment in secure, user-friendly platforms. These systems should allow for transparent bid evaluation, easy access to tender opportunities by vendors, and integration with other procurement modules. Efforts should also focus on training staff and suppliers to fully utilize these platforms for competitive and fair tendering processes. Strengthen e-sourcing strategies: Although e-sourcing had a relatively modest effect, its role is still vital. Effective e-sourcing can improve supplier diversity, ensure better value-for-money decisions, and contribute to long-term strategic procurement planning.

Reevaluate e-auctioning. The study highlights the need for additional investigations into the underperformance of e-auctioning. Future studies could explore qualitative dimensions such as user perceptions, system usability, organizational culture, supplier readiness, and the role of

ICT infrastructure. Broader research could also examine sector-specific challenges, comparative studies across counties or countries, and the long-term impact of e-procurement adoption on organizational efficiency and service delivery

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