



**E-TENDERING PRACTICE ON SUPPLY CHAIN PERFORMANCE IN THE COUNTY GOVERNMENT OF MIGORI;
KENYA**

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ABSTRACT

Globally, most of the economies are embracing the use of integrated systems in handling transactions for effectiveness and efficiency to be witnessed from all departments concerned. In Kenya IFMIS as an integrated system applied in government offices. The study mainly focused on determining the role of e-tendering practices on supply chain performance. The IFMIS is an electronic system for managing of supply chain performance in Government departments; it has increased transparency, fairness and ease access information on supplier's related information's, eased tendering procedures hence influencing supply chain performance and increase ability to establish accountability to donors and the public procurement. Despite the introduction of the system at both National Government and County Government's level, cases of mismanagement of public resources are still rampant and delays in public procurement procedure. In light of such developments in Kenya public offices, the objective of the study; was to establish the role of E-tendering on supply chain performance in Migori County Government; Kenya. The study employed a descriptive research design. The population of interest targeted consisted of all the officers working in supply chain department, finance department and chief officers in the County Government of Migori. The researcher data collection was primary data collected using structured questionnaires and piloting of the research instrument to establish its validity was done in County Government of Migori on officers not involved in the major study. Data was analyzed using SPSS version 24 and findings were analysed to come up with results were interpreted and presented in tables, mean and standard deviations. Regression analysis was done to test and analyze results to establish the relationship between the study independent and dependent variables. The study findings revealed that there a significant positive relationship between e-tendering practices and supply chain performance. From the research findings the study concluded that E-Tendering practices have a positive influence on supply chain performance in County Government of Migori. The study recommended that County Government executive and policy makers should invest on current technology and IFMIS in there, finance and supply chain activities and operations management since the research result has shown a positive of the study variables of influence on supply chain performance.

Key words: E-Tendering, Integrated Financial Management Information System, Supply Chain Performance

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INTRODUCTION

The Integrated Financial Management Information System is a financial system in one online platform system which plays major role in management of business firms, institutions and organizations. The different system and activities are known as modules in IFMIS it ranges from financial management, budgeting, auditing, suppliers' procurement and general ledger management. The 21st Century has seen many developing countries embarking and embracing of new technology by automating and integrating their Public Finance Management systems to improve on management of their expenditure hence resulting to prudent, accountability and promoting integrity in public sector.

In a study by Hove and Wynne (2010), they establish that for accountability and prudent use of public resources, management of financial processes and procedures will be achieved through automation and application of IFMIS. Diamond and Khemani (2006) in their study established IFMIS as a tool of management support and change thus spearheading the budgetary reforms which lead to "accountability, fairness, openness, increased public participation in public finance management, equitable sharing of limited resources, benefits of public borrowing and prudence in management of resources", as per the Public Finance Act: 2012. With greater public awareness and increased demand for services to the general public accountability in spending public sector departments, IFMIS has been adopted to improve Supply Chain service delivery efficiency and Effectiveness.

In Malaysia, the government issued a policy statement instructing all public entities to use IFMIS in all their procurement activities and suppliers' management operations (Yossuf *et al.*, 2011). Kaliannan *et al.* (2009) in their study established that Malaysian public sector was going through rapid technological changes managing organizational operations especially in adoption of automated systems in many of its public entities.

Adoption of e-government operations and particularly IFMIS is inevitable for the government in the world. A review study conducted by Commonwealth of Australia establishes that the National Governments of Scotland, New Zealand, Italy, New South Wales and Western Australia in 2005 reported that these Countries were already using IFMISs in their public procurement and supply management operations. Complaints, risk of fraud and corruption.

In Africa, the concept of IFMIS is increasingly gaining popularity and adoption in countries in managing the public sector procurement activities and operations. To minimize the risk challenges faced in managing in public sector procurement procedures, many countries in African have resorted enactment of policies, laws and regulation as necessitated to enable the adoption and use of current technological hence implementation of electronic procurement systems (Sijaona, 2010). Tanzania for instance has implemented and adopted IFMIS in public sector to allow e-sourcing practice, e-tender advert, e-bid submission, e-tender evaluation, e-supplier contacting, e-payment, e-tender awarding and e-contract monitoring and evaluation to ensure all public procurement activities and procedures are conducted electronically (Tanzania PPOA, 2016).

In Kenya, there are some public entities that have successfully embraced and adopted implementations of new technology by using IFMIS technology. In private sector for instance nation media group through their digital platform known as N-Soko enables their clients to purchase their products in an online platform (Gitahi, 2011). Awino (2011) in his research study on how selected strategy variables affect organization's performance. Further, ICPAK (2017) reported that poor financial performance has been reported in public entities where IFMIS has not been adopted and implemented, there was evidence overspending, poor financial controls, unrealistic budgets, focus on inputs rather than outputs, increased pending bills, spending not aligned to

priorities, fraud, poor management of records and documents, procurement issues increase in stock outs. In Kenya, just like other developing countries the world over, businesses are embracing modern technological applications and use of computerized systems and tools in ensuring that their business dealings and operations are made faster, convenient, easier, reliable, and 24/7hours of business operations beyond and against known business hours (Jesse, 2013).

The County Government of Migori is one (1) of the 47 Counties located in the Nyanza region of Kenya. This is one of the counties that was formed following the enactment of the devolved functions of the Kenyan Constitution in 2010. These counties based on geographical units that the Constitution of Kenya envisaged as the units of devolved Government functions and revenue. Each County formed a one-unit Constituency for electing a representative to the Kenyan Senate and a special women's representative to the National Assembly of Kenya and a Governor. In the County Government of Migori IFMIS has been adopted in procurement and finance department currently payments of supplier's and procurement and sourcing are done electronically. Despite this full automation of procedure and activities, counties still report frequent breakdowns of the Integrated Financial Management and Information system which continued to hamper development County Governments (Ochieng, 2017). Electronic tendering is an online application system for processing that manages the purchasing cycle from the need identification, online tender advertisement to the issuing of award notifications. It provides a centralized electronic platform to help organizations improve efficiencies, fairness and accountability while reducing traditional tendering method and increasing supply chain performance (Chen, 2004).

In current dynamic market, marketing needs is always prime thing to achieve in almost all aspects of business core objectives of organizations. To achieve high security measures in e-tendering

practice, Public sector major Infrastructure must be implemented for a robust security system and the process to provide secure web based computerized procurement portal for all procurement user requirements. It also uses asymmetric encryption/decryption technique to offer high shielded secured environment, (Malik, 2013). According to Fasli, (2007) e-tendering practice is a process of carrying out the entire procurement cycle on internet including submission of price bid such that efficiency, economy, speed of the internet can be harnessed. E-tendering practice is a process of transmitting requests electronically by use of internet to execute procurement operations (Fasli, 2007). In this study e-tendering practice is taken to include; e-notices, e-notification, e-selection, and e-awarding to request for information and response for prices to suppliers and receiving back their feedback (Davilla & Gupta, 2012).

Frankwick (2004) in his research findings argues that the electronic nature of an e-Tender marketplace means that an organization never needs to miss an opportunity as they receive an email and sms alert every time a relevant, new tender is advertised. Suppliers get the benefit of customers, who have usually already made a decision to purchase, coming directly to them. They don't have to spend time and money tracking down potential customers. They have an electronic brand new sales channel with very little effort or cost. Customers can let the suppliers do their research for them. Businesses that respond to the e-Tender will provide information about their products and services, their pricing, and any other information the customer might need to help them make the purchase. They will be normally provided with a link in their website and any customer testimonials that might be relevant. Rather than having to search the internet for this type of information, the customer completes one simple online web-form and the suppliers do the rest (Palmer, 2003). Smith (2000) asserts that E-tendering practice is the process of sending Request for e-Invoices and Request for

Purchases to prequalified suppliers and receiving the responses of suppliers back, using electronically using internet technology hence improving supply chain performance. Usually e-tendering practice is supported by a computerized system often the e-tendering practice system also supports the analysis and assessment of responses electronically.

An electronic computer-based process wherein the complete tendering process; from advertising to receiving and submitting tender-related information are done online. This enables firms to be more efficient in their supply chains as paper-based transactions are reduced largely or eliminated totally, facilitating for a speedier exchange and sharing of information thus high supply chain performance (Swan, 2000). Traditionally E-tendering practice has been most commonly used by government agencies and the public sector rather than by the private sector. However, with increasing numbers of both business customers and consumers turning to the online to research goods and services before making a purchase, e-tendering practice is becoming a successful and a more efficient sales channel for a variety of organizations and customers hence more efficient supply chain performance (Dexter, 2001). In current era, Security is always prime thing to achieve in almost all aspects of business and in the organizations. Most of the businesses are tending towards remote transactions with the aid of web-based computer systems. For the remotely controlled business, e-tendering practice becomes most efficient, effective and prominent approach. This process involves a seller, a buyer and a mediator web-based computer system. To achieve this, we must have a secure computerized platform environment to maintain integrity and security of data and the confidentiality of the concern business. To achieve high security measures in e-tendering practice, Public Key Infrastructure is implemented for in a robust security and the process to provide secure web-based system guarantees the reliability of the overall system performance. It also uses asymmetric computerize

d encryption and decryption technique to offer high shielded environment, (Malik, 2013).

Statement of the Problem

Despite the devolvement of many Government functions to County Governments in Kenya's current state of the service delivery and procurement functions are facing a myriad of challenges which are attributed to delays in funding from National Government (Korir, 2014). Further, earlier researchers and studies such as Rotich and Okello, (2015) indicated that costs hamper public procurement participation and operations in county resource management. Hawo (2015), in his study on the effect of E-Tendering within the budgetary management of public sector, revealed that if proper systems that aid financial management are put in place, then positive results would be achieved. Muigai (2012) in his study he found out that E-Tendering is a major component of financial reforms that positively affect financial management in many public entities. Imbuye (2013) in his study on E-tendering adoption and implementation highlighted the weaknesses and gaps within the System that was being used. He noted that the interfaces were not being used optimally All these have led to the growing pending bills that are a threat to the economy. In addition, most Counties are being faced with massive misuse of public funds, lack of project implementation, over accrued bills have also been observed at the County level and all this have hindered service delivery.

However, many Studies done in this area have not examined the effect of using technology in managing procurement operation. E-Tendering practice have not been employed effectively in Government institutions and this implies that there is scanty knowledge on the effect of E-Tendering practices in County Governments. The study therefore sought to establish and find out the effects of E-Tendering on supply chain performance in the County Government of Migori; Kenya

Objective of the Study

The study established the role of e-tendering practice on supply chain performance in the County Government of Migori.

Research Hypothesis

H₀₁: e-tendering does not significantly affect supply chain performance of the County Government of Migori.

LITERATURE REVIEW

Theoretical review;

Actor Network Theory

The Actor Network Theory was developed and adopted in the early 1980's by scholars Michel Callon, Bruno Latours and John Law while writing on a publication for the science and technology adoption model (Tatnall & Gilding, 2009). The Actor-network theory discussed that the world is full of hybrid entities containing both human and non-human elements, and was developed to assess and analyze situational contexts where identifications of these elements are complicated and complex in nature (Tatnall and Gilding, 2009). The theory deals with interaction of two elements in a network and how various components in the two elements can be identified. In the desire to evaluate and analyze all interactive elements in a system both human and non-human, the theory derive on the approach to such systems is sustained in a level playing platform. The theory highlights that, when consideration for evaluation and selection to be done there has to be a level playing field and the choice settled must be the best of all in the list (Tatnall & Gilding, 2009). Sourcing in procurement involves identification of product or service suppliers. The organization contracting should create a level playing field for all the suppliers and only identify the best which fits the set requirements. In an integrated electronic system, electronic sourcing (e-sourcing practice) would inform digital processing of different suppliers based on electronic documentation they present hence identify which can match the set requirements. The theory recognizes the impact of

interaction of numerous elements in an online platform (Cusumano & Selby, 2014). The electronic sourcing platform makes it possible for the interaction with numerous elements, which in procurement can be numerous possible suppliers, and also makes it possible to identify the best who can match the requirements. In manual systems this is impossible to implement as avenues for abuse are many where the concept of ANT equality can never be realized (Cusumano & Selby, 2014). Technology has enabled procurements systems, operations such as sourcing for potential suppliers is undertaken in a fair and transparent manner. The principles of agnosticism, general symmetry and free association would ensure that all the bidders are evaluated equally and their strengths measured in a level ground. This will eliminate any likelihood or loopholes for the selection to be inclined towards favoritism (Tatnall & Gilding, 2009). Bias proof e-sourcing practice platform adhering to the ANT theory entailed the definition of standard requirements that shall form as the basic minimum for consideration of the potential selected choices and all the options shall have a fair and equal chance of selection.

Dynamic Capability Theory

This theory was first introduced by David Teece, Gary Pisano and Amy Shuen (Chien & Tsai, 2012). The theory describes an organization's ability to deliberately manage its resources in an effort to improve its overall performance. According to Chien and Tsai (2012), dynamic capability is the efforts which an organization purposefully adapt to manage its organization's resource base. Organization should be able to adequately and timely to external changes react and adapt to constant changes in technology. This requires the implementations of different strategies and policies that will increase multiple capacity of the organization and put them into optimum use.

The dynamic capability theory revealed that only those organizations able to achieve its set objectives will actually be able to break even in any of these competitive worlds (Chien & Tsai, 2012).

The marketing environment and conditions more and ever dynamic and turbulent due to constant change in current technology and marketing environment needs and requirement and customers' expectations hence companies need to adopt new supply chain strategy for them to remain competitive dynamic market. Supply chain management is now moving away from traditional old manual processes and is aligning itself to an electronic, computerized system which enables, flexibility, innovation, quality, and profitability through the integration and adoption of IFMIS in its supply chain operations and hence restructuring and allocating of resources to best to provide customer-driven products and services in a fast dynamic and changing market environment (Yusuf et al., 2004). Agility and dynamic of many business worldwide and capacity to embraces organizational structures, information communications technological systems, logistics and supply procedures and in particular, change of mindsets, rules and policies to adopt new technology (Christopher, 2000).

Lee (2004) revealed that supply chain aims at responding quickly and faster to short-term changes in market needs and demand or supply and ensure that the firms handle external environmental factors. Christopher (2000) identified main characteristics of agile supply chain that included fairness, transparency, competition and network-based procedures. Agile supply chain is a dynamic market environment sensitive and needs that the supply chain functions is to be able to read and respond to the market demand. The supply chain function should show the willingness and ability to create an environment in which information can flow and be shared freely upwards and downwards in the supply chain for them to achieve a more optimum supplier base. Christopher (2000) argues that leveraging electronic supplier relations management enables companies to create dynamic supply chains functions by reducing procurement lead time and minimizing procurement complaints.

Krajewski *et al.* (2009) asserts that effective and efficient supply chain has the qualities of make ensure effective stock control, low inventory investment, short lead time, emphasis low process with consistent high quality and on time delivery while that for responsive supply chain include assemble to order, with create emphasis on product variety reduction, best operational strategy, high capacity production, just on time inventory delivery to enable fast delivery time, shorter lead time and emphasis on needs customization, and flexibility. It is through information sharing and collaboration with suppliers and contractors that the companies ensure its external suppliers will improve quality, delivery time and high-quality service performance. This requires real time and constant market feedback and actual customer requirements without making projections based on past sales or history. The adoption use of information communication technology has helped the organizations to record data on suppliers, demand through Efficient Customer. Response from point of sale or the point of use hence increasing the responsiveness in process stock control. Efficient and effective Customer Response is designed to integrate and rationalize product needs, packaging, new product design and development and replenishment of orders across the supply chain network hence increasing emphasis on key areas such as EDI, ERP and continuous order replenishment (Harrison & Van Hoek, 2008).

Implementing IFMIS has streamlined business operations and activities by provide a window opening into operations management, integration in the supply chain management activities, hence increasing customer services and streamline products distribution network (Rao, 2002). Porter (2008) found out that that the adoption of information communication technology will change the dynamic competitive environment in many ways, namely through changing the organizational structure and customer's needs,

Changes in marketing needs, organizational structure, marketing strategies as well as tastes and

preferences among customers are prevalent and as to such firms should be able to process customers' orders quickly and timely. Evidently, IFMIS integrates and manages the in-house and external procurement components to address dynamics of organizations in achieving operational excellence and by reducing cost and increasing saving on time used to procure goods (Mwenga, 2016).

Contingency Theory

Contingency theory was put across by Woodward, (1985) that formulate a broad generalization about the formal structures that are associated with various technologies adaptations. The Contingency Theory as described by Hersey and Blanchard (1969) revealed that there is no one definite strategy management which guarantees success of the strategy put in place by and organization. Management and firms are regarded as 'open systems' hence are affected by changes requiring different approaches to handle and solve emerging issues.

The contingency is a key tool in the recent past in identification, analysis and the evaluation of the factors that affect the design and adoption of information systems. The theory holds that, to operate and manage the systems it will require having the relevant resources and well-coordinated skills. Daft (1998) also revealed that each information system varies based on the firm specification, environment, needs, capacity and a system that may work in one organization may not necessarily work in another. As such the Contingency Theory is built on three main aspects; auditing information, financial information, and managerial information. Proper utilization of information from these three major sectors is what is to bring about the success of the IFMIS (Mungai, 2012). Thus this theory is relevant to the research study in that it postulates that not one thing is independent on itself as they depend on other elements so as to be effective and efficient. Hence for IFMIS to have a positive impact on organizational performance, hence the organization

ought to have appropriate strategic management plan in place in the supply chain unit.

From the theoretical model, supply chain performance management is linked to the contingency theory of leadership. Supply chain management core aim is to link each element and process of the manufacturing procurement and supply processes from need identifications raw materials acquisition, processing of goods and up to the delivery of the final product to end users of the product. It focuses on how organizations utilize their suppliers' processes, procedure, policies and available resources technology capability to enhance competitive advantage (Skjøtt-Larsen et al., 2007). Many companies are now searching at securing and minimizing operations cost, quality, technology and other competitive advantages as strategic plan in their operations, there is need for expertise to pursue in a globally competitive environment and to achieve this many firms should be focused on their supply chain management functions. Supply chain management emphasizes on the overall and long-time benefit and of all parties in the supply chain line through coordination's and implementations of information sharing (Yu et al., 2001).

Resource Based View Theory

The Resource Based View (RBV) theory was developed by Barney and Wernerfelt in 1930s in their evaluation of heterogeneous organizations which introduced the idea of resource position barriers being roughly analogous to entry barriers (Lynch et al., 2000). It asserts that the resources of an organization are key factors to ensuring that organizations perform well. These resources are what give an organization added advantage over the rest of organizations. As a scanning the market environment and exploiting surrounding opportunities using available resources.

According to the theory, resources can be classified into organizational capital resources, physical capital resources and human capital resources. Allocating of these resources will help in creating an efficient organization and hence ensuring that it

achieves greater performance (Lynch et al., 2000). The RBV can be used as a basis for the development of supply chain strategy and policy formulation process (McKoneSweet & Lee, 2009). A supply chain function requires a collaborative effort between a manufacturer, its suppliers and customers (Flynn et al., 2010). Dyer and Singh (1998) highlighted that the valuable resources are often provided by supply chain functions and argued that structuring the inter organizational resources is more critical to achieve high performance than a firm's own constrained resource base. Specifically, suppliers play an integral role in supplying essential resources to the local market and in implementing firm's implementation strategies. Accordingly, the external resources must be efficiently effectively managed and integrated with the internal resources of the firm in order to achieve high performance (Hitt, 2011).

Kim and Narasimhan (2002) reports that supply chain function in an organization should integrate and links an organization with its customers, suppliers and other channel distributors by integrating their relationships management, activities functions, processes, procedures and locations. According to Lambert (2004), successful implementations of supply chain management function requires cross-functional team of professionals to integrate major business processes within the organization. Organizations must integrate and link their operations activities with trading partners and suppliers in order to promote competitive advantage for the whole supply chain function and overall organizations performance (Lambert & Cooper, 2000). Power (2005) asserts

that integration involves the cooperation, teams in procurement and supplies including free information sharing, trust, team work, shared technology capacity and a fundamental shift away from managing individual functional processes to managing integrated supply chains of processes. Kwon and Suh (2004) consider supply chain integration and coordination to be a strategic management tool that aims to reducing operations costs and thus increase customer satisfactions and product quality. Supply chain integration and implementations is a good approach for improving business overall performance in a highly competitive and dynamic market (Narasimhan, Jayaram, & Carter, 2001). Frohlich and

The major challenge and risk in supply chain is to coordinate activities across the supply chain so that the organizations can improve performance by reducing costs, increasing service levels, reducing the, better utilization of resources and effectively responding to changes in the market place (Simchi-Levi et al., 2009). Chopra and Meindl (2015) found that that supply chain coordination occurs when all the different levels of activities and procedures of supply chain work toward the objective of optimizing total supply chain performance.

From the theoretical framework discussed, Electronic supplier relations management practice is explained by the Resource Based View theory .Kim and Narasimhan (2002) established that supply chain integration is a networked links an organization with its customers, suppliers and other stake holders by integrating core functions, coordination, activities functions, processes and locations.

Conceptual Framework

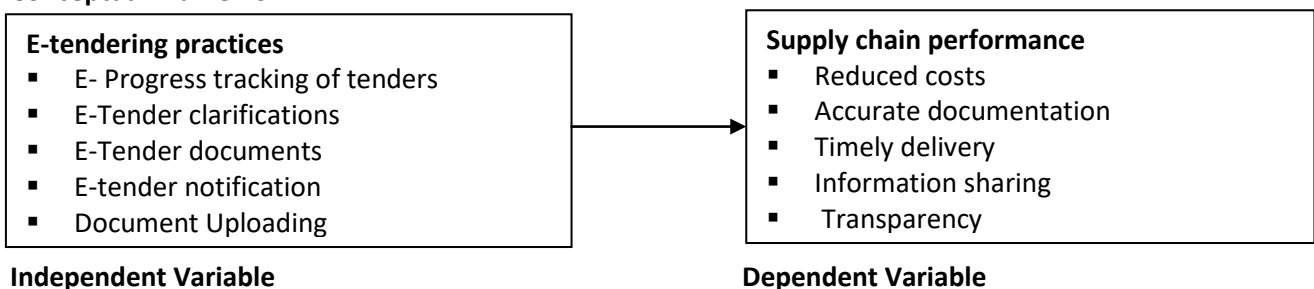


Figure 1: Conceptual Framework

METHODOLOGY

Research Design: This research was conducted using a descriptive survey design. Descriptive survey was used because it portrays an accurate profile of persons, events and situations as they are. This design refers to a set of methods and procedures that describe variables. It involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data. Descriptive studies portray the variables by answering who, what and how questions (Kozlowski, 2013).

Target Population: The study targeted twenty (25) procurement officers, forty-five (45) accountants and fourteen (14) Chief Officers in charge of different departments. The selected officers are involved in daily running of the County's financial and procurement activities and therefore provided appropriate information regarding Information Communication and Technology adoption needed in the study.

Sample Size and Technique: Cramer and Hewitt (2004) define a sample size as the actual number of elements, cases or entities in a population that was studied. Mugenda and Mugenda (2003) assert that a sample size is an important element in determining the statistical precision with which population values can be estimated. Where time and resources allow, it is good to use a large sample since small samples do not reproduce the salient characteristics of the population to an acceptable degree. Several approaches can be used to determine the sample size. A census approach targeted all the 84 officers for the study. The use of the census approach enabled comprehensive determination of the phenomenon with equal representation of all the study elements. This was also supported by the assertion of Mugenda and Mugenda (2003) who stated that a census approach is appropriate where the sample is small and manageable to minimize biasness and ensure completeness in the findings

Data Collection Instruments: Primary data was

collected by means of self-administered questionnaires. The questionnaires had structured questions. These questionnaires were structured and designed in multiple choice formats.

Data Processing and Analysis: Data collected from the field was coded, cleaned, tabulated and analyzed using both descriptive and inferential statistics with the aid of specialized Statistical Package for Social Sciences (SPSS).version 24 software. Descriptive statistics such as frequencies and percentages as well as measures of central tendency (means) and dispersion (standard deviation) was used. Data was also organized into graphs and tables for easy reference.

Further, inferential statistics such as regression and correlation analyses was used to determine both the nature and the strength of the relationship between the dependent and independent variables. Correlation analysis is usually used together with regression analysis to measure how well the regression line explains the variation of the dependent variable. The linear and multiple regression plus correlation analyses were based on the association between two (or more) variables. SPSS version 24 is the analysis computer software that was used to compute statistical data.

Study conceptualized Regression Model;

$$y = \beta_0 + \beta_1 X_1 + \epsilon$$

y = Supply Chain Performance

β_0 = Constant

X_1 = E-Tendering

$\{\beta_1\}$ = Beta coefficients

ϵ = the error term

FINDINGS AND DISCUSSIONS

Eighty-four (84) questionnaires were administered to respondents; seventy-six (76) questionnaires were properly filled and returned. The response rate is shown in the Table 1.

Table 1: Response Rate

Gender	Frequency	Percentage
Returned	76	90.5
unreturned	8	9.5
Total	84	100

From the above response rate was 90.5% as (8) 9.5% of the questionnaires distributed were not received. Mugenda and Mugenda (2003) asserted that a response rate more than 50% is adequate for analysis 60% is good, and response rate above 70% is perfect. 90.5 % response rate is considered excellent hence Information from the questionnaires was used for analysis. Questionnaires were used and respondents were assured of anonymity as they were not required to disclose traceable identities hence this method partly contributed to the high response rate achieved in this study.

Descriptive Statistics;

The respondents were asked to indicate the extent of agreement with E-tendering practices statements from strongly disagree to strongly agree. Results were; 36(47.7%) of the respondents strongly agreed that E-tendering practice aids e-progress tracking of tenders. while 28(35.4%) agreed on the same. A mean of 4.23 and standard deviation of 0.95 suggested that there is a great deviation from the mean. In regard to whether using e-tendering practice system all users are able to clarify all the e-tendering practice procedures. From the findings none strongly disagreed, 18(23.1%) disagreed, none was neutral, 26(33.8%) agreed and 32(43.0%) strongly agreed.

Majority of the respondents 58(76.8%) agreed that using e-tendering practice system all users are able to clarify all the e-tendering practice procedures. A mean of 2.68 and standard deviation of 1.16 implied that there is great dispersion from the mean. The results also revealed that 24 (29.2%) and 40(56.9%) of the respondents agreed and strongly agreed respectively that E-tendering practice facilitates advertisement, submission, opening and evaluation of tenders documents online with a

mean of 4.32 and standard deviation of 0.97. This implies that there is great deviation from mean. Majority of the respondents 65(86.1%) agreed that when E-tendering practice aids advertisement, submission, opening and evaluation of tenders documents online.

The findings also showed that 30.8% of the respondents agreed that E-tendering practice enables bidders to get both award and regret notification online and additional 52.3% strongly agreed. A mean of 4.26 and standard deviation of 0.96 implied that there is some deviation from the mean. From the findings, 47.7% of the respondents strongly agreed that tender documents are downloaded and uploaded while 35.4% agreed on the same. A mean of 4.23 and standard deviation of 0.95 suggested that there is a great deviation from the mean.

This concurs the study of Rotich, Muma and Waruguru (2015) in the study, on Relationship Between E-tendering practice and Procurement Performance among County Governments in Kenya, results found that e-tendering practice positively affect the performance of supply chain unit of County Governments in Kenya.

Inferential Statistics;

Correlation between E-tendering practices on supply chain performance

The Pearson correlation analysis was used to analysis the relationship between E-tendering practices on supply chain performance. In investigating the influence E-tendering practice on supply chain performance, the study results were a coefficient of correlation (r) as 0.567**, P<0.01. This shows that there exists a significant influence relationship between E-tendering practice on supply chain performance. These imply that the supply chain performance increase or decrease with

an increase or decrease in a unit of E-tendering practices at any given time.

Regression Results of E-tendering practices and Supply chain performance

Regression analysis was used to establish the amount of variance accounted for by change in one

variable in predicting another variable. Regression analysis was conducted to find the proportion in the dependent variable which can be predicted from the independent variable (E-tendering practices) Table 2 shows the analysis results.

Table 2: Regression Results of E-tendering practice and supply chain performance

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.567 ^a	.321	.310	.51538		
a. Predictors: (Constant), E-tendering practice						
ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.917	1	7.917	29.804	.000 ^b
1	Residual	16.734	75	.266		
	Total	24.761	76			
a. Dependent Variable: Supply chain performance						
b. Predictors: (Constant), E-tendering practices						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.177	.353		6.160	.000
	E-tendering practices	.484	.089	.567	5.459	.000
a. Dependent Variable: Supply chain performance						

The results revealed a coefficient of determination (r^2) of 0.321 meaning E-tendering practices can influence and explain up to 32.1% of the variance of any unit in supply chain performance. The F test gave a value of $F(1, 76) = 29.804$, $P < 0.01$, which supports the goodness of slope fit of the model in explaining the variation in the dependent variable. It also means that E-tendering practices are a useful determinant of supply chain performance. The unstandardized regression coefficient (B) value of E-tendering practices was 0.484, $p < .001$. This indicated that a unit change in E-tendering practices would result to change in supply chain performance by 0.484 significantly. The regression equation estimating the supply chain performance as a result of E-tendering practices was as below:

Supply chain performance = 2.177+0.484X₂

From the results, E-tendering practices had significant positive influence on supply chain

performance with $P < 0.01$ and it significantly accounted 32.1% variance in supply chain performance. Therefore, the second null hypothesis is rejected as E-tendering practices have significant effect on supply chain performance.

CONCLUSIONS AND RECOMMENDATIONS

The study’s objective was to find out the effect of E-tendering practices on the supply chain performance. The Pearson correlation analysis was used to estimate the relationship between E-tendering practices and supply chain performance. In analyzing the influence of E-tendering practices on the supply chain performance, the study revealed a coefficient of correlation (r) as 0.567**, $P < 0.01$. The least beta coefficient was 0.258, which is coefficient value for E-tendering practices. These values are significant ($B = .258$, $p = .017$). This means that E-tendering practices is a strong determinant in explaining the supply chain performance variables,

when the variance explained by all other variables in the model is controlled. This implies that a unit change in E-tendering practices would result to change in supply chain performance by 0.258 in the same direction. Therefore, the second hypothesis was rejected since $\beta_2 \neq 0$ and P value <0.05 influencing supply chain performance.

From the findings, the study concluded that E-Tendering practices affect supply chain performance in County Government of Migori; Kenya.

Based on the study findings the following recommendations were made. The study recommended that County Government of Migori has to invest on current technology E-Tendering since the research has found that it has a high influence on supply chain performance. The study

recommends that there is need for other all procurement departments in county government to adapt this modern technology and ensure use of E-Tendering to increasing their supply chain performance. The study further recommends that Policies and legislation to be enacted to enhance implementation and management of E-Tendering.

Areas for further research

The study was limited to County Government of Migori hence limited in its generalization of the findings; there is need for further studies of the same to consider other counties in Kenya for the sake of generalizing the results of the study. Further studies could be undertaken on national governments departments in Kenya. Future researches, therefore, may consider more factors like adaptation to change and government policies.

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