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E-PROCUREMENT PRACTICES AND PERFORMANCE OF INDEPENDENT REGULATORY AGENCIES IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT

Government agencies around the world have been using information technology and the internet to deliver government services and to access information electronically . For many governments, one of the more successful and applicable initiatives is the delivery of electronic procurement to enhance transparency in service delivery. Independent regulatory agencies play an important role in that they are a special category of State Corporations with oversight roles over their sectors. There is poor service delivery in the regulatory bodies in Kenya which affects efficiency and general performance of the institutions. The general objective of the study was to examine effect of electronic procurement practices on performance of independent regulatory bodies in Nairobi County, Kenya. The study specifically focused on the effect of e-sourcing, e-payment on performance of independent regulatory bodies in Nairobi County, Kenya. The study was guided by four theories; the grey theory, decomposed theory of planed behavior. The unit of analysis was 29 independent regulatory bodies in Kenya. The unit of observation was 50 procurement, 50 stores, 50 ICT, and 50 finance management staff in the independent regulatory bodies. The study used census since the target is less than 200. The study used questionnaires to collect data. A pilot was conducted with 10% of the sample hence 20 management staff. The study used content and construct validity. Reliability was measured using Cronbach's alpha coefficient. Data was analyzed using SPSS Version 28.. Findings were tabulated. Results on validity shows that the questionnaire content is valid as approved by the supervisors. Construct validity results show that; e-sourcing had an AVE =0.550, e-payment, AVE=0.530 and performance of independent regulatory bodies AVE=0.560. The indicators of the independent and dependent variables are therefore valid since they meet the recommended threshold of an AVE of 0.5. Reliability results show that; performance of independent regulatory bodies had alpha value of 0.834, E-sourcing 0.892, E-payment 0.840. The reliability summary shows that all the variable measures were reliable since they are above 0.7. Using descriptive and inferential statistics, the findings revealed that e-procurement practices significantly impact performance. E-sourcing had the strongest effect ($\beta = 0.374$), followed by e-payment ($\beta = 0.311$), all statistically significant at $p < 0.05$. The study concluded that e-procurement enhances service delivery, accountability, and operational efficiency within regulatory agencies. Key recommendations include strengthening e-sourcing platforms, enhancing e-payment security and supplier access These interventions are essential for improving transparency, efficiency, and performance in Kenya's public procurement sector.

Key Words: Electronic Procurement Practices, Performance of Independent Regulatory Bodies, E-Sourcing, E-Payment

Background of the Study

E-procurement refers to the use of internet-based system to carry out part or all stages of procurement process, including sourcing, receipt, and post-purchase review (Mavidis & Folinas, 2022). Salum and Ntimbwa (2020) revealed that the Government play the roles of establishing important infrastructure to facilitate e-procurement as per procurement policy and acts enforcement. The challenges facing e-procurement in local government include working facilities or tools, low knowledge on how to operate e-procurement, networks challenges, a low financial resource that is below the cost of e-procurement and challenges of contradicting in implementation of government policy and acts associated with the implementation of e-procurement.

Government agencies around the world have been using information technology (IT) and the internet to deliver government services and to access information electronically for several years, practices which are commonly referred as eGovernment initiatives. For many governments, one of the more successful and applicable initiatives is the delivery of electronic procurement to enhance transparency, establish an open market place for procurement needs, and support the introduction of procurement reforms to better manage and monitor public procurement activities (Chen, Bretschneider, Stritch, Darnall, & Hsueh, 2022). The E-procurement system when adopted reduces transaction costs for both government and the providers and streamlines the procurement processes. The system also makes procurement for routine transactions more productive and expected to free procurement professionals to focus on the more strategic activities of the Procuring and Disposing Entities. The benefits of e-government procurement range from achievement of value for money, efficiency, accountability, transparency, governance to customer satisfaction (Owere, 2021).

Statement of the Problem

Independent regulatory agencies play an important role in that they are a special category of State Corporations with oversight roles over their sectors (Jamison & Berg, 2018). According to a report by KIPPRA (2019), there is poor service delivery in the regulatory bodies in Kenya which affects efficiency and general performance of the institutions. The report indicated that 45% of citizens had negative comments regarding service delivery in the regulatory bodies in Kenya citing complaints about service delivery. Pricewaterhouse Coopers (PWC, 2020) report indicated that 37% of the fraud cases reported were from Government and state-owned enterprises in Kenya. Independent regulatory agencies in Kenya continue to face a range of challenges, including but not limited to accountability, service delivery, productivity and stakeholder satisfaction. This is despite the fact that these agencies are meant to contribute immensely to Kenya's economic and social development. Their performance and operational efficiency has continued to deteriorate in recent years (Yatani, 2021). The Performance Evaluation of State Corporations and Tertiary Institutions report for the Financial Year 2021/2022 released 11th of April 2023 ranked independent regulatory agencies at number five out of the eight functional categories of State. The independent regulatory agencies were ranked as the most deteriorated category of State Corporations (PSPMU, 2022). During the FY 2020/2021, 74.8% of State Corporations (including regulatory agencies) did not achieve their performance targets.

There are various studies on e- procurement in Kenya; Kimutai and Magutu (2020) showed that e-supplier identification, e-supplier selection, e-prequalification and e-supplier evaluation as key e-sourcing practice are the key e-sourcing practices among most commercial state corporations in Kenya. Mapendo, Mutuku, and Musau (2020) concludes that the use of e-payment plays an important role in enhancing the performance of the tuskys supermarket. Hajir (2021) concluded that adoption of e-payment, and e-sourcing practices were significant predictors of operational performance of the supermarkets. There is study limitation on e-

procurement practices and performance of independent regulatory bodies in Kenya. This study hence sought to fill the knowledge gap by examining the effect of e-procurement practices on performance of independent regulatory bodies in Nairobi City County, Kenya.

Specific Objectives

i. To assess effect of e-sourcing on performance of independent regulatory bodies in Nairobi City County, Kenya.
ii. To determine effect of e-payment on performance of independent regulatory bodies in Nairobi City County, Kenya.

LITERATURE REVIEW

Theoretical Review

Grey Theory

Julong Deng proposed the grey hypothesis (1982). According to Sternberg and Lubart (1991). The researcher established the theory to solve complex problems involving uncertainties, and attempts to handle a system with unidentified or imperfect knowledge. A grey system comprises both known and unknown factors. According to this approach, the information is divided into three types (Deng, 1989). This categorization is determined by the level of information obtained. First, when it is absolutely definite, it is said to be white; second, when it is completely unknown, it is regarded to be black; and finally when it is indefinite, it is regarded to be grey. The grey theory asserts that the buyer computes a grey conceivable level between the ideal reference supplier alternative and the set of compared suppliers' alternatives to establish the classification of all supplier alternatives and to pick the best provider based on grey statistics (Deng, 1989). Sometimes, the selected solution (candidate supplier) which has the minimum grey possibility degree from the ideal solution may also have a lower grey possibility degree from the negative ideal solution as compared to other alternatives. In manufacturing industries the raw materials and component parts can equal up to 70% of the product cost. According to Sternberg and Lubart (1991), when only a few parts are acquired externally, the complete requirement can be met by a single provider. Such a paradigm seems to be viable, particularly in the recent years which has witnessed a significant change in many organizations' sourcing strategies, shifting from the traditional practices of acquiring multiple suppliers to depend mainly on a single supplier with whom a long-term mutual relationship exists. In such case, the choice entails picking one provider for a single product list to satisfy the overall client's need (Deng, 1989). The theory supports the variable on e-sourcing since through technology, the procurement managers can be able to contact several suppliers and evaluate them on a low budget since it does not involve physical contacts with the suppliers in the earlier stages of procurement.

Decomposed Theory of Planned Behavior

This theory was created by Taylor et al., (1995). It emanated from the concept that the theory of planned behavior beliefs can be fragmented into various dimensions. Taylor et al., (1995), claimed that the decomposed Theory of Planned Behavior model describes explicit main beliefs that encourage utilization of Information Technology. The decomposition of beliefs about attitude contain three aspects of invention which have an impact on behavioral plans. The key factor in the theory of planned behavior is the plan to do a particular behavior. They are indicators of how users find it difficult to attempt, the efforts they plan to use so as to do something. Despite the fact that a few practices could really meet this necessity extremely well, the implementation exceedingly relies somewhat on some non-motivational components like accessibility of basic assets (e.g., time, cash and attitudes). These elements show a persons' actual authority over the behaviour. To the extent that an individual has the opportunity and

resources and plans to carry out the behavior, the person should be effective in doing as such. Various scholars have utilized the theory of planned behavior; users' adoption of instant texting (Lu *et al.* 2009), wellbeing services (nutrition, alcohol abuse, medication guidelines, smoking, watching weight) (Hoie *et al.* 2012) and people intent to exercise through the web (Spink *et al.* 2012).

The weakness of the theory of planned behaviors as presented by Ajzen al (1991) is that it does not factor in variables that can be used to forecast a particular behavior. Another limitation is this theory considers a set of beliefs that influences perceptions, as a one-dimensional element hence making it hard to understand the precise beliefs which affect organization behaviour in various technology adoption situations (Hoie *et al.* 2012). The model of the theory of Planned Behavior assumes that user decide by analyzing the costs and benefits of various courses of action and selecting the option that increases their anticipated net benefits. The theory is hence applicable to the variable on e-payment which are more secure and transparent that cash payments.

Conceptual Framework

According to Kothari and Garg (2014), a conceptual framework is a hypothetical model that identifies a model under investigation and the relationship between dependent and independent variables. Figure 2.1 depicts the conceptualization of the study variables.

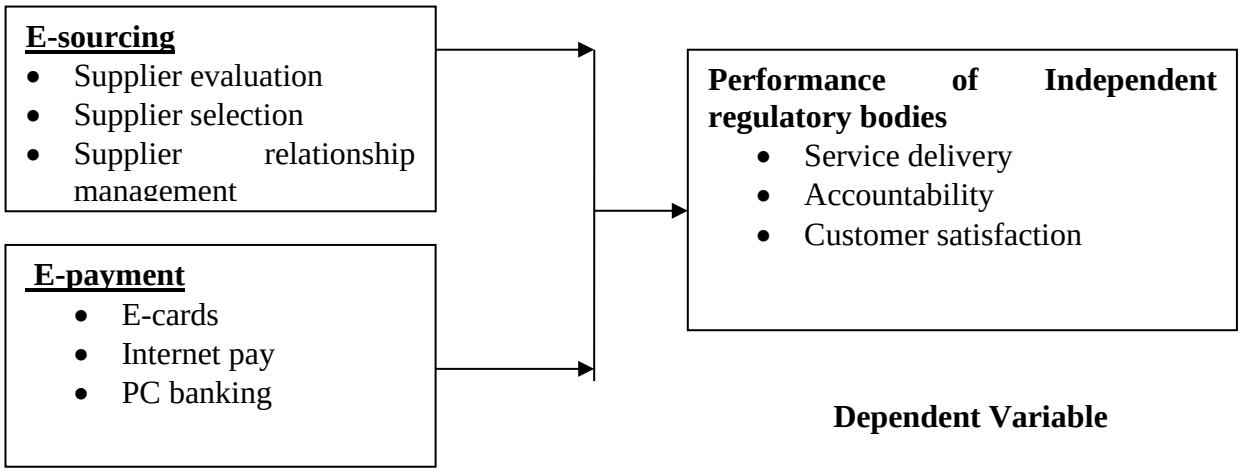

Figure 2. 1: Conceptual Framework

E-sourcing

E-sourcing is the sourcing process enabled with appropriate web-enabled, collaborative technology to facilitate the full-life cycle of the procurement process for both buyers and suppliers. Suppliers in electronic procurement are categorized into auctions depending on their long-term and short-term relationships or both (Belisari, 2020). In auction, short term relationship, all suppliers and their price catalogue are electronically provided hence making it easy for the buying firm to make comparison before making their decision on which suppler to pick. On long term relationship, there involves a strategic alliance where both buyer and supplier enter a joint planning through sharing their information on procurement process electronically. Some of benefits of e-sourcing to a firm are, there is a level playing field to all suppliers which lead to fairness , improve trust between suppliers and leads to supplier relationship management. (Greunen, Herselman, & Nierkek, 2019).

Implementing electronic sourcing allows organizations to access a larger pool of suppliers, potentially securing better prices, higher quality, and increased expertise from experienced suppliers. E-sourcing enables organizations to identify top suppliers across a broader geographical area and maintain audit trails for transparency and accountability. As internet penetration grows and more suppliers adopt technology, public entities, including state corporations, are increasingly encouraged to embrace electronic sourcing to enhance procurement effectiveness and promote accountability in supplier selection. (Waithaka & Kimani, 2021). Wangari and Ndeto, 2022) describe electronic sourcing in creating and approving purchase requisitions, placing purchase orders, and receiving goods and services through internet-based software systems. Integrating electronic sourcing significantly improves organizational performance by eliminating repetitive manual processes and excessive paperwork, thus reducing costs, increasing productivity, and enhancing customer service (Kimutai et al., 2020).

E-payment

Electronic payment is a type of monetary transfer from the purchaser to the vendor that is provided using electronic communication systems. The electronic payment system has grown increasingly over the last decades due to the widely spread of internet-based banking and shopping. As the world advance more on technology development, a lot of electronic payment systems and payment processing devices have been developed to increase, improve and provide secure e-payment transactions while decreasing the percentage of check and cash transaction. . The most commonly used electronic payment methods are debit cards, virtual cards, credit cards, and ACH means like direct debit and direct deposits (Suryono & Palupi, 2024).

Today, most companies, government departments and corporations have embraced electronic transactions to improve their profitability or efficiency in selling goods or services in areas such as credit card, banking, health insurance, automobile insurance, online auction, etc. (Abdi, & Barasa, 2023). Technology and e-payments have been one of the most significant obstacles every company faces in the internet age. Simplicity of payment helps consumers to buy, saving effort and time. New payment technologies that take the form of electronic methods have not only reduced the settlement time but also the financial costs of processing client payments. The shift from the traditional paper-based payment systems to electronic methods has substantially reduced the cost of operations for organizations (Yakubu, 2022).

Empirical Review

E-sourcing and Firm Performance

Prince and Patrick (2019) studied the impact of e-sourcing adoption on supply chain efficiency in Rwanda's telecommunications industry, using MTN Rwanda as a case study. The population of the study consisted of 265 randomly selected MTN Rwanda employees. The study chose 53 respondents from a sample of 20 percent of the population. Primary data was collected using open-ended and closed-ended questionnaires. The study's findings showed that MTN Rwanda implemented e-Sourcing to handle sections of its procurement activities, despite being disintegrated with other systems that run in silos.

Abdalla and Wamalwa (2024) investigated the effect of the electronic procurement system on the organizational performance of freight firms in Mombasa County. The study employed a descriptive design and stratified sampling procedure. The study sampled 254 employees including general managers and departmental heads from 80 freight firms in Mombasa County. Electronic mail questionnaires were used to collect data. Results showed that electronic sourcing had a statistically insignificant and negative effect on the transparency. There was a weak positive and insignificant correlation between electronic sourcing and organizational performance.

Murithi, Ngugi, and Kiarie (2024) studied impact of electronic sourcing on the performance of state corporations in Kenya. The study used a descriptive correlational research design. Data were collected from a sample of 153 respondents out of a population of 248. Data was collected using questionnaires. The findings indicated that electronic sourcing significantly affects the performance of state-owned corporations in Kenya. The study concludes that electronic sourcing is crucial for ensuring audit trails, enhancing service delivery, and managing operational costs effectively. Embracing electronic sourcing could enable state corporations to improve their performance by becoming more effective in their roles and functions.

Oginga (2021) sought to determine the influence of e-procurement on organizational performance: a case of Kenya Airports Authority. This study used descriptive survey design. The target was 147 managers consisting of top management, middle level management and lower-level management. A closed-ended questionnaire was used in data collection process. The study revealed that e-sourcing has strong and significant relationship with organizational performance. E-sourcing has become a key procurement tool allowing organizations to connect, screen and shortlist suppliers, irrespective of whether they are present at the same location or at the same time allowing managers to secure better outcomes than from traditional negotiations.

E-payment and Firm Performance

Arthur, Mwaseba, and Mnasi (2023) examined the influence of e-Payment system on the performance of public procurement of Kasulu District. The study employed a positivism philosophy and implemented a cross-sectional research design. The study sample included 395 respondent. Data was collected using questionnaires. The study revealed that the e-Payment System significantly and positively impacts public procurement performance. An increase in the execution of e-Payment System elements leads to improvements in various procurement aspects, including timely allocation of resources, increased value for money, better service quality, reduced user complaints, and improved communication.

Ademola, Kolawole, and Afolabi (2024) investigated the effect of electronic payment channels on the performance of microfinance banks in the South West region of Nigeria. Secondary data from annual reports of the selected microfinance were obtained from 2007 to 2021. Descriptive statistics, correlation analysis, and fixed effect regression model were employed for the analysis. Results indicated that ATMs and POS channels have positive and significant effect on the performance of microfinance banks. However, findings revealed that mobile banking had positive but insignificant effect on the performance of microfinance banks in Nigeria

Atuheire (2022) studied effect of Electronic Payment on Revenue collection of National Water and Sewerage Corporation of Uganda. The study adopted a descriptive and correlational study designs. Primary and secondary data were collected using SPSS. Secondary data on revenue collection from 2011 to 2020 was analyzed. The study found that electronic payment systems do not have a significant contribution on revenue collection. The study found a strong and significant relationship between electronic payment systems and revenue collection but limited by network inconsistencies.

Munyao (2020) sought to establish the effects of e-payment system on revenue performance. The study adopted descriptive research design. The study population consisted of 65 respondents at Sarova Hotels. Stratified sampling technique was deployed in the study. A sample size of 65 respondents was studied. A questionnaire was used for data collection. The findings revealed that there exists a significant relationship between e-payment benefits and revenue performance. The study concluded that e-payment technology enhances convenience and that electronic payment technology is essential for the hotel to have a global presence in terms of market expansion.

Adawe and Ndengui (2024) evaluated the effect of e-payment on supply chain management success in the health sector in Kenya. The purpose of this empirical study was to investigate how hospitals in Kenya are using electronic tendering and electronic invoicing to improve their supply chain management. The study found that Kenyan hospital administrators have a highly positive perception of electronic procurement practices. The findings concluded that e-invoicing positively impacts procurement processes, promoting transparency and operational effectiveness.

Wekesa, Abuga, and Simotwo (2022) analyzed the influence of electronic payment systems' influence on revenue collection performance in Trans-Nzoia County, Kenya. This study adopted a descriptive survey research design. The study utilized the census technique to sample 57 respondents. A questionnaire was used to collect data. The study concluded that electronic fund transfer payment systems, mobile payment systems, electronic billing machines, and online banking had a positive significant effect on revenue collection performance.

Kimonye and Muchelule (2024) studied the relationship between electronic payment system and financial performance of commercial banks in Kenya. The study analyzed the relationships between electronic cards issued and bank agents and financial performance. The research adopted a cross-sectional study design. The target was the Information Technology, Operations, and Finance Management Staff of the 24 domestic commercial banks in Kenya. The findings revealed a significant relationship between electronic payment systems and financial performance. Specifically, electronic cards usage and bank agents were found to positively influence financial performance, while the impact of automated teller machines (ATMs) was statistically significant.

RESEARCH METHODOLOGY

The study adopted cross sectional research design. According to Creswell and Creswell (2017), cross-sectional research design is widely employed to gather data at one specific point in time. The target population for this study was independent regulatory bodies in Nairobi Kenya. According to information from the website of state corporations advisory committee (2023), there are 25 independent regulatory bodies in Kenya which was the study unit of analysis. The unit of observation was 50 procurement, 50 stores, 50 ICT, and 50 finance management staff in the independent regulatory bodies. The study target was 150 respondents. This study used the census approach since the target population is small. A census is the procedure of systematically acquiring and recording information about the members of a given population (Mugenda & Mugenda, 2008).

The study used questionnaires for data collection. According to Kowalczyk (2015), a questionnaire allows a scholar to gather a great amount of data at a low cost from a diverse group of participants who are sometimes dispersed across a vast geographic area. Quantitative data was coded then analyzed using Statistical Package for Social Sciences (SPSS) computer software version 28. The study used descriptive and inferential statistics. Descriptive statistics included percentage, mean, and standard deviation. Inferential statistics on the other hand included correlation and regression which helped to establish the relationship between the independent and dependent variables.

RESEARCH FINDINGS AND DISCUSSION

The study initially prepared 200 questionnaires, out of which 20 were used for pilot testing and excluded from the main data collection. Therefore, 180 questionnaires were officially administered to the targeted respondents drawn from procurement, stores, ICT, and finance

departments within independent regulatory agencies in Nairobi City County. Out of the 180 questionnaires distributed, 162 were completed and returned, while 18 were not returned, resulting in a response rate of 90%. According to Mugenda and Mugenda (2003), a response rate of 70% and above is considered excellent in survey-based research and provides reliable data for analysis. Therefore, the achieved response rate of 90% is deemed highly adequate and enhances the validity and generalizability of the study findings. This response level strengthens the study's ability to draw valid conclusions about the influence of e-procurement practices on the performance of independent regulatory agencies.

Descriptive Analysis of Study Variables

This section presents the descriptive statistics for each of the independent variables—E-sourcing, E-payment and the dependent variable, Performance of Independent Regulatory Bodies. The analysis utilizes mean scores and standard deviations to interpret the extent to which respondents agreed or disagreed with each statement related to the study variables. Data was collected using a five-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The mean values were interpreted based on their closeness to either end of the scale, with means ranging between 1.00 and 2.49 indicating disagreement, 2.50 to 3.49 reflecting a neutral or moderate position, and 3.50 to 5.00 signifying agreement with the statements. This descriptive analysis provides insight into the prevailing e-procurement practices within independent regulatory agencies and their perceived influence on organizational performance.

E-Sourcing Practices

The first objective of the study was to assess effect of e-sourcing on performance of independent regulatory bodies in Nairobi City County, Kenya. Respondents were asked to indicate their level of agreement with statements related to e-sourcing. The results are summarized in Table 4.1

Table 4.1: Descriptive statistics for E-Sourcing Practices

E-Sourcing Statements	Mean	Std. Deviation
The organization has embraced electronic requisitions when sourcing for suppliers	4.236	0.527
The organization has an active catalog that contains all the information regarding the quality and specifications of goods and services required	4.167	0.588
Our suppliers are referred to available online databases that have the required information regarding the supplies that the organization intends to procure	4.192	0.611
Identified vendors in our organization are assessed virtually without the necessity of physically being at the organization	4.153	0.574
The organization has put adequate measures and systems to ensure the sourcing of suppliers is effectively done electronically	4.208	0.556
Organization electronically evaluate proposals, quotations, and bids from several vendors	4.278	0.495
E-sourcing ensures that suppliers are always updated on the supply chain	4.236	0.559
Aggregate Score	**4.210**	**0.559**

Electronic evaluation of proposals, quotations, and bids ranked highest (Mean = 4.278, SD = 0.495). This shows that most agencies prioritize automating evaluations to enhance efficiency and eliminate manual errors. Keeping suppliers updated on supply chain activities scored

(Mean = 4.236, SD = 0.559), indicating that regular updates build strong supplier relationships and improve communication. The use of electronic requisitions in supplier sourcing had a mean of 4.236 (SD = 0.527), confirming that digital requisitions are well-integrated into sourcing. Adequate e-sourcing systems came next (Mean = 4.208, SD = 0.556), implying that most agencies have established robust digital platforms to support procurement.

Referring suppliers to online procurement databases scored (Mean = 4.192, SD = 0.611), indicating that agencies often guide suppliers to centralized digital platforms. Maintaining online catalogs with quality and specification details recorded (Mean = 4.167, SD = 0.588), reflecting that while digital catalogs are common, not all agencies fully optimize their use. Virtual vendor assessments had the lowest score (Mean = 4.153, SD = 0.574), suggesting that some agencies still balance between virtual and physical assessments.

The aggregate mean score for e-sourcing was 4.210, demonstrating that independent regulatory agencies have widely adopted e-sourcing processes such as electronic requisitions, virtual vendor evaluations, and digital supplier catalogs. This finding resonates with Murithi, Ngugi, and Kiarie (2024) who found that electronic sourcing significantly improves performance by ensuring audit trails, enhancing service delivery, and reducing operational costs in Kenyan state corporations. Their study emphasized that e-sourcing promotes accountability and allows organizations to manage suppliers more effectively, leading to better procurement outcomes. Similarly, Oginga (2021) established that e-sourcing has a strong and significant relationship with organizational performance at Kenya Airports Authority. Oginga noted that e-sourcing allows entities to connect, screen, and shortlist suppliers regardless of location, enhancing procurement flexibility and competition. The current study supports these conclusions, as the high scores indicate that e-sourcing is integral to supplier management and contributes directly to improved regulatory agency performance in Nairobi City County.

E-Payment Practices

The study sought to determine effect of e-payment on performance of independent regulatory bodies in Nairobi City County, Kenya. Respondents shared their views on the adoption of e-payment systems. The findings are presented in Table 4.2.

Table 4.2: Descriptive Statistics for E-Payment Practices

E-Payment Statements	Mean	Std. Deviation
The organization ensures suppliers have access to their online supply account 24/7	4.056	0.658
The organization use online bank transfers to make payment to suppliers	4.125	0.674
E-payment leads to secure and safer payment transactions	4.153	0.601
E-payment is a convenient and credible means of making payments	4.208	0.589
Electronic payment is crucial for effective service delivery	4.264	0.517
Electronic payment technology allows the organization to create internal revenue control mechanisms	4.222	0.556
Mobile payments greatly reduce delivery time	4.097	0.665
E-cards and E-cheques greatly reduce delivery time	4.181	0.617
Aggregate Score	**4.163**	**0.597**

The statement on e-payments enhancing service delivery rated highest (Mean = 4.264, SD = 0.517), suggesting that agencies highly value e-payments for speeding up workflows. Internal revenue control through e-payment scored (Mean = 4.222, SD = 0.556), indicating that digital payments improve financial accountability. E-payment's convenience and credibility followed (Mean = 4.208, SD = 0.589), reflecting trust in these platforms. E-cards and e-cheques

improving efficiency scored (Mean = 4.181, SD = 0.617), showing moderate application of these tools. Secure and safer transactions through e-payments were rated (Mean = 4.153, SD = 0.601), indicating positive confidence in security features. The use of online bank transfers scored (Mean = 4.125, SD = 0.674), suggesting standard practice though with room for growth. Mobile payments reducing delivery time scored (Mean = 4.097, SD = 0.665), while 24/7 supplier access to online accounts was lowest (Mean = 4.056, SD = 0.658), implying some agencies still limit supplier access.

The e-payment practices scored an aggregate mean of 4.163, confirming strong adoption across independent regulatory bodies. The highest scores around enhancing service delivery and internal revenue control suggest that these agencies experience practical benefits from digitized payments, including speed, transparency, and accountability. This aligns with Arthur, Mwaseba, and Mnasi (2023) who reported that implementing e-payment systems significantly improves public procurement performance in Kasulu District Council, Tanzania. Their study found that e-payments lead to better resource allocation, timely service delivery, and reduced complaints—all reflected in the current study's findings. Similarly, Kimonye and Muchelule (2024) concluded that electronic payment systems positively influence financial performance in Kenyan commercial banks. They highlighted that electronic cards and banking agents streamline financial flows, increase efficiency, and improve overall performance. This is comparable to the present study's results, where e-payment promotes accountability and supports service efficiency in the public sector.

Performance of Independent Regulatory Agencies

The general objective of the study was to examine effect of electronic procurement practices on performance of independent regulatory bodies in Nairobi City County, Kenya. Performance indicators were analyzed based on service delivery, accountability, and customer satisfaction. Table 4.3 presents summary of respondents responses of performance statements.

Table 4.3: Descriptive Statistics for Performance of Independent Regulatory Agencies

Performance Statements	Mean	Std. Deviation
Service delivery in the regulatory body has improved	4.278	0.495
There is improved accountability of the transactions	4.236	0.504
There are less complaints from the customers	4.097	0.589
There improved efficiency in service delivery	4.264	0.517
Aggregate Score	**4.219**	**0.526**

Improved service delivery scored highest (Mean = 4.278, SD = 0.495), indicating that e-procurement practices enhance responsiveness. Efficiency improvement followed (Mean = 4.264, SD = 0.517), suggesting noticeable gains in operational flow. Improved accountability rated (Mean = 4.236, SD = 0.504), reflecting that e-procurement reduces loopholes for mismanagement. Reduced customer complaints had the lowest score (Mean = 4.097, SD = 0.589), implying some residual challenges in fully addressing client grievances.

The performance of independent regulatory agencies scored the highest aggregate mean of 4.219, indicating that the adoption of e-procurement practices has directly enhanced service delivery, efficiency, and accountability. The findings demonstrate that digital systems have improved customer satisfaction and streamlined operations, though challenges like customer complaints still exist. These findings align with Boafo et al. (2020) who found that e-procurement enhances transparency, improves procurement record management, and strengthens supplier relationships in Ghana's public sector. The study recommended that governments should institutionalize e-procurement systems to ensure efficiency and accountability.

Across all variables, mean scores range from 4.158 to 4.219, indicating that respondents generally agreed that e-procurement practices (e-sourcing, e-payment) are well-adopted and positively impact the performance of independent regulatory agencies in Nairobi City County. The consistently high means and low standard deviations reflect a shared experience and perception across respondents, validating the effectiveness of these digital procurement practices in promoting transparency, efficiency, and accountability.

Correlation Analysis

This section presents the Pearson correlation analysis results to determine the strength and direction of the relationship between each e-procurement practice (e-sourcing, e-payment) and the performance of independent regulatory agencies in Nairobi City County. The Pearson correlation coefficient (r) ranges from -1 to +1, where values closer to +1 indicate a strong positive relationship, values closer to -1 indicate a strong negative relationship, and values near zero indicate no relationship. The results are summarized in Table 4.4.

Table 4. 4: Correlation Analysis Matrix

Variables		Performance	E-Sourcing	E-Payment
Performance	Pearson Correlation	1		
	Sig. (1-tailed)			
	N	162		
E-Sourcing	Pearson Correlation	.713*	1	
	Sig. (1-tailed)	.000		
	N	162	162	
E-Payment	Pearson Correlation	.701*	.612	1
	Sig. (1-tailed)	.000	.093	
	N	162	162	162

*Correlation is significant at the 0.05 level (2-tailed)

The study established a strong positive correlation between e-sourcing and performance ($r = .713$, $p < 0.05$), meaning that better e-sourcing directly enhances service delivery, accountability, and efficiency. This finding is consistent with Achere (2020), who studied public universities in Kenya and found that e-sourcing significantly improves procurement performance by shortening lead times, increasing supplier competitiveness, and improving value for money. Achere's research concluded that digital sourcing systems optimize the procurement cycle and promote transparency—mirroring the results of this study that strong e-sourcing practices improve independent regulatory agencies' operational efficiency.

The correlation between e-payment and performance was also strong ($r = .701$, $p < 0.05$), indicating that robust e-payment systems enhance the financial and operational performance of regulatory agencies. These results are supported by Kithinji (2020), who found that e-payment systems directly influence financial performance in Nairobi-based commercial banks. Kithinji noted that digital payments reduced payment cycles, minimized fraud risks, and improved cash flow management. Similarly, this study confirms that e-payments play a pivotal role in improving service delivery and promoting accountability within independent regulatory agencies.

Coefficients of Regression

This subsection explains the individual contribution of each independent variable to performance using both unstandardized (B) and standardized (Beta) coefficients.

Table 4.5: Beta Coefficients of Study Variables

Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	0.564	0.145		3.893	.000
E-Sourcing	0.342	0.063	0.374	5.429	.000
E-Payment	0.291	0.054	0.311	5.389	.000

Based on the unstandardized coefficients, the regression equation is:

$$Performance = 0.564 + 0.342(E\text{-}Sourcing) + 0.291(E\text{-}Payment)$$

E-sourcing showed a strong positive effect on performance with B = 0.342 and Beta = 0.374 (p = .000). This means that a unit increase in e-sourcing improves agency performance by 0.342 units, holding other factors constant. Its standardized coefficient further confirms that e-sourcing has the strongest individual effect among all variables. This supports Githinji (2021) who established that e-sourcing systems significantly enhance cost efficiency and procurement speed in Kenyan universities.

E-payment recorded B = 0.291 and Beta = 0.311 (p = .000). This suggests that a unit improvement in e-payment systems results in a 0.291 unit increase in performance. Its high Beta shows that digital financial transactions play a substantial role in enhancing efficiency and accountability. These findings align with Karanu (2020) who noted that e-payments improve cash flow management and service delivery in public sector organizations.

Conclusions

The study concludes that e-sourcing significantly improves performance by enhancing supplier selection, promoting transparency, and reducing lead times. Digital requisitions and virtual assessments make sourcing more efficient and accountable in regulatory agencies.

E-payment systems positively impact agency performance by ensuring timely, secure, and traceable payments. Automated payment processes improve financial control, minimize delays, and strengthen supplier relationships, leading to better service delivery.

Recommendation on E-Sourcing

Given that e-sourcing had the strongest impact on performance, it is recommended that independent regulatory agencies invest in centralized and fully integrated e-sourcing platforms. These platforms should include supplier databases, digital catalogs, and real-time vendor performance records to improve supplier engagement and decision-making. Agencies should also organize regular supplier training sessions to equip vendors with the knowledge and skills required to navigate e-sourcing systems efficiently. Further, linking e-sourcing platforms with market intelligence tools will enable procurement officers to assess supplier competitiveness accurately. Continuous system upgrades and enhancements are necessary to accommodate virtual supplier assessments and streamline communication with potential suppliers.

Recommendation on E-Payment

The study recommends that independent regulatory agencies fully automate their e-payment processes to ensure faster, more secure transactions and eliminate delays caused by manual approvals. Strengthening system security through multi-factor authentication and regular audits will protect against cyber threats and fraud. Agencies should also enhance transparency by providing suppliers with real-time access to payment status, reducing payment disputes and building supplier confidence. Integrating e-payment systems with the organization's financial

management systems is equally essential to promote seamless reconciliations, ensure accountability, and improve tracking of all financial transactions.

Suggestions for Further Research

Based on the study findings and limitations, future research should explore the challenges and barriers to e-procurement adoption within independent regulatory agencies to understand factors hindering full implementation. Comparative studies could also be conducted between national and county-level agencies to assess differences in e-procurement impact. Additionally, research focusing on the long-term effects of e-procurement on supplier relationships and service delivery outcomes would provide deeper insights into the sustainability and efficiency of digital procurement systems in Kenya's public sector.

REFERENCES

Abdi, A., & Barasa, P. (2023). *Effect of Electronic Procurement Practices on Performance of Preferential Procurement in Kwale County Government*. Journal of Economics, Management Sciences & Procurement, 3(1), 34–56.

Adawe, M., & Ndengui, N. (2024). *Influence of Adopting Electronic Procurement Practices on Performance of Supply Chain Management for Hospitals in Kenya*. The International Journal of Business & Management, 12(7), 167–170.

Ademola, A., Kolawole, A., & Afolabi, D. (2024). *Effect of Electronic Payment Systems on the Performance of Microfinance Banks in Nigeria*. The Journal of Business Studies, 8(1), 59–72.

Arthur, B., Mwaseba, N., & Mnasi, H. (2023). *Examining the Influence of E-Payment System on LGAs' Public Procurement Performance: A Case of Kasulu District Council, Kigoma Tanzania*. Global Journal of Purchasing and Procurement Management, 2(2), 1–16.

Chen, Y., Bretschneider, S., Stritch, J. M., Darnall, N., & Hsueh, L. (2022). *E-procurement system adoption in local governments: The role of procurement complexity and organizational structure*. Public Management Review, 24(6), 903–925.

Deng, J. (1989). *Introduction to grey system theory*. The Journal of Grey System, 1(1), 1–24.

Jamison, M. A., & Berg, S. V. (2018). *An Introduction to the Institutional Design of Regulatory Agencies*. Public Utility Research Center, University of Florida.

Kimonye, E., & Muchelule, Y. (2024). *E-Payment System and Financial Performance of Commercial Banks in Nairobi City County, Kenya*. International Journal of Social Sciences Management and Entrepreneurship, 8(4), 754–768.

Kimutai, L., & Magutu, O. (2020). *Electronic Sourcing and Procurement Cost of Commercial State Corporations in Kenya*. Noble International Journal of Business and Management Research, 4(8), 72–84.

Mapendo, D., Mutuku, F., & Musau, C. (2020). *Impact of Electronic Procurement Practices on Organization Performance*. Unpublished Thesis, Riara University.

Mavidis, A., & Folinas, D. (2022). *From public E-procurement 3.0 to E-procurement 4.0: A critical literature review*. Sustainability, 14(18), 11252.

Murithi, N., Ngugi, K., & Kiarie, D. (2024). *Electronic Sourcing as an E-Procurement Practice and Its Role on Organizational Performance: A Study in State-Owned Corporations in Kenya*. Journal Integration of Social Studies and Business Development, 2(2), 125–132.

Oginga, O. (2021). *E-Procurement and Organizational Performance: A Case of Kenya Airports Authority*. [Master's Thesis, United States International University Africa].

Owere, B. (2021). *Organizational Attributes and Adoption of Electronic Procurement in Local Governments: A Case Study of Tororo District Local Government*. [Master's Thesis, Kyambogo University].

PricewaterhouseCoopers (PWC). (2020). *Kenya Economic Crime and Fraud Survey Report*. PWC Kenya. Retrieved from https://www.pwc.com

Salum, M., & Ntimbwa, M. C. (2020). *Assessment of the Effectiveness of E-Procurement in Local Government in Tanzania: A Case of Lindi District Council*.

Sternberg, R. J., & Lubart, T. I. (1991). *An Investment Theory of Creativity and Its Development*. Human Development, 34(1), 1–31.

Waithaka, K., & Kimani, G. (2021). *Effect of E-Procurement Practices on Supply Chain Performance*. Global Journal of Purchasing and Procurement Management, 1(1), 32–42.

Wangari, K. N., & Ndeto, C. (2022). *Influence of Electronic Sourcing on Performance of State Corporations in Kenya*. International Journal of Procurement and Supply Chain Management, 6(1), 93–105.

Wekesa, I. B., Abuga, I., & Simotwo, P. (2022). *Influence of Electronic Payment Systems on Revenue Collection Performance in Trans Nzoia County Government Kenya*. The International Journal of Business & Management, 10(11).

Yatani, U. (2021). *2021 Budget Policy Statement*. National Treasury, Government of Kenya. Retrieved from https://www.treasury.go.ke