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INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEM IMPLEMENTATION AND ITS IMPACT ON PROCUREMENT PERFORMANCE AMONG PARASTATALS IN KENYA

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Abstract

Purpose: The purpose of the study was to assess IFMIS implementation and its impact on procurement performance among parastatals in Kenya with an aim of making recommendations on proper use of IFMIS.

Methodology: This study adopted a descriptive research design approach targeting heads of procurement and ICT at the 187 parastatals. The study preferred this method because it allowed an in-depth study of the subject. To gather data, structured questionnaire were used to collect data from a sample of one hundred and thirty (130) respondents, who were selected using simple random sampling, from the four strata. Once collected, data was analyzed using descriptive and inferential statistics. Quantitative data was analyzed using multiple regression analysis. The qualitative data generated was analyzed by use of Statistical Package of Social Sciences (SPSS) version 22.

Results: The response rate of the study was 74%. The regression results revealed that the IFMIS platforms identified in the study, that is, online inventory management, electronic vendor evaluation, online payments and online contract management combined could explain approximately 71.5% of the variations in the procurement performance among parastatals. The other 28.5% may be attributed to other strategies not explained by the model or the variables.

Conclusion: The findings of the study indicated that online inventory management, electronic vendor evaluation, online payments and online contract management have a positive relationship with procurement performance among parastatals in Kenya.

Contribution to theory, policy and practice: The study recommended that public institutions should embrace IFMIS technology so as to improve performance and further researches should to be carried out in other public institutions to find out if the same results can be obtained.

***Keywords*:** *online inventory management, electronic vendor evaluation, online payments, online contract management*

1.0 INTRODUCTION

The study sets out to investigate IFMIS implementation and its impact on procurement performance among parastatals in Kenya. To this end, this chapter builds the case by introducing the problem warranting the study. This chapter presents; the background of the study, problem statement, objectives, research questions, importance of the study, the scope of the study and limitations of the study.

Internet technology has provided organizations with vast opportunities to operate beyond their traditional physical boundaries. More specifically ICT platforms such as IFMIS have provided firms with more efficient solutions to drive significant value into their business (Premkumar, 2009). Indeed in 2001 one of the major advocates of internet based business strategies, Michael Porter, professed that if firms were intent on remaining competitive they would have to adapt their business models to accommodate more effective and efficient internet based business approaches (Lavelle & Bardon, 2009).

According to Issa, Flood and Caglasin (2013), the majority of organizational spending consists of purchasing. In order to decrease the total costs spent on purchasing process, internet technologies are used and IFMIS has become popular to implement in the latest era by both governments and enterprises. Although the opportunities for improvement seem abound, both private and public sector are still cautious as far as the adoption of electronic technologies is concerned.

According to Eadie, Perera and Heaney (2011) there is a gap between theory and practice. In the use of IFMIS many studies have concentrated in the USA and other large economies such as Germany and Japan. Despite the compelling nature of the case for public sector ICT procurement practices that has been made both by formal, governmental-sponsored reviews, and perhaps more importantly through the positive experiences of private sector organizations, there is very little evidence that it has been widely adopted within the UK public sector. A study by Klein, Conn and Sorra (2010) of government purchasing strategies found that only 73% of orders are sent electronically; 67% of invoices are received and processed electronically and 86% of tenders are transacted electronically.

According to Aboelmaged (2009) a serious subject of doubt is that the availability of the facilities necessary for participation in IFMIS implementation by government practitioners is in question. Most procurement professionals in Nigeria make use of stand-alone computers running few application packages for word processing and spread sheeting. A moderately high level of proficiency in the use of ICT tools such as IFMIS is also a pre-requisite for the use of procurement facility by stakeholders.

Kenya's trade liberalization has accelerated since the early 1990s, thus stimulating imports and improving access to alternative and superior technologies. With the advent of globalization and global financial crisis, adopting information and communication technology in Kenyan parastatals have become increasingly important. For example, national gender and equality commission has adopted systems such as IFMIS in its procurement processes (Amayi, 2011).

1.2 Problem Statement

The procurement area is the largest single category of spend, ranging from 50% to 85% of revenue. The interest in this topic has emanated from many drivers, including trends such as rampant delay

in delivery, low quality products, dissatisfied customers and the dwindling triple bottom-line (Kirungu, 2012). In a bid to restructure the government to facilitate better provision of services and better systems of accountability, the 2010 Constitution seems to have created a fourth arm of the government that of parastatals which collectively have far reaching functions and mandates (GoK, 2008).

These institutions in Kenya have been experiencing a myriad of problems including low quality goods, overpriced procurement contracts and gross mismanagement (Rotich, 2011). According to statistics from the World Bank (2013) there was a 42.7% drop in profits to Sh629 million from Sh1.64 billion a year earlier at Geothermal Development Company (GDC) and the public sector in general recorded a decline in performance. A report by CCG (2010) indicates that in some state corporations such as Kenya Electricity Generating Company (KenGen), the total operating expenditure increased by 2% compared to similar period in 2011.

According to National Land Commission (NLC), customer satisfaction survey of 2011, 2012 and 2013, it is notable that the percentage index has been fluctuating that is, 65%, 53% and 46% respectively (Kirungu, 2012). NLC faces a major challenge in controlling the overall operating cost because of the constant increase of sourcing cost; this is evident by NLC posting an increase in expenses of Ksh 6 Billion compared to Ksh 4 Billion noted in the previous year according to a (NLC) 2013 annual report.

Productivity of public sector institutions is quite low while at the same time they continue to absorb excessive portion of the budget, becoming a principal cause of long term procurement problems (KIPPRA, 2010). In fact a parliamentary committee reports that out of many reports examined by the Auditor General, only few parastatals managed a clean bill of health (CCG, 2007). According to Transparency International (2011) 80% of public sector institutions rely on old records in selecting their suppliers, while only 25% search through internet catalogue in selecting suppliers (Rajkumar, 2010), the reason for loss, fraud, theft and gross mismanagement.

However, in Australia, previous research by Knudsen (2012) on the survey of the use of IFMIS and related technologies in procurement, shows that their use in the procurement processes improved procurement performance by 81%, while in Kenya, no empirical research has been undertaken to quantify IFMIS implementation and its impact on procurement performance. It is against that backdrop that this study will be done to assess IFMIS implementation and its impact on procurement performance among parastatals in Kenya.

1.3 Objectives of the Study

i. To assess the influence of online inventory management on procurement performance among parastatals in Kenya. ii. To establish the influence of electronic vendor evaluation on procurement performance among parastatals in Kenya.
ii. To determine the influence of online payments on procurement performance among parastatals in Kenya.
iii. To evaluate the influence of online contract management on procurement performance among parastatals in Kenya.

2.0 LITERATURE REVIEW

2.1 Empirical Review

Online Inventory Management and Procurement Performance

Kalakota et al., (2011) analyzed the warehouse and inventory management system in Shell Petroleum Development Company and demonstrated the utility of ICT through vendor managed inventory as a veritable value-added tool in electronic inventory management. Croom (2010) also tried to justify the use of modified EOQ models logistic-based approach to managing inventory of perishable products.

Electronic Vendor Evaluation and Procurement Performance

According to a study done by Farzin et al., (2010) he argues that electronic vendor appraisal process is an essential aspect of both strategic sourcing and procurement performance in order for an organization to achieve competitive advantage. Boer et al., (2012) observed that developing a robust, easy-to-deploy method of evaluating vendor electronically is a critical business competency. Boer noted that the methodology should be sound and the approach practical. Vendor evaluation may take various approaches which all influence the quality of data obtained from the vendors which reflect the true picture of the suppliers (Petroni, 2010).

Online Payments and Procurement Performance

Wang et al., (2014) in their study on the levels of electronic payment adoption in business networks, they define e-payment system as a form of financial commitment that involves the buyer and the seller facilitated via the use of electronic communications. Also, Segev and Gebauer (2011) sees e-payment as a form of inter-connections between organizations and individuals aided by banks and inter-switch houses that enables monetary exchange electronically.

Online Contract Management and Procurement Performance

Cagliano Angeles (2010) explored the effectiveness of e-contracting in Ghana's public corporations and adopted a descriptive research design. Findings of the study revealed that econtracting strategies enhances procurement performance by reducing transaction costs and cycle times; allowing possibility of developing vendor managed inventory and improvements in just in time deliveries; facilitating more accurate deliveries due to reduced input order errors by suppliers; shared performance measurement data which encourages improved supplier performance; potential for less expediting by the buyer as the supplier acknowledges orders by exception which automatically updates the buyer's system; reduced stock due to shared sales/forecast information; possibility of using self-billing. However, the study was conducted in Ghana

2.2 Theoretical review

The Technology Acceptance Model (TAM)

This model was developed and validated by Davis (1993), he used technology acceptance model (TAM) to explain the mechanisms that influence and shape users' acceptance of new information technology such as electronic tendering (Minahan & Degan, 2011). Inventory management system as an information technology application consists of useful tools for users to save money and increase organizations' effectiveness and efficiency (Davila, Gupta & Palmer, 2013). Process cost savings, reduced administration costs, decrease in costs through reduced staffing levels, increased quality through increased competition, placing purchase orders, reduction in time through

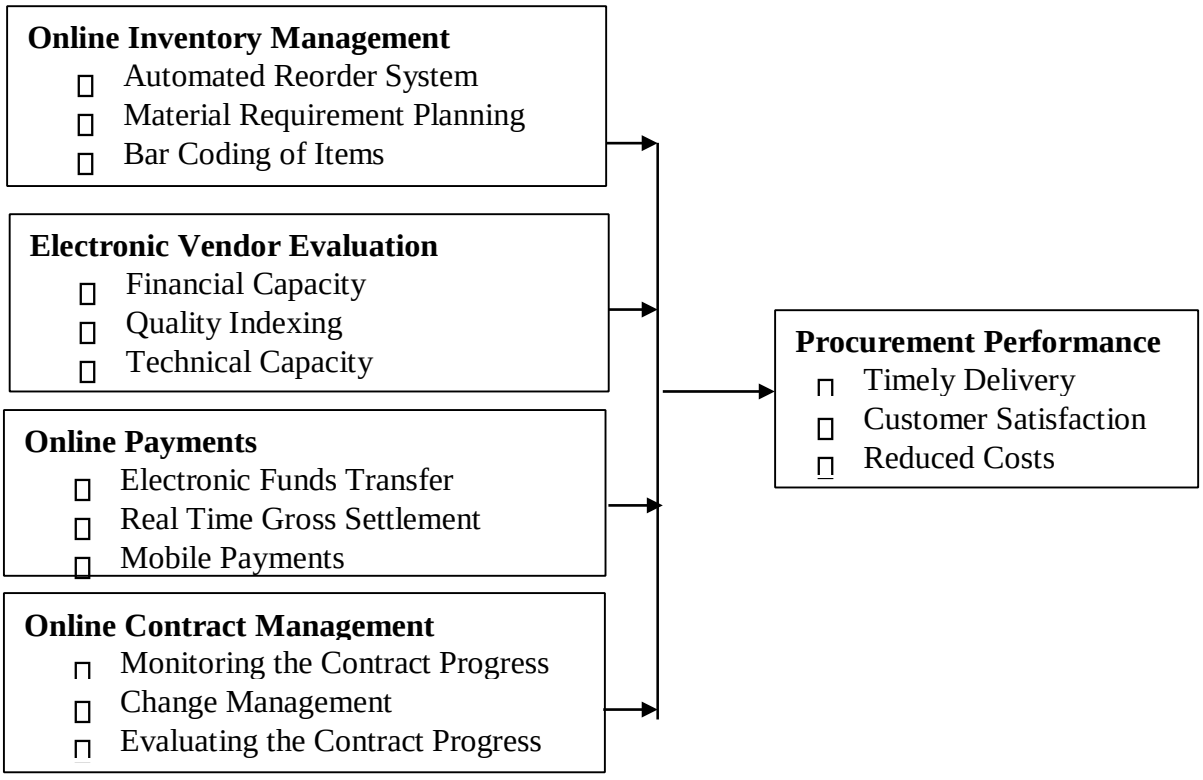
improved internal workflow and shortened overall procurement cycle times through aspects like automated reorder system, compose some of the benefits that stem of inventory management system (Kheng & Al-Hawamdeh, 2012).

According to TAM, there are two specific variables that are fundamental determinants of users' attitude toward using information technology and actual use of the system: perceived usefulness and perceived ease of use relatively to new information system design features (Eadie, Perera & Heaney, 2011). If users realize that bar coding of items is quicker and efficient, then their acceptance will be more likely (Bilali & Bwisa, 2015).

Many researchers have conducted empirical studies to examine the explanatory power of the TAM, which produced relatively consistent results on the acceptance behavior of IT end users (Aboelmaged, 2009). In summary, TAM provided an explanation of the determinants of technology acceptance that enables explanation of user behavior across a wide scope of end-user information technologies and user populations (McIntosh & Sloan, 2011). Technology acceptance model is relevant in that it explains parastatals are increasingly accepting and using new technologies in inventory management and ICT procurement activities which consequently is improving procurement performance.

Figure 1: Conceptual Framework

2.3 Conceptual Framework



3.0 METHODOLOGY

This study adopted a descriptive research design approach targeting heads of procurement and ICT at the 187 parastatals. The study preferred this method because it allowed an in-depth study of the subject. To gather data, structured questionnaire were used to collect data from a sample of one hundred and thirty (130) respondents, who were selected using simple random sampling, from the four strata. Once collected, data was analyzed using descriptive and inferential statistics. Quantitative data was analyzed using multiple regression analysis. The qualitative data generated was analyzed by use of Statistical Package of Social Sciences (SPSS) version 22.

4. 0 RESULTS FINDINGS

The obtained data from the questionnaires give to the respondents was as follows.

4.1 Descriptive Analysis

Online Inventory Management

The first objective of the study was to assess the influence of online inventory management on procurement performance among parastatals in Kenya. The respondents were asked to indicate to what extent did online inventory management influence procurement performance among parastatals in Kenya. Results indicated that majority of the respondents 25% agreed that it was to

extent and not all were at 5 and 8% respectively.

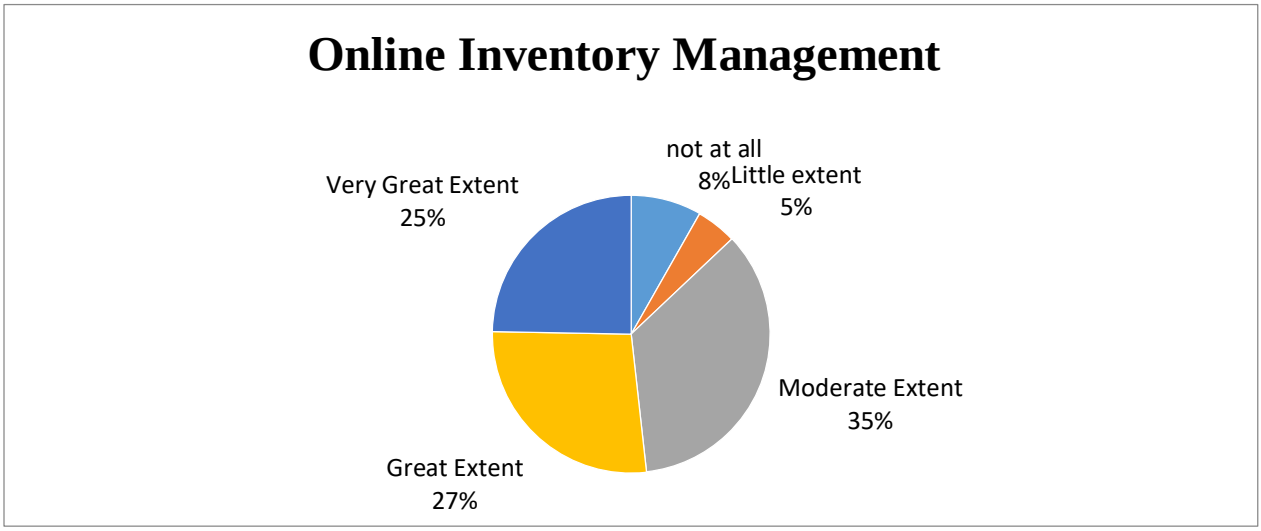


Figure 2: Online Inventory Management

a very great extent, 27% said that it was to a great extent, 35% said it was moderate, while little

The respondents were also asked to comment on statements regarding online inventory management influence on procurement performance among parastatals in Kenya. The responses were rated on a likert scale and the results presented in Table 1. It was rated on a 5 point Likert scale ranging from; 1 = strongly disagree to 5 = strongly agree. The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score

of 0 to 2.5. The score of 'neutral' has been taken to represent a statement agreed upon, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.

Table 1: Online Inventory Management

Statements	N	Mean	Std. Deviation
Automated reorder system greatly reduces delivery time	96	4.3	1.0
MRP greatly reduce delivery time	96	3.6	1.4
Bar coding of items greatly reduces delivery time	96	3.8	1.3
Automated reorder system greatly influences customer satisfaction	96	3.0	1.4
MRP greatly influence customer satisfaction	96	4.2	1.0
Bar coding of items greatly influences customer satisfaction	96	3.7	0.5
Automated reorder system greatly reduces costs	96	3.4	1.3
MRP greatly reduces costs	96	4.1	4.3
Bar coding of items greatly reduces costs	96	3.8	1.2
Average	**96**	**3.8**	**1.5**

The respondents were asked to indicate their descriptive responses for online inventory management. The result revealed that majority of the respondent with a mean of (4.3) agreed with the statement that automated reorder system greatly reduces delivery time. The measure of dispersion around the mean of the statements was 1 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.6) agreed with the statement that MRP greatly reduce delivery time. The measure of dispersion around the mean of the statements was 1.4 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.8) agreed with the statement that bar coding of items greatly reduces delivery time. The measure of dispersion around the mean of the statements was 1.3 indicating the responses were varied.

The result revealed that majority of the respondent with a mean of (3.0) agreed with the statement that automated reorder system greatly influences customer satisfaction. The measure of dispersion around the mean of the statements was 1.4 indicating the responses were varied. The result in table 4.5.1 revealed that majority of the respondent with a mean of (4.2) agreed with the statement that MRP greatly influence customer satisfaction. The measure of dispersion around the mean of the statements was 1 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.7) agreed with the statement that bar coding of items greatly influences customer satisfaction. The measure of dispersion around the mean of the statements was 1 indicating the responses were varied.

The result revealed that majority of the respondent with a mean of (3.4) agreed with the statement that automated reorder system greatly reduces costs. The measure of dispersion around the mean

of the statements was 1.3 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.8) agreed with the statement that MRP greatly reduces costs. The measure of dispersion around the mean of the statements was 1.2 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.8) agreed with the statement that bar coding of items greatly reduces costs. The measure of dispersion around the mean of the statements was 1.2 indicating the responses were varied. However the variations in the responses were varied as shown by an average standard deviation of 1.5 and an average mean of 3.8. The findings agree with Knudsen (2015) that using online inventory management when sourcing is a smart move and can reduce expenses significantly.

Electronic Vendor Evaluation

The second objective of the study was to investigate the influence of electronic vendor evaluation on procurement performance among parastatals in Kenya. The respondents were asked to indicate to what extent did electronic vendor evaluation influence procurement performance among parastatals in Kenya. Results indicated that majority of the respondents 31% agreed that it was to

moderate, while little extent and not all tied at 5%.

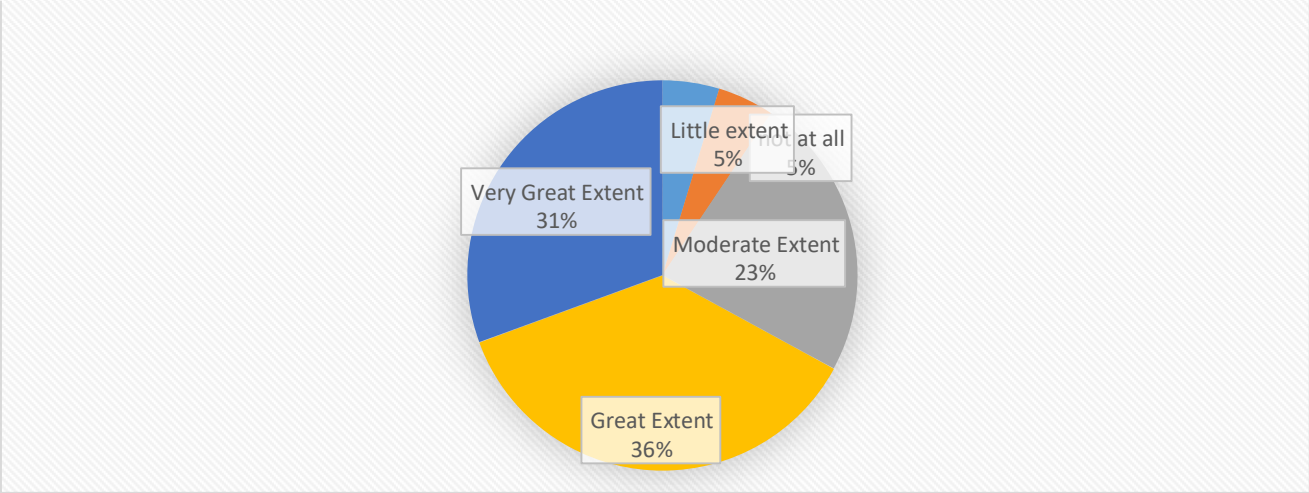


Figure 3: Electronic Vendor Evaluation

a very great extent, 36% said that it was to a great extent, 23% said it was

The respondents were also asked to comment on statements regarding electronic vendor evaluation influence on procurement performance among parastatals in Kenya. The respondents were asked to indicate descriptive responses for electronic vendor evaluation. The result in Table 2 revealed that majority of the respondents as indicated by a mean of (3.8) indicated that they agreed with the statement that establishing the financial capacity greatly reduces delivery time. The responses were varied as measured by standard deviation of 1.1. The result revealed that majority of the respondents as indicated by a mean of (3.6) indicated that they agreed with the statement that establishing the supplier quality index greatly reduces delivery time. The responses were varied as measured by standard deviation of 1.1. The result revealed that majority of the respondents as indicated by a mean of (3.7) indicated that they agreed with the statement that establishing the

technical capacity reduces delivery time. The responses were varied as measured by standard deviation of 1.1

Table 2: Electronic Vendor Evaluation

Statements	N	Mean	Std. Deviation
Establishing the financial capacity greatly reduces delivery time	96	3.8	1.1
Establishing the supplier quality index greatly reduces delivery time	96	3.6	1.1
Establishing the technical capacity reduces delivery time	96	3.7	1.1
Establishing the financial capacity greatly influences customer satisfaction	96	3.5	1.2
Establishing the supplier quality index greatly influences customer satisfaction	96	3.8	1.2
Establishing the technical capacity greatly influences customer satisfaction	96	3.5	1.4
Establishing the financial capacity greatly reduces costs	96	3.5	1.4
Establishing the supplier quality index greatly reduces costs	96	3.3	1.5
Establishing the technical capacity greatly reduces t costs	96	3.6	0.5
Average	**96**	**3.6**	**1.2**

The result revealed that majority of the respondents as indicated by a mean of (3.6) indicated that they agreed with the statement that establishing the financial capacity greatly influences customer satisfaction. The responses were varied as measured by standard deviation of 1.2. The result revealed that majority of the respondents as indicated by a mean of (3.6) indicated that they agreed with the statement that establishing the supplier quality index greatly influences customer satisfaction. The responses were varied as measured by standard deviation of 1.2. The result revealed that majority of the respondents as indicated by a mean of (3.5) indicated that they agreed with the statement that establishing the technical capacity greatly influences customer satisfaction. The responses were varied as measured by standard deviation of 1.4.

The result revealed that majority of the respondents as indicated by a mean of (3.5) indicated that they agreed with the statement that establishing the financial capacity greatly reduces costs. The responses were varied as measured by standard deviation of 1.4. The result revealed that majority of the respondents as indicated by a mean of (3.3) indicated that they agreed with the statement that establishing the supplier quality index greatly reduces costs. The responses were varied as measured by standard deviation of 1.5. The result revealed that majority of the respondents as indicated by a mean of (3.6) indicated that they agreed with the statement that establishing the technical capacity greatly reduces costs. The responses were varied as measured by standard deviation of 0.5.

However the variations in the responses were varied as shown by an average standard deviation of 1.2 and an average mean of 3.6. These findings imply that electronic vendor evaluation was at the

heart of the organization. They agree with Lysons (2013) that organizations must look toward their vendor evaluation improvements. The opportunities for cost savings and operational improvements can be enormous as the impact on profitability is considerable.

Online Payments

There was also need to establish how online payments influenced procurement performance among parastatals in Kenya as the third objective. The respondents were asked to comment on extent to which online payments influence procurement performance among parastatals. Results indicated that majority of the respondents 21% agreed that it was to a very great extent, 22% said that it was to a great extent, 21% said it was moderate; little extent was 28% and not all at 8%.

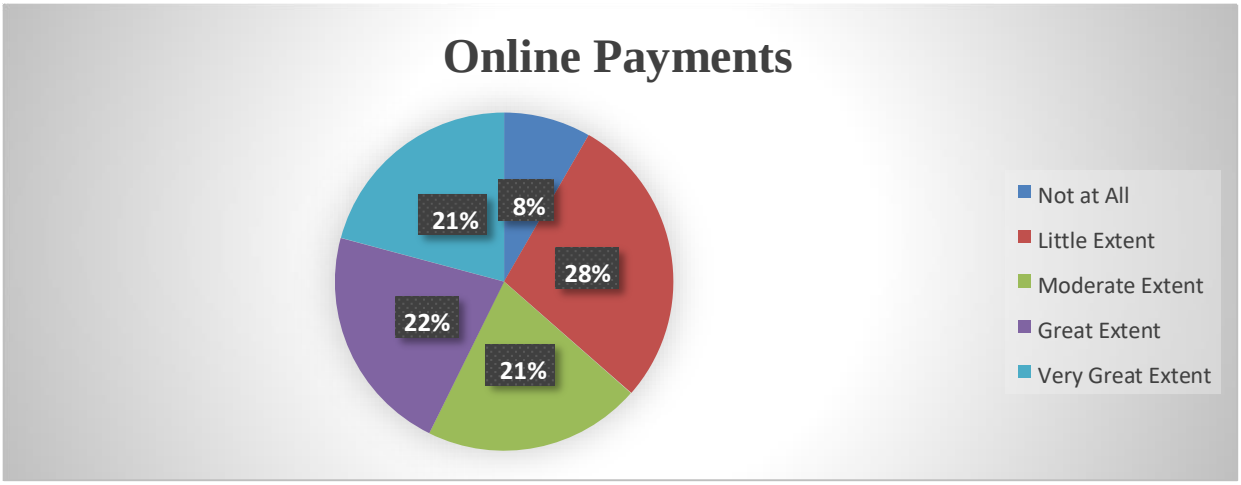


Figure 4: Online Payments

The respondents were asked to indicate their levels of agreement on statements regarding online payments. The results Table 3 revealed that majority of the respondent (3.9) agreed with the statement that their electronic funds transfer greatly reduces delivery time. The responses were varied as shown by the standard deviation of 1.2. The results revealed that majority of the respondent (3.2) agreed with the statement that RTGS greatly reduce delivery time. The responses were varied as shown by the standard deviation of 1.3. The results revealed that majority of the respondent (4.0) agreed with the statement that mobile payments reduce delivery time. The responses were varied as shown by the standard deviation of .8.

The results revealed that majority of the respondent (4.2) agreed with the statement that electronic funds transfer greatly influences customer satisfaction. The responses were varied as shown by the standard deviation of .9. The results revealed that majority of the respondent (3.7) agreed with the statement that RTGS greatly influence customer satisfaction. The responses were varied as shown by the standard deviation of .5. The results revealed that majority of the respondent (2.4) agreed with the statement that mobile payments greatly influence customer satisfaction. The responses were varied as shown by the standard deviation of 1.3.

The results revealed that majority of the respondent (3.1) agreed with the statement that Electronic funds transfer greatly reduces costs. The responses were varied as shown by the standard deviation of 1.2. The results revealed that majority of the respondent (3.2) agreed with the statement that

RTGS points greatly reduce costs. The responses were varied as shown by the standard deviation of 1.3. The results revealed that majority of the respondent (3.5) agreed with the statement that mobile payments greatly reduce costs. The responses were varied as shown by the standard deviation of 1.3.

The average mean of all the statements was 3.7 indicating that majority of the respondents agreed on online payments influence on procurement performance of parastatals in Kenya. However the variations in the responses were varied as shown by a standard deviation of 1.1.
These findings imply that through online payments, companies can improve competitive positioning, gain entry to new dynamic and technology driven markets (Maina, 2008).

Table 3: Online Payments

Statements	N	Mean	Std. Deviation
Electronic funds transfer greatly reduces delivery time	96	3.9	1.2
RTGS greatly reduces delivery time	96	3.2	1.3
Mobile payments reduces delivery time	96	4.0	0.8
Electronic funds transfer greatly influences customer satisfaction	96	4.2	0.9
RTGS greatly influences customer satisfaction	96	3.7	0.5
Mobile payments greatly influences customer satisfaction	96	2.4	1.3
Electronic funds transfer greatly reduces costs	96	3.1	1.2
RTGS points greatly reduces costs	96	3.2	1.3
Mobile payments greatly reduces costs	96	3.5	1.3
Average	**96**	**3.7**	**1.1**

Online Contract Management

There was also need to establish how online contract management influences procurement performance among parastatals. The respondents were also asked to comment on statements regarding the extent to which online contract management influenced procurement performance among parastatals. Results showed that 3% of respondents indicated to very great extent, great extent was at 12%, moderate extent was 37%, while little extent was at 27% and not at all was at 21%

Figure 5: Online Contract Management

The respondents were asked to indicate the descriptive responses for online contract management. The result Table 4 revealed that majority of the respondent (3.2) agreed with the statement that monitoring the contract progress greatly reduces delivery time. The responses were varied as shown by a standard deviation of 1.3. The result revealed that majority of the respondent (3.2) agreed with the statement that change management greatly reduce delivery time.

The responses were varied as shown by a standard deviation of 1. The result revealed that majority of the respondent (4.3) agreed with the statement that evaluating the contract progress reduces delivery time. The responses were varied as shown by a standard deviation of 1. The result revealed that majority of the respondent (4.2) agreed with the statement that monitoring the contract progress greatly influences customer satisfaction. The responses were varied as shown by a standard deviation of 0.8. The result revealed that majority of the respondent (4.1) agreed with the statement that change management greatly influences customer satisfaction. The responses were varied as shown by a standard deviation of 1. The result revealed that majority of the respondent (4.2) agreed with the statement that evaluating the contract progress greatly influences customer satisfaction. The responses were varied as shown by a standard deviation of 0.8

The result revealed that majority of the respondent (4.4) agreed with the statement that monitoring the contract progress greatly reduce costs. The responses were varied as shown by a standard deviation of 0.6. The result revealed that majority of the respondent (4.4) agreed with the statement that change management points greatly reduce costs. The responses were varied as shown by a standard deviation of 0.6. The result revealed that majority of the respondent (4.4) agreed with the statement that evaluating the contract progress greatly reduces costs. The responses were varied as shown by a standard deviation of 0.7.

The average mean response for the statements on online contract management was 4.4 indicating there was agreement on online contract management, the variations in the responses was 0.9. The results imply that an organization benefits greatly when online contract management is embraced to reduce costs (Bird, 2009).

Table 4: Online Contract Management

Statements	N	Mean	Std. Deviation
Monitoring the contract progress greatly reduces delivery time	96	3.2	1.3
Change management greatly reduces delivery time	96	2.9	1.0
Evaluating the contract progress reduces delivery time	96	4.3	0.9
Monitoring the contract progress greatly influences customer satisfaction	96	4.3	0.9
Change management greatly influences customer satisfaction	96	4.1	1.0
Evaluating the contract progress greatly influences customer satisfaction	96	4.2	0.8
Monitoring the contract progress greatly reduces costs	96	4.4	0.6
Change management points greatly reduces costs	96	4.4	0.7
Evaluating the contract progress greatly reduces costs	96	4.4	0.6
Average	**96**	**4.4**	**0.9**

4.2 Correlation Analysis

Correlation analysis was used to determine both the significance and degree of association of the variables and also predict the level of variation in the dependent variable caused by the independent variables in Table 5. The correlation summary shown in Table 5 indicated that the associations between each of the independent variables and the dependent variable were all significant at the 95% confidence level. The correlation analysis to determine the relationship between online inventory management and procurement performance among parastatals in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there was a positive relationship (r=0.556) between online inventory management and procurement performance among parastatals in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05).

The correlation analysis to determine the relationship between electronic vendor evaluation and procurement performance among parastatals in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results indicated that there was a positive relationship (r=0.662) between electronic vendor evaluation and procurement performance among parastatals in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05).

The correlation analysis to determine the relationship between online payment and procurement performance among parastatals in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there was a positive relationship (r=0.703) between online payments and procurement performance among parastatals in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05).

The correlation analysis to determine the relationship between online contract management and procurement performance among parastatals in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there was a positive relationship (r=.691) between online contract management and procurement performance among parastatals in

Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05). Hence, it was evident that all the independent variables could explain the changes in the procurement performance among parastatals in Kenya, on the basis of the correlation analysis.

Table 5: Summary of Pearson's Correlations

Correlations		Online Inventory Management	Electronic Vendor Evaluation	Online Payments	Online Contract Management	Procurement Performance
Online Inventory Management	Pearson Correlation	1				
	Sig. (2-Tailed)					
Electronic Vendor Evaluation	Pearson Correlation	.372**	1			
	Sig. (2-Tailed)	0				
Online Payments	Pearson Correlation	.353**	.449**	1		
	Sig. (2-Tailed)	0	0			
Online Contract Management	Pearson Correlation	.363**	.771**	.547**	1	
	Sig. (2-Tailed)	0	0	0		
Procurement Performance	Pearson Correlation	.556**	.662**	.703**	.691**	1
	Sig. (2-Tailed)	0	0	0	0	

*** Correlation is Significant at the 0.05 Level (2-Tailed).*

4.3 Regression Analysis

In this study multivariate regression analysis was used to determine the significance of the relationship between the dependent variable and all the independent variables pooled together. Regression analysis was conducted to find the proportion in the dependent variable (procurement performance among parastatals in Kenya.) which can be predicted from the independent variables

(online inventory management, electronic vendor evaluation, online payments, online contract management).

Table 6 presented the regression coefficient of independent variables against dependent variable. The results of regression analysis revealed there was a significant positive relationship between dependent variable and the independent variable. The independent variables reported R value of 0.846 indicating that there was perfect relationship between dependent variable and independent variables. R square value of 0.715 means that 71.5% of the corresponding variation in procurement performance among parastatals in Kenya can be explained or predicted by (online inventory management, electronic vendor evaluation, online payments, online contract management) which indicated that the model fitted the study data. The results of regression analysis revealed that there was a significant positive relationship between dependent variable and independent variable at (β = 0.715), p=0.000 <0.05).

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846[a]	.715	.703	.14869

a) Predictors: *(Constant), Online Inventory Management, Electronic Vendor Evaluation, Online Payments, Online Contract Management.*

b) Dependent Variable: *Procurement Performance*

Table 7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.002	4	1.251	56.562	.000[b]
	Residual	1.99	91	0.022		
	Total	**6.992**	**95**			

a) Predictors: *(Constant), Online Inventory Management, Electronic Vendor Evaluation, Online Payments, Online Contract Management*

b)Dependent Variable: *Procurement Performance*

The significance value is 0.000 which is less than 0.05 thus the model is statistically significance in predicting how online inventory management, electronic vendor evaluation, online payments and online contract management influence procurement performance among parastatals in Kenya. The F critical at 5% level of significance was 28.61. Since F calculated which can be noted from the ANOVA table above is 56.562 which is greater than the F critical (value= 28.61), this shows that the overall model was significant.

The study therefore establishes that; online inventory management, electronic vendor evaluation, online payments and online contract management were all important IFMIS tools influencing

procurement performance of parastatals. These results agree with Odhiambo and Kamau (2013) results which indicated a positive and significant influence of IFMIS on procurement performance of parastatals. Table 8 shows the coefficients of determination summary results.

The research used a multiple regression model

$$Y= \beta_0+ \beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+Ɛ$$

The regression equation will be;

$$Y=2.07 + 0.166X_1 + 0.138X_2 + 0.119X_3 + 0.09X_4$$

The regression equation above has established that taking all factors into account (online inventory management, electronic vendor evaluation, online payments, online contract management) constant at zero, procurement performance among parastatals in Kenya will be an index of 2.07. The findings presented also shows that taking all other independent variables at zero, a unit increase in online inventory management will lead to a 0.166 increase in procurement performance of parastatals .The P-value was 0.000 which is less 0.05 and thus the relationship was significant.

Table 8: Coefficients of Determination

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.07	0.193		10.725	0.000
	Online Inventory Management	0.166	0.041	0.255	4.048	0.000
	Electronic Vendor Evaluation	0.138	0.053	0.235	2.603	0.010
	Online Payments	0.119	0.021	0.398	5.667	0.000
	Online Contract Management	0.090	0.043	0.201	2.093	0.037

a) Predictors: (*Constant), Online Inventory Management, Electronic Vendor Evaluation, Online Payments, Online Contract Management*

b)Dependent Variable: *Procurement Performance*

The study also found that a unit increase in electronic vendor will lead to a 0.138 increase in procurement performance among parastatals in Kenya. The P-value was 0.010 and thus the relationship was significant. In addition, the study also found that a unit increase in online payments will lead to a 0.119 increase in procurement performance among parastatals in Kenya. The P-value was 0.000 and thus the relationship was significant.

Lastly, the study found that a unit increase in online contract management will lead to a 0.090 increase in the procurement performance among parastatals in Kenya. The P-value was 0.030 and hence the relationship was significant since the p-value was lower than 0.05. The findings of the

study show that, online inventory management contributed most to the procurement performance among parastatals in Kenya.

5. 0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study sought to assess IFMIS implementation and its impact on procurement performance among parastatals in Kenya. The study targeted staff of parastatals, specifically heads of procurement and ICT departments. A total of 96 employees participated. The findings of the study indicated that online inventory management, electronic vendor evaluation, online payments and online contract management have a positive relationship with procurement performance among parastatals in Kenya.

5.2 Recommendations

The study is a milestone for further research in the field of procurement performance among parastatals in Africa and particularly in Kenya. The findings demonstrated the important IFMIS platforms to the performance of parastatals to include; online inventory management, electronic vendor evaluation, online payments and online contract management. The current study obtained an R^2 of 71.5% and should therefore be expanded further in future in order to include other IFMIS platforms that may as well have a positive significance to procurement performance of parastatals. Existing literature indicates that as a future avenue of research, there is need to undertake similar research in other institutions and public sector organizations in Kenya and other countries in order to establish whether the explored IFMIS platforms herein can be generalized to affect procurement performance in other public institutions

The study recommended that public institutions should embrace IFMIS technology so as to improve performance and further researches should to be carried out in other public institutions to find out if the same results can be obtained.

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