

Effect of E-Contracting on Performance of Public Hospitals in Kakamega County, Kenya

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ABSTRACT

The study objective was to determine the effect of E-Contracting on performance of public hospitals in Kakamega County. The study was founded on diffusion of innovation theory and RBV theory. The study applied descriptive survey research design. The study utilized a sample size of 204 which was derived from a sampling frame of 416 using Yamane 1967 formula. Questionnaire was used to collect data. Validity was determined through discussion with the supervisor and department staff and reliability was also determined by pilot study with a focus on internal consistency. This was measured using the Cronbach alpha coefficient. The measures of central tendency and correlational analysis were also used in data analysis. The study was of utmost significance to the policymakers in the health sector, researchers and academicians and the public hospitals in Kakamega and Kenya at large. The findings were presented in tables and figures. The study revealed that manual processes continue to prevail in contract administration, and the platforms are deficient in sophisticated functionalities to facilitate effective negotiation, monitoring, and collaboration. Besides, the study revealed that although the system does not markedly streamline the purchase process, as demonstrated by the restricted capabilities of e-shopping carts and error checking tools, it offers certain advantages in inventory management and procurement oversight.

Keywords: E-contracting, Performance, Diffusion of Innovation Theory, Resource based view theory, Hospital

INTRODUCTION

Healthcare is a highly competitive global industry. People accept to travel to remote parts of the world in order to receive the service quality they hope for. Patients usually prefer to go to private hospitals, hoping to receive high service quality. On the other hand, healthcare organizations operating in the public sector are undergoing pressure from governments and the general public to improve quality and compete effectively with their counterparts in the private sector. (Jabnoun, N., & Chaker, M, 2003)

Public hospitals are the majority health facilities in Kenya and majority of the citizens depend on them for healthcare services. The performance of public hospitals in Kenya have been marred with a lot of issues ranging from poor services to the patients, delayed supplier payments and constant labor unrest. Complaints have arisen from the manner in which procurement of goods and services are handled leading to inefficiencies in various departments including in the clinical medicine. Patients have been equally suffering in grief due to poor service delivery. Public hospitals have inadequate facilities and are characterized by dilapidated facilities, insufficient drugs, inadequate human capital as well as obsolete infrastructural facilities (Oloo et al., 2017).

E-Contracting has been an important function of government and private institutions all over the world. According to Laryea et al (2014) electronic contracting is a valuable means through which organisations can promote accountability, efficiency, transparency and value for money in the acquisition of goods, services, utilities and works. Electronic procurement has a great impact on the economy and needs to be well managed. Electronic contract management is the electronic inspection. Inspection is generally the process of assessing the goods supplied or services rendered to ensure they are in line with the specifications as provided in the tendering documents (Liao et al, 2002]. Inspection is therefore carried out during the contract implementation process and it seeks to ensure quality, quantity, timeliness, and cost-effectiveness

Caraiani, G., et.al (2013) defines Electronic contracts as the formation and/or performance achieved by means of a transmission or electronic. This type of contract has the following characteristics: Is a contract between partners who are not in the same time and at the same place, so a contract between absent parties, it can be considered as a variant of the contract perfected by mail; Commercial operation, which is achieved by electronic mean is remotely comparable sale the seller has, in many ways, the offer and the buyer sends an order; Transmission of information and communication between parties is done electronically: videoconference, electronic catalog, through computer, interactive public terminal, electronic mail; being the electronic contract agreement ending the Internet, the international dimension is the default (distinguished national - international is not essential, at least in a first approach). Electronic contracting process offers a number of specific legal issues that relate primarily to contract formation, electronic signature and electronic document exchange. Electronic contracting refers to the formation of contracts by electronic means (UNCITRAL, 2002). Electronic contracting focuses on the terms or conditions of a contract negotiation and monitoring of contract performance (Lee, 1998). The term describes electronic contracting system that helps to build applications and negotiate electronic contracts

According to Linus N. Murithi et al (2025), Electronic contract management (ECM) involves the use of digital tools and processes to create, store, manage, and execute contracts. This approach enhances efficiency, reduces costs, and improves compliance and visibility in contract management. As one of the key phases in public procurement, contract management comes after the supplier has been sourced and contract awarded to the qualifying supplier. This phase involves closely monitoring the process of implementing the contract and carrying out essential steps during the implementation process including inspecting the progress of the contract, receiving suppliers' invoices as per the contract, and reporting on the progress of the contract. Electronic contract management, therefore, entails undertaking all these functions through computer-assisted systems to ensure their effectiveness and efficiency.

In its broadest sense, e-contracting may be described as the process whereby any or all of the following activities take place within a purely electronic environment, the proposed parties to a contract negotiate and form their contract through the use of an electronic communication method; once the contract has been formed, the parties electronically administer and manage the contract (for example, the parties may use an online collaboration system to communicate with each other, deliver contractual notices, agree to contractual amendments, alter project drawings and provide project approvals); and upon completion of the contract, relevant project records and communications are archived using an electronic storage medium (as opposed to the traditional paper based method of record retention (Dawson E. P et al 2007)).

Statement of the Problem

Electronic procurement facilitates streamlining procurement, ensuring prompt service delivery while optimizing resource use (Rotich et al., 2015). Notably, there has been effort by the government especially from the public procurement regulatory authority to streamline procurement functions and improve performance (Rotich & Okello, 2015). Regardless of the effort by the governments of developing countries, like Kenya and development partners like the World Bank and IMF to improve performance of the 9 organization's procurement function, public procurement is still marred by corruption, unfair tendering and poor evaluation of qualification for the tenders (Okello et al., 2021). The ethics and anti-corruption commission in their 2022 yearly report stated that procurement in the public sector is still marred with a lot of irregularities which need to be looked into since this has affected the performance of the public sector. This has in effect hampered the level of services being offered in the public hospitals thereby making the public who can afford to seek private healthcare services. Facilities in most of the public hospitals are dilapidated, insufficient and in some cases lack of proper personnel to handle them. Report from National Treasury (2020) established that the level of E-Government was still down leading to acquisition and implementation of Electronic procurement in the budget policy statement for fiscal year 2020-21. While transparent electronic procurement systems foster accountability, ensuring responsible budget expenditure and service delivery or improving procurement planning and ensuring efficient budget absorption; it still remains an avenue for impropriety in the public sector leading to poor performance (Adjei-Bamfo et al., 2019). Ngeno and Omwenga studied factors that contribute to e-procurement adoption in Bomet County government while Afolabi et al., (2019) in their study in Nigeria about critical factors for e-procurement;

Ruzindana and Prashant (2016) studied adoption of e-procurement and how it affects procurement performance among Rwanda's telecommunication companies; while Mahdillou and Akbary (2014) studied e-procurement adoption and the benefits that accrue as well as costs implications. Masudin, et al., (2021) examined the impact of E-procurement adoption on company performance in Indonesia. To this end, even though studies have been undertaken around electronic procurement in Kenya, there is not any known study about how it affects procurement performance in public hospitals in Kakamega County, presenting a contextual and geographical gap. By increasing efficiency, reducing costs and improving transparency, e procurement can help these hospitals deliver better services to the community, ultimately contributing to improved health outcomes. Consequently, it was against this backdrop that the study determined the effect of E-Contracting on performance of public hospitals in Kakamega County, Kenya.

General Objective of the Study.

To determine the effect of E-Contracting on performance in public hospitals in Kakamega County, Kenya.

Research Hypothesis

H₀₁ E-Contracting does not significantly affect performance of public hospitals in Kakamega County, Kenya.

Theoretical Literature

This study is anchored on two theories namely: Diffusion of Innovation theory and Resource based view theory.

Diffusion of Innovation Theory.

The study was guided by the diffusion of Innovation theory; diffusion is the process by which an innovation is communicated through certain channels over a period of time among the members of a social system. It was founded by Rodgers (1962). An innovation is an idea, practice, or object that is perceived to be new by an individual or other unit of adoption. Communication is a process in which participants create and share information with one another to reach a mutual understanding (Rogers, 2009). The Innovation- Decision Process Model suggests that the adoption of an innovation is not a single act, but a process that occurs over time. Potential adopters go through five stages when interacting with an innovation.

The first stage is knowledge in which potential adopters find out about an innovation and gain a basic understanding of what it is and how it works. The second stage is persuasion in which potential adopters form a positive or negative impression of the innovation. It is only in the third stage decision, that the innovation is actually adopted or rejected. The fourth stage, implementation, occurs when the innovation is actually used. In the fifth stage, confirmation, the adopter seeks information about the innovation and either continues or discontinues use of the innovation. Diffusion theory explains the concept in which firms can successfully adopt ICT in its procurement processes to enhance performance innovatively.

In the context of electronic procurement in public hospitals, diffusion theory could explain how the new procurement system is adopted by different stakeholders such as hospital administrators and procurement officers and the factors that influence the rate of adoption. Understanding the diffusion process can help in identifying barriers to adoption such as lack of technical experts, insufficient infrastructure and can guide strategies to promote the adoption of electronic procurement systems effectively in order to improve performance.

The model is drawn from new product development and marketing theory. Both fields are dominated by the assumption that users adopt new technology to maximize their utility. Also, the model does not integrate the overlapping effects of the different contexts and domains. MacVaugh, J., & Schiavone, F. (2010).

García-Avilés, J. A. (2020), argues that the theory may not apply in organizational management, the decision process is more complex than at the individual level. Organizations have goals, regulations, and informal practices that shape the processes. As Lyytinen and Damsgaard (2001) argue, an innovation needs not necessarily

pass through various stages of adoption for an individual to adopt to it, sometimes adoptions take place in dyadic relationships so that it becomes difficult to identify the stages of adoption.

Resource Based view theory.

This theory was originated by Wernefelt in 1980s and 1990s from the works and is a basis for competitiveness of a company which lies mainly in the accomplishment of organizational resources that are valuable at the business's use. Resource based view theory suggests that a firm's competitive advantage and performance are driven by its unique bundle of resources and capabilities (Dess et al., 2013). In the context of telecommunication, this theory can help analyze how companies leverage their resources such as technology, human capital and brand reputation among others to develop and implement innovative strategic performance

RBV emphasizes the importance of internal resources and capabilities as the primary sources of competitive advantage and superior performance. Specifically, RBV helps in identification of resources, assessment of resource heterogeneity and mobility, linkage to innovation strategies, impact on strategic performance as well as dynamic capabilities perspective. This theory provides valuable framework for understanding how internal resources and capabilities can be leveraged to achieve superior performance. By focusing on the technological, human and organizational resources, public hospitals can enhance their procurement processes, leading to greater efficiency, transparency and overall effectiveness in service delivery. By applying the RBV framework, a study could analyze how the resources and capabilities of public hospitals influence the successful adoption of electronic procurement systems and how this in turn affects their performance. It helps in identifying key strengths to leverage and potential gaps that need to be addressed for better outcome.

However, the use of different terminology to explain results of RBV studies makes it very difficult to compare the results of various studies. For example, while some researchers outline distinct meanings for the core terms; resources, competencies, and capabilities (e.g., Helfat & Peteraf, 2003), other researchers use the terms interchangeably (e.g., Ray et al., 2004). Nanda (1996) suggests that the lack of commonality of terms limits the usefulness of results of RBV research to strategic thinking (Madhani, 2010).

Empirical Review of Literature

Yazidi & Rana (2025) examined how procurement practices, such as project performance, need assessment, supplier sourcing, and contract management practice, influence the performance of projects in project management organizations in the United States. An exploratory research approach used for the study, and a quantitative analysis is done, while the other portion contains the four primary independent variables and one dependent variable. The target population consisted of managers, contractors and project managers which was 100. Data analysis is done using SPSS Version 25, including a reliability check. Empirical data are gathered in this study strategy to test the hypothesis. Additionally, statistical analyses are performed. The researcher assesses the effectiveness of procurement procedures in terms of need assessment, supplier sourcing, and contract management. The efficacy of procurement practices on the execution of the project is a research gap that the study attempts to solve. This study utilized a descriptive survey research design,

This study aimed at assessing the extent to which the contract management contribute to the Purchasing performance in Rwanda Energy Group as a selected procuring entity. The research survey design was used for this particular study with the population of 66 respondents, a census was used. Primary data was collected using a reliable and validated questionnaire.

The researcher adopted descriptive survey research design using both qualitative and quantitative research paradigms. The Data Collection Instrument was questionnaire that was self-administered with the help of research assistants. The research concluded that contract management is a very important variable in enhancing Purchasing performance. The researcher recommends that procuring entities should ensure that they abide to the contract conditions and terms, prepare and maintain proper contract documents, establish contract cost control policies and monitor the contract. This study was done in Kenya with a target population of 416. The sample size was obtained using stratified random sampling.

Linus et al. (2025) examined the extent to which state corporations have embraced electronic contract management and whether it has contributed to their performance. Descriptive correlation research design was adopted. The study targeted supply chain managers from 248 state corporations in Kenya. Using a sampling formula, a sample of 153 respondents was obtained and selected through a stratified random sampling technique. A questionnaire used to collect data for the study, which was analyzed using descriptive and inferential statistics.

The findings revealed that electronic contract management significantly influenced performance of state corporations in Kenya. It was concluded that most of the corporations had not effectively embraced electronic contract management and this affected their performance. This study used descriptive survey research design while integrating both inferential and descriptive statistics and it was carried out in hospitals.

Khaemba & Kirima (2025) examined the influence of digital contract management systems on procurement performance in Nairobi City County Government, focusing on contract structure, and contract monitoring. The research was anchored on Control Theory, and Principal–Agent Theory providing a multi-theoretical perspective for understanding the relationships between digital contract management practices and procurement outcomes.

The study adopted a descriptive research design targeting 137 staff members involved in procurement and contract management across various county departments. A stratified random sampling technique was used to select a sample of 102 respondents, ensuring proportional representation of all departments. Data were collected through self-administered structured questionnaires using a drop-and-pick method, complemented by email distribution for inaccessible respondents. The findings underscore the importance of adopting clear and comprehensive contract structures, strengthening monitoring mechanisms in enhancing procurement performance. This study was done in Kakamega county thus filling the geographical gap.

Conceptual Framework

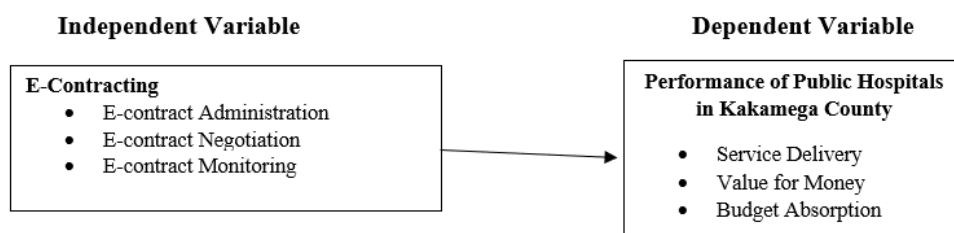


Figure 1

Figure 1 above shows the interplay the independent variable operationalized by E-contracting while the dependent variable was operationalized by performance of public hospitals in Kakamega County.

METHODOLOGY

The study applied descriptive survey research design, qualitative data analysis method was applied in this study. Both inferential and descriptive statistics were used in analyzing the data collected in this research study. Inferential data analysis was done through correlation and linear regression analysis. . The study applied descriptive survey research design. The study utilized a sample size of 204 which was derived at after the calculation from a population of 416 using Yamane 1967 formula. Questionnaire was used to collect data. Validity was determined through discussion with the supervisor and department staff and reliability was also determined by pilot study with a focus on internal consistency. This was measured using the Cronbach alpha coefficient. The measures of central tendency and correlational analysis were also used in data analysis.

Validation of Research Instruments

The research instruments were adopted from existing research literature where past studies on the subject matter had been done. This gives it the credibility on how data was collected from the respondents under study. To further make, the instruments more efficient, they were subjected to experts in the field of supply chain.

RESULTS AND DISCUSSION

Descriptive statistics: E-Contracting on performance.

The study aimed to determine the effect of E-contracting on performance in public hospitals in Kakamega County. E-contract administration, e-contract negotiation, and e-contract monitoring were used to measure the context of e-contracting.

Table 1. Descriptive Findings on E-Contracting

Statements on E-Contracting	Mean	Std. Deviation
Our e-contracting systems simplify the administration of contracts, reducing paperwork and manual processes.	3.76	.986
Our e-contracting platforms facilitate efficient negotiation of contract terms through features like automated workflows and version control.	3.81	1.124
Electronic access to contract documents improves communication and collaboration between contracting parties and our hospital.	4.01	.812
E-contracting has streamlined our contract management process, leading to increased efficiency.	3.96	.920
E-contracting systems offer automated tracking and alerts for key contract milestones and deadlines in our hospital.	3.87	1.235
Utilizing e-contracting tools helps our hospital ensure standardized and consistent contract terms across agreements.	3.63	.932
E-contracting has improved the effectiveness and control of our contract management process.	3.93	.903
Our electronic monitoring tools improve visibility into contract performance and compliance.	3.69	1.122
Utilizing e-contracting practices has enabled our hospital to reduce the risk of errors and omissions in contract documents.	3.42	.921
Average	3.79	1.005

Source: Field Data (2025)

The findings in Table 1 present a picture regarding the effect of e-contracting systems on the administration, management, and performance of contracts in public hospitals in Kakamega County. As a critical component of electronic procurement, e-contracting aims to improve efficiency, transparency, and accountability in contract management processes (Ameyaw et al., 2012; Lauren et al., 2020). However, the findings suggest that despite some apparent benefits, significant challenges limit the full realization of these goals. The analysis reveals that e-contracting platforms have largely fallen short in streamlining contract administration. With a mean score of 3.76 (SD = 0.986), most hospitals still rely heavily on manual procedures such as document preparation, approval routing, and record-keeping. This reliance impedes efforts to reduce paperwork burdens and administrative overhead, thereby constraining the potential for cost reduction and faster contract execution that automation promises (Gunasekaran et al., 2018). The limited automation undermines the capacity of e-contracting systems to optimize operational workflows, diluting their contribution to institutional efficiency.

Moreover, the perceived inadequacy of these systems to facilitate effective contract negotiations as reflected in a low mean of 3.81 (SD = 1.124), points to gaps in critical functionalities like automated workflow management, version control, and real-time tracking of contract amendments. Such shortcomings can prolong negotiation cycles, foster misunderstandings, and ultimately diminish the quality of contractual terms, which negatively affects procurement outcomes (Zheng et al., 2018; Lauren et al., 2020). The shortcomings in communication and collaboration support (mean of 4.01, SD = 0.812) further underscore that hospitals are not fully capitalizing on digital tools to synchronize efforts across suppliers, administrators, and legal teams, which is essential for successful contract performance (Callender & Schapper, 2017). The general efficiency of contract management remains unimproved (Mean = 3.96, SD = 0.920), which may be symptomatic of weak integration between e-contracting platforms and other hospital management systems. Inadequate contract monitoring tools can delay identification of compliance issues and slow responses to contractual milestones, thereby compromising procurement effectiveness (Klijn & Koppenjan, 2016). The lack of automated alerts for critical deadlines (Mean = 3.87, SD = 1.235) aggravates this vulnerability, increasing the risk of delayed payments or penalties and undermining contractual obligations adherence (Giannakis & Croom, 2004).

Standardization of contractual terms receives similarly low marks (Mean = 3.63, SD = 0.932), raising concerns about consistency and fairness in contracting. Standardized contracts are vital to prevent ambiguity and disputes, and their absence may lead to inefficiencies and conflicts throughout contract execution cycles (Bovis, 2016). The persistence of heterogeneous contract terms points towards fragmented practices across hospitals, undermining efforts toward regulatory compliance and operational cohesion. Nonetheless, the study identifies a notable positive effect: e-contracting appears effective in reducing errors and omissions in contract documents (Mean = 3.93, SD = 0.921). This suggests that automated document generation and review functionalities mitigate common human mistakes such as missing clauses or inconsistent data, thereby producing more precise and legally sound contracts (Gunasekaran et al., 2018).

Despite this benefit, e-contracting's broader influence on contract oversight and internal controls remains muted (Mean = 3.69, SD = 1.122), with the system exerting neither clearly beneficial nor adverse effects. This neutrality may stem from limited system integration, insufficient end-user training, or uneven application across departments.

Additionally, real-time monitoring capabilities appear underdeveloped, reducing transparency about contract compliance and performance. Without robust tracking tools, hospitals face challenges in timely detection and resolution of contract-related issues, which can hinder effective governance and accountability (Tran et al., 2019; Callender & Schapper, 2017). While e-contracting systems in Kakamega County's public hospitals contribute to lowering document errors, substantial barriers remain that restrict their capacity to fully transform contract management.

Addressing these shortcomings through enhanced automation, improved integration, comprehensive training, and the development of sophisticated monitoring tools; will be essential to unlocking the full potential of e-contracting to support efficient, transparent, and effective procurement processes.

Table 2. Inferential statistics: E-Contracting on performance.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.799 ^a	.638	.636	.47752	.638	311.654	1	177	.000
a. Predictors: (Constant), E-Contracting									
Anova									

Model		Sum Squares	df	Mean Square	F	Sig.
1	Regression	71.066	1	71.066	311.654	.000 ^b
	Residual	40.361	177	.228		
	Total	111.427	178			
a. Dependent Variable: Performance						
b. Predictors: (Constant), E-Contracting						

Source: Field Data (2025)

The findings summarized in Table 2 revealed a strong positive association between e-contracting and the performance of public hospitals in Kakamega County. The correlation coefficient ($R = 0.799$) emphasizes a significant linear relationship, suggesting that advances in e-contracting are closely linked to improvements in hospital procurement outcomes and, by extension, overall institutional performance. This aligns with broader evidence highlighting the centrality of digital contract management in enhancing transparency, accountability, and efficiency within public sector procurement frameworks (Lauren et al., 2020; Gunasekaran et al., 2018). The coefficient of determination ($R^2 = 0.638$) further indicates that approximately 63.8% of the variability in hospital performance can be explained by changes in e-contracting practices.

The ANOVA results highlight a strong statistically significant relationship between e-contracting and the performance of public hospitals in Kakamega County. The regression analysis produced an F-Statistic of 311.654 with an associated p-value effectively at zero ($p < 0.001$), indicating that e-contracting explains a substantial portion of the variance in hospital performance while leaving minimal unexplained error. This significant F-ratio reflects a well-fitting model and suggests that improvements in e-contracting meaningfully contribute to enhanced institutional outcomes. Given the p-value is below the conventional 0.05 threshold, the study confidently rejects the null hypothesis that posits no meaningful effect of e-contracting on hospital performance (Field, 2013). These findings align with prior research emphasizing the critical role of digital contract management in strengthening public sector procurement practices by fostering efficiency, transparency, and accountability (Gunasekaran et al., 2018; Lauren et al., 2020). By validating the explanatory power of e-contracting within this context, the analysis reinforces the importance of prioritizing technological adoption and integration to support more effective healthcare delivery in public institutions.

The hypothesis under consideration was E-Contracting does not significantly affect performance in public hospitals in Kakamega County. Given the P-Value (0.000) is less than 0.05, the null hypothesis (H_0) is rejected, meaning the alternative hypothesis (H_1) is accepted. This confirms that E-Contracting has a significant effect on the performance of public hospitals in Kakamega County.

DISCUSSIONS AND FINDINGS.

The study analyzed the effect of e-contracting on the performance of public hospitals in Kakamega County and concluded that, although the technologies have potential advantages, their execution is predominantly ineffective. Manual processes continue to prevail in contract administration, and the platforms are deficient in sophisticated functionalities to facilitate effective negotiation, monitoring, and collaboration. Principal difficulties encompass suboptimal system integration, restricted automation, and insufficient standardization of contractual terms. Nonetheless, other advantages were observed, such as diminished documentation errors, enhanced compliance, superior record-keeping, and fortified supplier connections. Notwithstanding these advantages, the total impact on contract management is constrained, primarily due to usability challenges and inadequate training. The study indicates that although e-contracting holds promise, substantial enhancements are necessary to achieve its complete effect on hospital performance.

CONCLUSION

The study concludes that although e-contracting in public hospitals in Kakamega County shows considerable potential, its present execution is inadequate to effect significant enhancements in contract administration and overall hospital performance. The continuation of manual processes and the absence of automation reveal systemic inefficiencies that compromise the supposed advantages of digital procurement systems. E-contracting systems have failed to improve essential elements of contract administration, including negotiation, communication, monitoring, and standardization. These deficiencies indicate significant deficiencies in system functionality, user training, and institutional preparedness. Consequently, hospitals cannot fully utilize digital tools to enhance openness, efficiency, and accountability in procurement processes. Nonetheless, the study delineates some areas of beneficial influence, including diminished errors, heightened compliance, and improved record-keeping. These indicate that e-contracting, when effectively executed and endorsed, can enhance governance and operational results. Consequently, for e-contracting to serve as a successful mechanism in public hospital procurement, enhanced system integration, focused capacity-building, and policy support are essential. Resolving these fundamental difficulties is crucial for realizing the complete potential of e-contracting in improving service delivery and institutional performance.

RECOMMENDATIONS

In order to reduce dependency on manual chores and streamline operations, the study suggests that hospital management give priority to integrating e-contracting systems with current administrative platforms through implementation of the following strategies,

- I. Invest in extensive training programs to improve staff expertise in sophisticated functionalities including automated workflows and real-time monitoring systems.
- II. Hospitals should promote the development of advanced communication technologies inside e-contracting platforms to better collaboration.
- III. Develop standardized contract forms and conditions, this will guarantee uniformity and clarity in procurement agreements.
- IV. Government entities must formulate explicit norms and frameworks for e-contracting in public hospitals to conform to national procurement criteria.
- V. Collaboration among hospitals, IT suppliers, and regulatory bodies should be promoted to guarantee the creation of interoperable, efficient systems.

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