



EFFECT OF ELECTRONIC PROCUREMENT ON PROCUREMENT PERFORMANCE OF STATE CORPORATIONS IN MOMBASA COUNTY

Nyamawi, L. M., & Kitheka, S.

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Nyamawi, L. M.,^{*1} & Kitheka, S.²

^{1*} Master Candidate, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya

² Ph.D, Lecturer, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya

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ABSTRACT

The general objective of the study was to establish the effect of electronic procurement on procurement performance of state corporations in Mombasa County. Specifically the study aimed at establishing how Electronic sourcing affects procurement performance, secondly: To study the effects of Electronic payment on procurement performance and to establish the effect of Electronic auctions on procurement performance of state corporations in Mombasa County. To measure the effect of the electronic procurement system on procurement performance, the researcher utilized a descriptive research design. The study adopted a census study of all the state corporations in Mombasa County and utilized the key informant approach. Data was collected from supply chain officers, ICT officers and finance officers by use of a questionnaire. The population of the study constituted 102 respondents across the 34 state corporations in Mombasa County. In conducting the study the researcher used limited financial resources prudently to get as much data as possible. The geographical disparity of the state corporation was a major challenge to timely collection of data. Respondent's accessibility was a major hindrance as some respondents were on leave while others were in meetings and seminars. Data was analyzed and presented in frequency tables. A regression analysis was conducted to establish the relationship between electronic procurement and procurement performance. Data was presented using frequency tables and key findings derived from this data were discussed. Conclusions were drawn from the findings and revealed that state corporations have adopted electronic procurement. The study also revealed further that electronic procurement has led to procurement performance success. The correlation analysis between independent and dependent variable had a strong positive correlation.

Key Words: *Electronic sourcing, Electronic payment, Electronic Auctions, Procurement Performance*

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INTRODUCTION

The invention of the Internet has led to a lot of advancements such as has been realized in the business field and has served as a catalyst for major changes in the operation and status of organizational procurement. Information Technologies have totally transformed the way organizations and government functions (Kassim, 2012). He further asserts that, majority of organizational expenses consists of money used to purchase various products and services for operations. To achieve reduction on the total costs spent and obtain efficiency on purchasing process, internet technologies are widely used and Electronic procurement has emerged as the latest trend in the recent past. There has been an upward trend in the adoption of electronic procurement by both private and public sector entities in the last decade. The importance of public procurement has been observed to grow not only in Kenya but across Sub-Saharan Africa due to the fact that the share of public procurement in the GDP of Sub-Saharan African countries ranges between 8-15%. Likewise, improvements in procurement legislation and its implementation have on average resulted in savings of 30% (Shalle & Irayo, 2013). Kenya like many other countries in the developing world was faced with high inefficiency in spending of public funds, especially in the area of public procurement. The enterprises which were contracted to take up business by the state were highly limited and there was little or no competition among them. The procurement procedure and process of public procurement was completely non-transparent and unregulated and there was no institutional framework whatsoever (Kamotho, 2014).

Purchasing performance is considered to be a mix of two elements: purchasing effectiveness and purchasing efficiency (Weele, 2011). Performance is the basis for assessing how well a function or organization is progressing towards its set targets and objectives, also a basis of identifying areas of

strengths and weaknesses and coming up with mitigating initiatives for performance improvements. This means that purchasing performance is not an end in itself but a means to effective and efficient control and monitoring of the purchasing function (Kassim, 2012). Purchasing efficiency and purchasing effectiveness represent different competencies and capabilities for the purchasing function. Efficiency reflects that the organization is “doing things right” whereas effectiveness relates to the organization “doing the right thing”. This means an organization can be effective and fail to be efficient, the challenge being to balance between the two, according to CIPS Australia. Measuring the performance of the purchasing function yields benefits to organizations such as cost reduction, enhanced profitability, assured supplies, quality improvements and competitive advantage (Kamotho, 2014).

The government strives to allow open and fair competition for procurement without discrimination in a transparent and accountable manner to ensure achievement of value for money in all public procurement. It is also expected that public procurement should contribute to the national economic growth and poverty reduction in line with the national development goals. Public procurement plays an important role in the Kenyan economy. The total volume of public procurement in 2003-2004 was established at 3.64 billion USD or 9% of the GDP (Independent procurement review Kenya May 2005). The Government, through the national development goals seeks among other things, to achieve economic growth and poverty reduction and also show tangible improvements in the delivery of services to her citizens. In Kenya public procurement is majorly done by state corporations under the guidance of the Public Procurement Oversight Authority in the confines of the 2015 Public Procurement and Asset Disposal Act. State corporations are viewed as public entities like the central and county governments, courts, commissions, co-operatives, and educational

institutions such as colleges, schools and universities that procure goods, services or works utilizing public funds (PPOA, 2009). Public procurement is a vital function of government. Apart from meeting requirements for goods, works, systems, and services in a timely manner (Vaidya, Sajeev & Callender, 2011), the Kenya procurement system had proved to be long, cumbersome and time consuming.

The Government has emphasized the automation of public financial processes; the Integrated Financial Management Information System (IFMIS) that has already been implemented in state corporations and will provide an interlinked system of internal controls providing clear audit trails and identification of the originator of all transactions. The electronic procurement system through the IFMIS introduced a new era to Government procurement by bringing to an end manual procurement challenges faced in the past. Kenya takes great pride in being the first African country to automate end-to-end procurement and payment processes in a devolved government system (Presidential Strategic Communications Unit PSCU, 2014). The reformation of public procurement has been a key milestone; the amendment of the Procurement Regulations in 2006 has enhanced the efficiency of procurement systems in state corporations. The reforms being implemented by the government are attributed to the realization of the need to continuously improve internal procurement policies and procedures. The benefits are administrative efficiencies, better contracts, stronger vendor relations, and the delivery of best-value contracted goods and services to internal and external customers.

Statement of the Problem

The major objective of a state's public procurement system is to deliver efficiency and ensure value for money in the use of public funds, as well as adhering to regulations and policies as required by law. Efficiency is arrived at from the purchasing function context as to how well the purchasing department is

performing against set targets. A number of studies have been carried out on electronic procurement and public procurement. Wangui (2012) in her study of information technology and procurement process in Kenya found out that, information technology if used appropriately can offer: smoother and faster process flow, efficient distribution of information, increased transparency and better control in public procurement. Her findings however failed to establish electronic procurement as the main ICT tool that enhances procurement performance in the public sector which is the domain of the current study.

A study on the effect of electronic procurement on performance of State Corporation by (Kamotho, 2014) concluded that electronic procurement is significant on enhancing procurement performance. It however failed to a greater extent to establish the extent to which independent functionalities of the electronic procurement system impact on procurement performance.

Another study by Meso (2010) on Public electronic procurement in Kenya: a critical analysis of the legal technological and governance challenges. She concluded that e Procurement is slowly gaining momentum but the existing legal framework does not adequately support it. E- Procurement is faced by serious challenges including insecurity, lack of confidentiality, and accessibility to the e Procurement systems etc. Her study failed to offer possible strategies of overcoming these barriers. This study sought to fill this gap by establishing the potential of electronic procurement in streamlining sound public procurement practices by establishing the relationship between electronic procurement and procurement performance in Kenya's state corporations.

From the discussion, it is clear that; despite the central role of electronic procurement as a key strategy and supply chain management tool, there is inadequate literature from previous empirical studies

relating to electronic procurement and procurement performance especially among the state corporations. A number of studies have shown positive impact of electronic procurement, most of them have not exhaustively unraveled the role of electronic procurement in enhancing procurement performance in state corporations. This study was set to establish the role of electronic procurement in enhancing procurement performance among state corporations. The study sought to answer the following research questions: Have the state corporations adopted electronic procurement and what are the benefits? What are the challenges facing the adoption of electronic procurement among state corporations? And is there a relationship between electronic procurement and procurement performance among state corporations?

Objectives of the Study

The general objective of the study was to establish the effect of electronic procurement on procurement performance of state corporations in Mombasa County. The specific objectives were;

- To establish how Electronic sourcing affects procurement performance of state corporations in Mombasa County
- To study the effects of Electronic payment on procurement performance of state corporations in Mombasa County
- To establish the effect of Electronic auctions on procurement performance of state corporations in Mombasa County

The research hypothesis were as below;

- **H₀₁:** There is no significant relationship between electronic sourcing and procurement performance of state corporations in Mombasa County
- **H₀₂:** There is no significant relationship between electronic payment and procurement performance of state corporations in Mombasa County

- **H₀₃:** There is no significant relationship between electronic -Auction and procurement performance of state corporations in Mombasa County

LITERATURE REVIEW

The E -Technology Perspective Theory

Electronic procurement lacks a proper definition since it encompasses a wide range of business activities. For example, (Noor, 2014) stated that electronic procurement remains a first generation concept aimed at buyers, which should progress into Electronic sourcing and ultimately into e-collaboration. E-collaboration is a tool that allows extensive interaction between customers and suppliers through the internet in terms of inventory management, demand management and production planning This research recognizes the extensive nature of electronic procurement, and appreciates that electronic procurement is a business-to-business (B2B) purchasing practice that utilizes electronic platform to identify potential sources of supply, to purchase goods and service, to transfer payment, and to interact with suppliers.

Game Theory

Transaction models such as Electronic auctions or online marketplaces have expanded buyers' toolkits. Some of the most sophisticated tools come from game theory. One reason the theory has such potential is the way it models conflicting and cooperating goals that vie for influence in transaction negotiations. Sourcing managers who understand game theory gain deeper insights into the interests and objectives of participants (Kariuki, 2012).

A few of the theory's concepts, such as the "winner's curse" or the "prisoner's dilemma," have found their way into popular discourse. One glaring example of winner's curse comes from the telecom industry. In an auction for wireless spectrum, incumbent Telcos bid up prices far beyond the value their business could support. The unlucky winners suffered for years

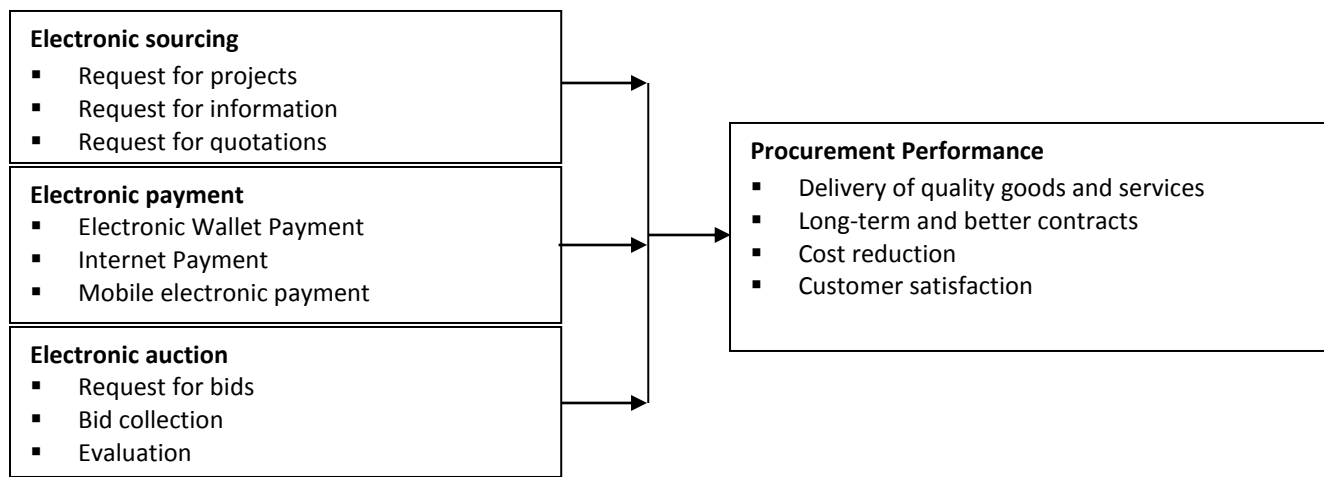
afterwards from heavy debt loads and low return on capital. The prisoner's dilemma on the other hand illustrates the equilibrium concept at the core of the theory (Orina, 2013). Two people imprisoned for the same crime are interrogated separately; they can either confess or remain silent. Because of the way the consequence depends on the other player's (unknown) action, apparent self-interest leads each player to confess.

Innovation Diffusion Theory

The theory explains individuals' intention to adopt a technology as a modality to perform a traditional activity. The theory is developed by Roger's in 1983. For an innovation to successfully appear in the

markets, much is required to convince the potential adopters. Individual users make decision whether or not to adopt an innovation, and this largely depends on knowledge and the performance of an innovation. The speed of the adoption is also affected by potential adopters' knowledge, experience of an innovation, and the knowledge and experience of those around i.e. close friends and family (Rodgers, 2015).

Different adopters however have different approaches toward implementation of an innovation. Some adopters use new products or services as soon as they receive it whereas others do not accept them until they feel comfortable with them.



Independent Variables

Dependent Variable

Figure 1: Conceptual Framework

Empirical Review

Electronic procurement refers to the use of internet-based system to carry out individual or all stages of procurement process, including search, sourcing, negotiation, ordering, receipt, and post-purchase review (Croom and Brandon, 2016). They are three types of electronic procurement systems which are buyer electronic procurement systems; seller electronic procurement systems; and online intermediaries. Electronic procurement systems takes various forms, there are those that concentrates on one or many stages of the procurement process, such as e-tendering, e-marketplace, Electronic auction /

reverse electronic auction, and e-catalogue. The electronic procurement application can be viewed more broadly as an end-to-end solution that integrates and streamlines many procurement processes throughout the organization (Croom and Brandon, 2015).

The main objectives of electronic procurement are: to reduce the time and cost of doing business for both vendors and the purchasers; to realize better value for money spent through increased competition; to standardize the procurement processes across departments/agencies and to allow equal opportunity all vendors and to bring transparency in the supply

chain.(Baily et al, 2012) have described three main processes in electronic procurement which include Electronic sourcing which is used for contractual processes and whose tools are like e-Tendering-RFQs (request for quotations) and electronic procurement processes which is used for transactional processes with tools that include market places, which use techniques such as e-catalogue. The last process is Electronic payment whose tools include virtual or embedded PC (procurement cards) as noted by Orina, (2013).

Electronic sourcing has been defined as the process of using internet to make decisions and form strategies regarding how and where services or products are obtained. The benefits accrued through use of Electronic procurement include, greater transparency, wider geographical reach and lesser time of transaction and better pricing. Electronic procurement involves automating and streamlining the procurement processes of an organization, thereby improving efficiency and transparency, and finally reducing the cost. Electronic procurement has influenced significant change and improvement in a number of areas, including internal and external communications, business transactions, management of supply chains and alliances, as well as contract management (Orina, 2013)

METHODOLOGY

The study adopted a descriptive survey design. A descriptive study is whereby information is collected without changing the environment hence enabling large amounts of data collection from an optimum population in an effective, easy and economical way using appropriate technique, questionnaires as in this study. The population of this study comprised of the Finance, ICT and Procurement managers at all the 34 state corporations in Mombasa County making it a total of 102 respondents. Stratified sampling was used to select respondents from 34 state corporations in Mombasa County. The study utilized

Primary data. The study engaged staff of the state corporations, especially those who interact with the electronic procurement system to gather data. Primary data was collected using a semi-structured questionnaire sub divided into two parts. Questionnaires were distributed to the various state corporations in the county. The multiple regression model was computed as follows;

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon$$

Where; Y = Procurement Performance

β_0 =Constant

$\beta_1, \beta_2, \beta_3$ = Coefficients of determination

X_1 = Electronic sourcing

X_2 = Electronic payment

X_3 = Electronic auction and disposal

ϵ = Error term

RESULTS

Electronic Sourcing Analysis

The study sought to determine how electronic sourcing as a procurement tool has impacted on the procurement performance of state corporations. Data was sought on the extent of importance and enhancing procurement processes by the state corporations. Respondents were asked to give responses on a Likert Scale of 1-5 Where; 1 = Strongly Disagree; 2 = Disagree; 3 = Moderately Agree; 4 = agree; 5 = Strongly Agree).

From the study as shown in Table 1 below, state corporations were using the Electronic sourcing platform, all the Electronic sourcing indicators had a mean of above 3.7. This implied that most of the state corporations were placing and sourcing for goods and services electronically. Sourcing cycle improvement had a mean of 4.5, majority of the respondents agreed that it had enhanced sourcing process improvement. This implied that sourcing has significance on procurement performance. Order placement had a mean of 4.2, it followed that majority of state corporations had fully implemented and were utilizing the Electronic sourcing platform.

Table 1: Electronic Sourcing

Electronic sourcing	Mean	Std Dev	Analysis N
The platform ensures limited time is taken to do sourcing	3.662	0.867	77
Order receipts is fast and accurate	3.870	0.878	77
The platform has ensured that the electronic sourcing process cycle has improved Sourcing process improvement	4.558	0.834	77
The electronic sourcing platform has enabled the organization to have a Global reach coverage	3.948	0.958	77
The organization has a larger base of suppliers to buy from (Supplier diversity)	3.961	0.923	77
The Customer can interact with the electronic sourcing system easily. i.e placing of orders and viewing catalogues.	3.870	0.893	77
The corporation enjoys on time delivery of products ordered	3.948	0.971	77
The electronic sourcing platform has significantly reduced electronic sourcing cycle time	3.766	0.792	77
All orders are placed electronically	4.246	0.975	77
Overall mean	3.981		

The aggregate mean of the variable Electronic sourcing was 3.981, this showed that the implementation and usage of the platform by the state corporation was very high. Electronic sourcing as a tool of enables faster and real time communication with clients and or suppliers. It also enabled sourcing from many suppliers across the platform. This enabled acquisition of high quality materials yet at competitive prices.

Electronic Payment Analysis

The research sought to determine how well electronic payment influenced procurement performance. Respondents were required to choose the extent to which Electronic payment has influenced performance based on a likert scale. Data was analyzed and represented in table 2 below.

Table 2: Electronic payment Analysis

Electronic payment	Mean	Std Dev	Analysis N
The electronic payment platform has Increased the rate of timely payments	3.987	0.834	77
The customers finds it easier and convenient to do payments electronically	4.012	0.850	77
The platform has significantly reduced cost per transaction/invoice	3.857	0.854	77
The electronic payment system has considerably enhanced the speed of service	3.883	0.972	77
The organization is able to audit the electronic payment transactions with ease.	4.077	0.956	77
Customers invoices are received and paid in a shorter duration	3.896	0.882	77
The system ensures less fraud and credit loss	4.077	1.010	77
A lot of payment errors are reduced	3.766	0.792	77
The organization is able to obtain financial data report	4	0.888	77
Overall mean	3.978		

Majority of the respondents found it easy and convenient to pay electronically, the system allowed

limited or no fraud and credit loss and they also agreed that organization was able to audit system

easily and quickly, these parameters had a mean of at least 4.0. The study observed that the tendency of State Corporation to do payment electronically was on the rise and the extent of usage was high with a mean of above 3.7. Electronic payment systems ensured less fraud and credit loss with a standard deviation of 1.010; this made Electronic payment an important factor in procurement performance. Timely payments and speed of service with a mean of 3.857 and 3.883 respectively were not only influenced by Electronic payment but also availability of funds. The variable had a mean of 3.978 this depicts that majority of the respondents agreed that Electronic

payment platform enhances the performance of procurement function. Electronic payment enables secure and enhances transparency. As a fact of e-procurement it was highly rated as one of the major variable that enhances procurement performance. Electronic payment increases reliability and accountability. There is more security in electronic payment and it is very fast.

Electronic Auction Analysis

The study sought to establish the influence of Electronic auction as a procurement tool; the findings obtained are discussed below.

Table 3: Electronic Auction Analysis

Electronic auction	Mean	Std Dev	Analysis N
Many bidders can access and send bids online	3.714	0.792	77
The system allows little or no human intervention	3.870	0.878	77
The system allows for Real-time bids evaluation	3.922	0.942	77
Bid information cannot be accessed before expiry of time frame	3.857	0.955	77
The system is secure from any intrusion	4.012	0.979	77
The platform allows for transparent bidding, evaluation and award step by step process	3.761	0.922	77
Bidders cannot per take any fraud and collusion in the entire process	4.103	0.981	77
The system has an effective communication /information dissemination	3.948	0.945	77
The system allows for a wholesome process	4.051	0.944	77
Overall mean	3.915		

From the study, Electronic auction as a procurement tool in State Corporation is widely used. Majority of the respondents attest to this with a mean of above 3.7. Security of the system from intrusion is ensured (4.051), the system allows for a step by step wholesome process (4.012) and do not allow for collusion in the process (4.103), bidder accessibility (3.714) is still a problem due to connectivity and stability of the network service. The respondents agreed that in deed Electronic auction (aggregate mean 3.915) has significant effect on procurement performance. Electronic auction enables the timely submission of bids, enhances competition therefore firms benefit from high quality products and services.

Procurement Performance

The study sought to investigate how electronic procurement Electronic sourcing, Electronic payment and Electronic auction had contributed to the performance of state corporations. Several performance indicators were used to determine the procurement performance of an organization including, Transaction Cost Reduction, Improved Procurement Resource Utilization, Reductions in Inventory, Significant Reductions in the Time Taken to Complete the Procurement Process, Better Contracts, Delivery of Best-Value Contracted Goods and Service, Stronger Vendor-Buyer Relationship, Assured Supply, and Reduced Work Content in the Total Requisition to Payment" Process. Respondents were asked to indicate the extent to which the organization's

procurement performance was as a result of the adoption of the various electronic procurement practices on a Likert Scale. Means, Standard Deviation

and Regression were applied in the analysis of the data as indicated on the following tables;

Table 4: Procurement Performance Analysis

Procurement Performance	Mean	Std Dev	Analysis N
The platform has enabled a Stronger Vendor-Buyer Relationship	4.051	0.535	77
Delivery of best-value contracted goods and service	4.116	0.485	77
The organization enjoys Better contracts	4.116	0.760	77
Improved procurement resource utilization across the organization	4.259	0.849	77
There is a significant Reductions in procurement costs	4.012	0.638	77
Significant reductions in the time taken to complete the procurement process	4.207	0.731	77
The Organizational has developed its strategic procurement goals	4.168	0.833	77
The organization can relay information across its supply chain network	4.103	0.717	77
The organization has achieved Procurement quality and measurement improvement	4.038	0.696	77
Overall mean	4.119		

From the study it was evident that, the three variables, Electronic payment, Electronic auction and Electronic auction were significant influencers' of procurement performance. Majority of the parameters scored a mean of 4.0 and above, implying that the implementation and utilization of the electronic procurement platform had enhanced procurement productivity hence higher output. Respondents acknowledged this by agreeing to a larger extent, all the parameters have a mean of 4.0 and above. E procurement significantly reduces the time taken to complete the process, 4.207 and

subsequently has enhanced the procurement resource utilization across the organization, 4.259. Respondents further agreed that procurement costs have been significantly reduced and procurement quality and measurement improvement has been achieved through the use of electronic procurement. The study showed that the benefits accrued by use of e procurement are significant, procurement performance had a mean of 4.119. This showed a successful implementation of e procurement has a high impact on the general performance of the organization.

Correlation Analysis

Table 5: Correlation Analysis

		Electronic sourcing	Electronic payment	Electronic auction	Procurement performance
Electronic sourcing	Pearson Correlation	1	.256*	.349**	.707**
	Sig. (2-tailed)		.025	.002	.000
	N	77	77	77	77
Electronic payment	Pearson Correlation	.256*	1	.563**	.727**
	Sig. (2-tailed)	.025		.000	.000
	N	77	77	77	77
Electronic auction	Pearson Correlation	.349**	.563**	1	.845**
	Sig. (2-tailed)	.002	.000		.000
	N	77	77	77	77

Procurement performance	Pearson Correlation	.707**	.727**	.845**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	77	77	77	77

The table above depicted there is a perfect correlations between variables and themselves, depicted by the diagonal of ones.

There existed a stronger correlation between electronic sourcing (.707), electronic payment, (.727) electronic auction (.845), and procurement performance at 1% level all with a $p < 0.05$ meaning

the relationship is statistically significant. The result depicted that all the three variables significantly influences procurement performance. A correlation coefficient greater than .5 and closer to one depicts a strong and positive relationship between the independent and dependent variables.

Table 6: Models Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Constant)	.022	.071		.315	.004
Electronic sourcing(X_i)	.315	.012	.442	25.6	.000
Electronic payment(X_{ii})	.317	.019	.335	16.8	.000
Electronic auction(X_{iii})	.362	.015	.506	24.7	.000
				89	

The results indicated that all the electronic procurement practices have a positive effect on procurement performance. Putting all other variables constant the performance level was at 2.2%. Electronic procurement performance increases by 0.315 through use of Electronic sourcing facet and a P-value of 0.000 which is significant. For every unit increase in use of electronic sourcing there is a corresponding .315 increase in procurement performance. Similarly for every unit increase in Electronic payment, procurement performance increases by 0.317 and P-Value of 0.000 which depicts that it is significant.

Electronic procurement performance of state Corporations increases by 0.362 through use of

electronic auctions putting other factor constant and a P- value of 0.000 which depicts that it is significant. The model summary explains the strength of the relationship between the variables and the dependent variables. It tells how well the independent variables affect the outcome of the investigation.

As per the SPSS generated results the Equation

$$Y = \beta_0 + \beta_1 X_i + \beta_2 X_{ii} + \beta_3 X_{iii} + \epsilon$$

$$Y = 0.022 + 0.315 X_i + 0.317 X_{ii} + 0.362 X_{iii} \dots\dots 1$$

Where;

Y = Procurement Performance

X_i = Electronic sourcing

X_{ii} = Electronic payment

X_{iii} = Electronic auction

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.990 ^a	.981	.980	.02134

The Coefficient of Multiple Determination (R^2 Square) was 0.981 indicating that the regression line explains

98.1% of the variation in the procurement performance of the state corporations. Most

processes of the procurement functions shall be carried using computers and via internet. The electronic procurement system increases reliability and stretches the interconnectivity of the processes

building an inclusive program and procedural activities. This impact positively on procurement performance.

Table 8: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.712	3	.571	12.52	.000 ^b
Residual	.033	73	.000		
Total	1.745	76			

Table 8 above showed the outcome of the Analysis of Variance (ANOVA) which indicated that, the F static was 12.522 with a significant change of 0.000%. This implied that the impact of electronic procurement practices on procurement performance was statistically significant. The study depicted that there is a positive correlation between electronic procurement and procurement performance and that indeed state corporations have enhanced the productivity of the procurement function through the use of electronic procurement facets. Procurement performance is highly dependent with the implementation electronic procurement as it makes process faster and quicker. Electronic procurement gives different facets that enables real time solutions in sourcing and payment platforms. Electronic procurement is indeed a positive influence of performance, it aids in faster processes and a wider coverage in real time.

Hypotheses Testing

Testing Hypothesis One

To assess the relationship between electronic sourcing and procurement performance the null hypothesis was set out as follows.

H₀₁: There is no significant relationship between electronic sourcing and procurement performance of state corporations in Mombasa County.

The regression result for electronic sourcing had a beta coefficient of .442 at a significance level of .004 which implied that there is a strong positive

relationship between electronic sourcing and procurement performance. The decision rule for hypothesis testing was reject **H₀₁** if P value is < 0.05 otherwise fail to reject if P value is > 0.05. The result showed that P-value was ≤ 0.05 and β ≠ 0 hence the null hypothesis was rejected. The study concluded there is a positive relationship between electronic sourcing and procurement performance of state corporations in Mombasa County.

Testing Hypothesis Two

To assess the relationship between electronic payment and procurement performance the null hypothesis was set out as follows.

H₀₂: There is no significant relationship between electronic payment and procurement performance of state corporations in Mombasa County.

The regression result of Electronic payment has a beta coefficient of .336 at a significance level of .000 which implied that there is a strong positive relationship between electronic payment and procurement performance. The decision rule for hypothesis testing was reject **H₀₂** if P value was < 0.05 otherwise fail to reject if P value is > 0.05. The result showed that P-value was ≤ 0.05 and β ≠ 0 hence the null hypothesis was rejected. The study concluded there is a statistically significant positive relationship between electronic payment and procurement performance of state corporations in Mombasa County.

Testing Hypothesis Three

To assess the relationship between electronic auction and procurement performance the null hypothesis was set out as follows.

H₀₃: There is no significant relationship between electronic -Auction and procurement performance of state corporations in Mombasa County.

According to results electronic auction has a beta coefficient of .506 at a significance level of .000 which implied that there is a strong positive relationship between electronic auction and procurement performance. The decision rule for hypothesis testing was reject H₀₃ if P value is < 0.05 otherwise fail to reject if P value is > 0.05. The result showed that P-value was ≤ 0.05 and $\beta \neq 0$ hence the null hypothesis is rejected. The study concluded there is a positive relationship between electronic auction and procurement performance of state corporations in Mombasa County.

CONCLUSION

From the research findings, the study concluded the following: The high coefficient of Multiple Determination (R² Square) implied that of the procurement performance of the state corporations can be attributed to the electronic procurement practices Electronic sourcing, Electronic payment and Electronic auction they had adopted hence the centrality of adopting and implementing electronic procurement strategies in public procurement. In order to enhance their competitiveness and agility, state corporations have to fully adopt electronic procurement practices in tandem with the current public procurement reforms while complementing the effort of the treasury in implementing Integrated Financial Management Systems (IFMIS). The fact that majority of state corporations have implemented electronic procurement is step in the right direction for the state corporations, this means that corporations are not only more receptive and agile but also keen to enhance their competitiveness in the global economy now more than ever before and to

enhance accountability and build up confidence to the citizenry due to a large public outcry, on a highly corruption infested public procurement system.

Electronic sourcing and procurement performance have a strong positive correlation as depicted in the study findings. A unit increment in Electronic sourcing implementation corresponds to a significant increase in procurement performance. From the study it was evident that it Increases transparency in purchasing process, Participating in Electronic sourcing helps companies better understand a potential supplier's culture by improving transparency and providing a clearer framework for how an organization is going to market with their goods or services.

An electronic sourcing event is a direct channel that can improve a sales and marketing team's capital efficiency; (i.e. reducing the number of months required to recover the cost of acquiring a customer). Participating in Electronic sourcing provides a means to better understand your competition and creates competitive intelligence. The study concluded that, indeed electronic sourcing affects procurement performance positively.

From the analysis the positive correlation coefficient depicts the existence of a positive relationship between Electronic payment and procurement performance. Respondents agreed that indeed through the use of Electronic payment, State Corporation have enhanced performance. The benefits of Electronic payment are from Time savings, Money transfer between virtual accounts usually takes a few minutes, expenses control to reduced risk of loss and theft. The study concludes that the benefits accrued to the corporations are many and wide and the use of Electronic payment has a positive impact on procurement performance of the state corporations.

The study found that Electronic auction has a positive impact on procurement performance. Respondents' reactions towards the use and benefits of Electronic auction were highly rated and skewed towards

strongly agree. E-auctions aids in removing the human factor from price negotiation not all buyers are good negotiators, and, by definition, only a handful of buyers can be selected as your best negotiators. More so, higher average cost reduction especially when compared to a basic 3-bids-and-a-buy RFX process. It increases efficiency and price transparency what used to take months can now be done in a couple of weeks, as well it also assists in the identification of the “best total cost” supplier as you can also track “bids” on delivery terms and conditions. Therefore the study concludes that it is evident that Electronic auction impacts positively on the procurement performance of state corporations.

RECOMMENDATIONS

The study recommended the following; most state corporations are still using the manual system versus the electronic procurement system, the electronic sourcing process has not been fully digitized. It's partly manual and partly digital. Therefore there is urgent need for them to go digitally full fledged to benefit optimally from the system. State corporations are still sourcing traditionally this consumes time in regards to time taken to send and receive quotations. The traditional sourcing process entails a lot of paper and is prone to errors of commission. Online electronic sourcing shall close this gap. Through Electronic sourcing implementation, State Corporation shall reduce paper work.

The Electronic payment system has gradually been improving, most payments are done through bank systems, and however there is need to embrace new trends in the industry I.e mobile banking. This shall improve speed and timely payments. Most corporations are using the cheque system more often, a time they have to split payments to facilitate large electronic payments. Electronic funds transfers and telegraphic transfers can be utilized to do larger payments.

Electronic auctions systems have not been fully implemented, Requests for quotations are mostly used. For greater efficiency and productivity, state corporations should be implemented to the fullest. It was established that majority of the staff in the corporations had little know how on IT skills, there is need to enhance their skills through training to achieve maximum productivity. Some facets such as Electronic auction have to a far extended been incapacitated by the existing law and regulation. The Act has not fully incorporated and allowed the use of electronic procurement system, thus non-optimal utilization of the system by state corporations. A change in the regulation would lead to utilization in wholesome systems that enable real time vendor competition and evaluation of bids to fully optimize Electronic auctions.

Suggestion for Further Studies

A research should also be done in other organizations and the results compared so as to ascertain whether there is consistency on the effects of electronic procurement on organizational performance. Further research should be done on the other facets of electronic procurement system to establish if there is impact on procurement performance as this research was confined to only three facets.

Procurement performance is yet to have a definite or standard way of performing or conducting it. This possess a great challenge to entities that wants to do procurement performance, since there is no clear guided way to conducting the same more so many entities do not know what are the right measures under procurement performance. Therefore, more research should be done on this discipline.

Other than electronic procurement there are other factors that influence procurement performance. These other factors works hand in hand with the electronic procurement system. More research has to be carried out on such other factors to establish their role in procurement performance.

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