



**DETERMINANTS OF IMPLEMENTATION OF PROCUREMENT CONTRACT MANAGEMENT PRACTICES IN STATE CORPORATIONS IN KENYA**

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### ABSTRACT

*This study sought to establish the determinants of implementation of procurement contract management practices in state corporations in Kenya. Descriptive research design was used for the study. The target population for this study will be 187 procurement personnel. The study used a semi-structured questionnaire to collect primary data. The quantitative data was entered into SPSS for analysis. Both quantitative and qualitative data analysis techniques will be used. Quantitative data was analyzed using descriptive and inferential statistics while qualitative data was analyzed thematically. Descriptive statistics were used to analyze the data while inferential statistics were used to test on the relationship between the variables of the study where multiple regression model were used at 5% level of significance to present the findings of the study. The study concluded that there is need for the organizations to ensure that there is adequate IT infrastructure, adequate level of automation for the procurement staff in the organization. The study recommended that state corporations should have adequate supplier base which is important to improve performance of its suppliers. The study recommended that the organization stakeholders should understand the actual means by which contracts are evaluated and awarded. Procurement planning is usually the first stage of procurement process and therefore organization need to develop the skills of the employees on developing quality procurement plans based on the approved budgets. The top level and lower level employees should be involved in formulation and development of the procurement plans so as to make the process of implementation easier and acceptable by all employees. The procurement personnel's in organization need to carefully study and understand the applicable procurement thresholds in different situations and relevant procurement method applicable.*

**Key Words:** Information Technology, Supplier Relationship, Procurement Ethics, Procurement Planning

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## INTRODUCTION

Contract management practice is a vital aspect in any organization that intends to gain a competitive advantage and value for money. A firm's procurement process is incomplete without an effective and efficient contract management practice. Cropper (2008) describes contract management is the process of monitoring whether the contract parties are complying and performing as per the agreement. It also involves handling of issues that include errors, payment, specifications, policy specifications, as well as any changes that may result in the course of the contract execution. Contract management entails a process of efficient and systematic management of contract creation, implementation, and analysis in order to maximize financial and operational performance, as well as minimize risks.

Kakwezi (2012) defines contract management as those activities related to contract handling including invitation to and evaluation of bids; awarding and implementation of contracts; measurement, and payment calculation. This also entails monitoring contract associations, handling related issues, integrating essential contract modifications or changes. This is meant to ensure that all contract parties exceed or meet each other's expectations and interact with contractor to attain the objectives' of the contract. As Uher and Davenport (2009) note, it also involves practical monitoring, management and review of terms of contract established through the process of procurement, ensuring delivery is done appropriately. Contract management activities aim at ensuring that parties comply with the contractual terms and conditions, as well as documenting and accepting any necessary changes in the contract execution.

The Kenya Government forms state corporations to meet both commercial and social goals. They exist for various reasons including to correct market failures, to exploit social and political objectives, provide education, health, redistribute income or develop

marginal areas. The majority of key state corporations that exist today were established in the 1960's and 1970's. By 1995, there were two hundred and forty (240) parastatals in Kenya. According to the presidential task force on parastatal reforms report of 2013, all entities previously known as state corporations are clustered into five broad classifications, that is purely commercial state corporations, commercial state corporations with strategic functions, executive agencies, independent regulatory agencies, and research institutions, public universities, tertiary education and training institutions (GOK, 2013). According to the report, the total number of state corporations in Kenya should be 187, but 17 of them are yet to be enacted and developed and thus currently, there are 170 operational state corporations in Kenya.

State corporations in Kenya play critical roles in the national development effort. First, government owned entities are important in promoting or accelerating economic growth and development. Secondly, they are critical to building the capability and technical capacity of the state in facilitating and/or promoting national development. Third, they are important instruments in improving the delivery of public services, including meeting the basic needs of the citizens. Fourth, they have been variously applied to creation of good and widespread employment opportunities in various jurisdictions and lastly, the state corporations are useful for targeted and judicious building of international partnerships. They therefore play a major role in enabling social and economic transformation of the economies in which they operate (GOK, 2010)

### Statement of the Problem

Despite the development of a Public Procurement reforms in the public sector in Kenya, state corporations are still experiencing challenges related to service delivery. For example a report by Mercer Human Consulting (2016) implementation in county

governments was poor in the last two years. Transparency International (2014) also indicated that over 54% of citizens were dissatisfied with service delivery of state corporations in Kenya. Further, A report by the Transparency International (2014), noted that in Kenya despite adoption of Procurement and Asset Disposal Act (PPADA), 2015, the service delivery of the state corporations is wanting. Similarly, Centre for Governance Development (2015) contended that as a result of procurement related problems, the state corporations of Kenya have been dogged with many intricate challenges that have negatively impacted on service delivery. According to the auditor general report (2016), despite PPADA (2015) being well implemented in the state corporations in Kenya, the service delivery in the county governments is wanting. The above scenario brings an interesting contradiction between the ideal situation and real situation on the ground. It is interesting to note that there is contradicting empirical evidence between PPADA (2015) and service delivery posing a gap that required to be empirically bridged. Further, on the contrary, the impact of PPADA (2015) on service delivery in county governments in Kenya had not received much attention in empirical research in Kenya. For example, not much had been done on the PPADA (2015) County Governments Service delivery link in a single study especially in the Kenyan context. It was on this premise the current study sought to re-examine the relationship between PPADA(2015) and state corporations in Kenya.

### **Objectives of the Study**

The purpose of the study was to establish the determinants of implementation of procurement contract management practices in state corporations in Kenya. The specific objectives were;

- Establish the effect of information & communication technology on implementation of procurement contract management practices in state corporations in Kenya

- Determine the effect of supplier relationship management on implementation of procurement contract management practices in state corporations in Kenya
- Assess the effect of procurement ethics on implementation of procurement contract management practices in state corporations in Kenya
- Find out the effect of procurement planning on implementation of procurement contract management practices in state corporations in Kenya

## **LITERATURE REVIEW**

### **Adaptive Structuration Theory**

Based on structuration theory, the study intends to determine the effects of information technology on procurement performance. Anthony Giddens in his *Constitution of Society* in 1984 addresses issues of human behaviour in the context of technology based on social structure. In other words, the theory looks into the process of human usage of computer systems and at the nature of group-computer interaction (Poole and DeSanctis, 2009). With the main focus of communication using information technology, the theory highlights the concepts of appropriation and structuration. In addition, the AST can be considered as a prime starting point to draw links between individuals and organisational learning. This is due to the core concept in AST that address issues of group interaction with technology as the basis of human activity (DeSanctis and Poole, 2008).

### **Scientific Management Theory**

To investigate the influence of employee competence on procurement performance, the study was based on scientific management theory. The theory basically consists of the works of Fredrick Taylor. Fredrick Taylor started the era of modern management in the late nineteenth and early twentieth centuries; Taylor consistently sought to overthrow management by rule of thumb and replace it with actual timed

observations leading to the one best practice Watson (2002). He advocated for the systematic training of workers in the one best practice rather than allowing them personal discretion in their tasks. He further believed that the workload would be evenly distributed between the workers and management with management performing the science and instruction and the workers performing the labor, each group doing the work for which it was best suited. Taylors' strongest positive legacy was the concept of breaking a complex task down into a number of subtasks, and optimizing the performance of the subtasks, hence, his stopwatch measured time trials (Osborne & Rubinstein, 2000).

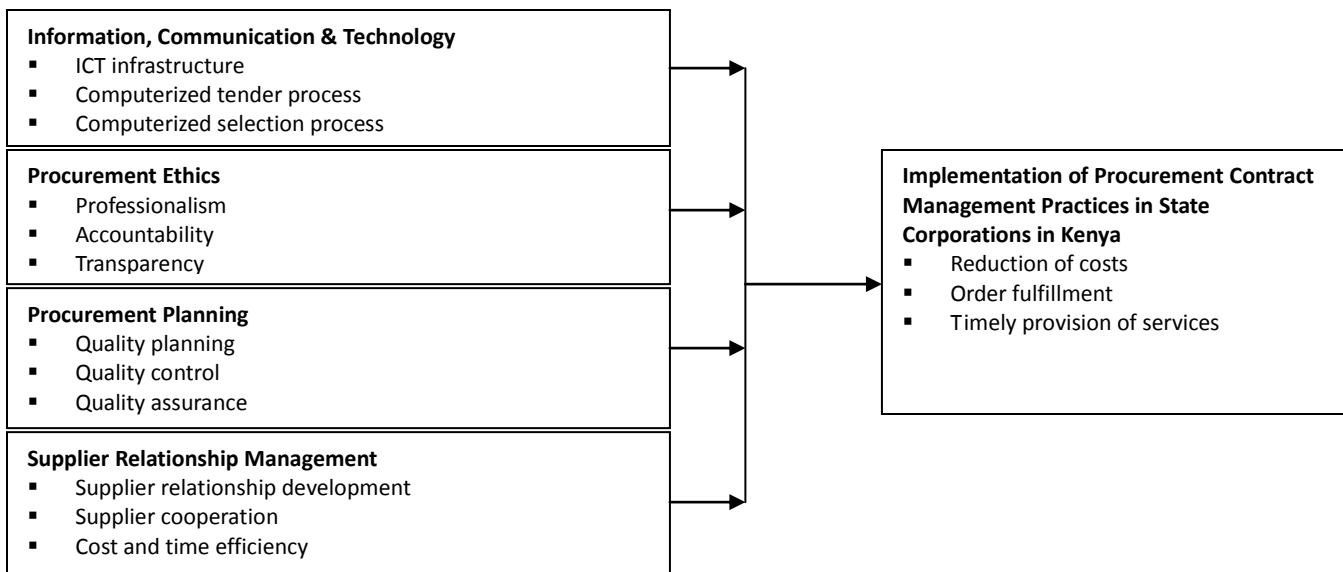
### Theory of Constraints

Based on theory of constraints the study tended to establish the effect of quality management systems on procurement performance. Due to the fact that the oil industry uses a wide range of speciality materials, procuring materials takes considerable

time and companies must stock certain amounts of spares to deal with clients orders. Major oil and gas equipment manufacturers worldwide face intense cost completion (Watson and Vokurka 2006). Therefore, to satisfy client requirements and minimize cost simultaneously, decreasing the possibility of lacking materials and eliminating inventory problems are factors critical to firm success.

### Transaction Cost Theory

Transaction cost theory (TCT) or transaction cost economics (TCE), has become an increasingly important anchor for the analysis of a wide range of strategic and organizational issues of considerable importance to firms (Jones, 2001) in particular, the TCT has been employed in studying firms' boundaries, vertical integration decisions, the ration for conducting an acquisition, the networks and other hybrid governance forms. Institutional arrangement range from transaction on the spot market to those within the firm.



### Independent Variables

### Dependent Variable

Figure 1: Conceptual Framework

### Empirical Review

Previous studies have used customer collaboration to explain the relationship between Supply Chain Collaboration and Supply Chain Performance. Kimani

(2016) studied Supply Chain Collaboration and Performance of Commercial Banks in Kenya. Her research was a cross sectional study that used questionnaires as the main data collection tool. The

researcher also interviewed respondents to identify how customer collaboration impacted Supply Chain Performance of the banks. Results indicate that there is a strong relationship between Customer collaboration and Supply Chain Performance of Commercial Banks. Specifically, the study found that customer satisfaction was greatly affected positively by Customer Collaboration. Responsiveness, Security, Trust and Reliability are some of the other advantages concluded with collaborating customers.

Salvador et al. (2001) carried out an empirical study in 164 industrial plants on their relationship with suppliers and customers. The study found that in those relationships to do with Quality Management, the organization would indirectly improve their time performances – delivery punctuality and speed of operations – as a result of full mediation via internal practices in: quality management; low management, inter-unit coordination and vertical coordination. On the other hand, in relationships to do with managing the flow of materials, the impact on time-related performances can either be completely or partially mediated via internal practices. Romano and Vinelli (2001) published a study describing the case of a company from the textile sector, to help to understand how quality could be managed using an SCM perspective, and what the operative and strategic consequences were for the company under study and the chain to which it belonged. They showed how SCM improves the capacity of the companies to recognize the expectations of the end customers.

Miles (2006) investigated the correlation between 12 determinants (practices) in quality management and business performance. The study concluded that there are differences between service and manufacturing organizations. One example was supplier relationships, which are essential for a manufacturing organization, compared to process improvements, which are more important for a service organization. These findings suggest that

individual quality management principles might have differing impacts on performance in manufacturing and service organizations.

Corbett et al. (2005) found that organizations that sought ISO 9000 certification had improved return of assets. They also found that organizations that had failed to seek certification experienced gradually worsening performance. The authors explained that these results were associated with the organizations management practices, which means that the decision to seek certification is positively associated with other „good management practices and that it is these latter practices that improve return of assets rather than the ISO 9000 development and certification process itself (Corbett et al., 2002). Poksinska (2005) reached the same conclusions in her thesis of ISO 9000.

In an empirical study of state-level administrative reforms and organizational changes in Pennsylvania, Boyd (2009) noticed that TQM was implemented with success in some agencies but not others. The reason for this mixed result is that, as Boyd summarized, “TQM was typically conceived within a department, and sometimes shared with other agencies, but it was never a priority of the governor or upper level executive staff. Where it did take hold, it was promoted by the top executive leader of an agency or bureau and implemented at multiple levels or in pockets of an organization” (Boyd, 2009: 235). Simply stated, it was just a product of a piecemeal approach of TQM implementation. Only when TQM was seriously taken by the next governor, who instituted a top down vision of the state by advancing a number of policy goals in the process of “reinventing government,” did the desired outcomes of TQM in administrative reforms and organizational changes become the desirable results.

Barsemoi, Mwangangi and Asienyo (2014) examined factors influencing procurement performance in the private sector in Kenya. The study adopted

descriptive research design. Target population was 169 employees working in Henkel Chemicals (E.A) from all levels of management. The study used systematic random sampling technique in selecting the 117 participants. A structured questionnaire was used as method of data collection. Data analysis was done using qualitative and quantitative analysis methods. The relationship between the independent variables (staff competence, organizational structure, and quality management and information technology) and procurement performance was tested using the regression analysis.

## **METHODOLOGY**

The study employed descriptive research design. The population of the study was 187 chief procurement officers drawn for the state owned enterprises as per List of Kenyan State Corporations 2017. The SOEs were classified based on Sectoral Categorization of Kenyan State Corporations. The study used a questionnaire to collect primary data. This study gathered both quantitative data which was coded and analyzed using Statistical Package for Social Sciences (SPSS) computer software. Descriptive statistics were used to analyze the data in frequency distributions and percentages which were presented in tables. Qualitative data was analyzed thematically by categorizing them along themes which were guided by the research hypotheses to establish links between data and major patterns that emerged from the research.

## **RESULTS**

### **ICT Integration**

The study sought to assess the influence of ICT integration on implementation of procurement contract management practices in the state corporations in Kenya. The findings in Table 1 showed that (75%) and (25%) of the procurement staff strongly disagreed and disagreed respectively that the organization ensures that procurement staff are computer literate giving a mean response of 1.25 (SD

= 0.44) showing strong disagreement by majority of the respondents. In addition, (62.1%) and (24.1%) of the respondents agreed and strongly agreed respectively that the organization has ensured that there is adequate IT infrastructure while (13.8%) held a neutral view thus giving a mean response of 4.10 (SD = 0.61) indicating agreement by majority of the respondents regarding this.

The findings further showed that (35.3%) and (32.8%) of the respondents agreed and strongly agreed respectively that there is adequate level of automation for the procurement staff in the organization while (1.7%) and (30.2%) of the respondents disagreed and held a neutral view respectively regarding this giving a mean response of 3.99 (SD = 0.84) indicating agreement by majority of the respondents. In addition, (36.2%) and (16.4%) of the respondents agreed and strongly agreed respectively that the organization has ensured that there is enhanced e-procurement to facilitate reduction of costs while (10.3%) and (37.1%) disagreed and held a neutral view respectively regarding this giving a mean response of 3.59 (SD = 0.89) showing agreement by majority of the respondents.

Finally, the findings showed that (49.1%) and (42.2%) of the procurement staff agreed and strongly agreed respectively that the organization has adequate procurement usage to enhance implementation of rules and regulations while (8.6%) held a neutral view giving a mean response of 4.34 (SD = 0.63) indicating agreement by majority of the respondents. The overall mean response was 3.75 (SD = 0.35) indicating agreement by majority of the respondents regarding majority of the items on Technology capabilities though there was a gap in terms of the organization ensuring that procurement staff are computer literate. Information Communication Technology (IT) is a technology that involves use of computers, software and internet connections infrastructure for supporting information processing and

communication functions (Crompton 2007). The use of computerized procurement systems demonstrates efficient use of information technology but in cases where the organization subjects all its procurement

functions to manual procedures, the benefits of information technology are not experienced and a high level of inefficiency is experienced during execution of procurement procedures.

**Table 1: Influence of Information Technology Statistics**

Statement	Mean	SD
The procurement staff are computer literate	1.25	.440
There is adequate IT infrastructure	4.10	.061
There is adequate level of automation	4.21	.008
E-procurement enhance reduction of costs	2.76	.003
Level of automation has enhanced timely delivery of services	2.67	.098
It infrastructure has improved procurement process	2.45	.542

### Supplier Relationship Management

The study sought to assess the influence of supplier relationship management on implementation of procurement contract management practices in the state corporations in Kenya. This section presented findings to statements posed in this regard with responses given on a five-point Likert scale (where 5 = Strongly Agree; 4 = Agree; 3 = Neutral; 2 = Disagree; 1 = Strongly Disagree). Table 2 presented the findings. The scores of 'strongly disagree' and 'disagree' were taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' were taken to represent a statement agreed upon moderately, 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 5.0.

As tabulated, a majority of respondents were found to disagreed that the supplier audits are regularly carried to ensure that the organization receives quality products (3.568); Supplier audits are carried

out annually to enhance relationship with the organization (3.236); request for quotations enhance matching the demand and supply for goods (2.908); The supplier ordering procedures are carried out promptly (2.134); There is adequate information sharing systems to improve supplier relationship (3.218). The study findings are in agreement with the findings by Siricha and Theuri (2016) stated that the supplier relationship enhance effectiveness of internal procurement processes such as payment processing, order processing and information sharing has a direct positive impact on organizational performance. Ordanini and Rubera (2008) also argue that improvement in such aspects of information sharing, order processing and payment process can bring forth enhanced organizational process particularly when internet technology is applied within the procurement process.

**Table 2: Supplier Relationship Management**

Supplier Relationship Management	Mean	Std. Dev
The supplier audits are regularly carried to ensure that the organization receives quality products	3.568	.439
Supplier audits are carried out annually to enhance relationship with the organization	3.236	.468
The organization continuously improves the payment process to enhance efficiency	2.908	.568



The organization supplier ordering procedures are carried out promptly	2.134	.326
There is adequate information sharing systems to improve supplier relationship	3.218	.328

**Procurement Ethics**

The study sought to assess the influence of procurement ethics on implementation of procurement contract management practices in the state corporations in Kenya. This section presented findings to statements posed in this regard with responses given on a five-point Likert scale (where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). The scores of ‘strongly disagree’ and ‘disagree’ were taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of ‘Neutral’ were taken to represent a statement 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 5.0.

According to Table 3, the study established that the organization stakeholders understand the actual means by which contracts are evaluated and awarded (Mean= 4.129, std= 1.432); The organization safe-guards the supplier confidentiality. (Mean= 3.908; Std= 1.467). There is equity and fairness on awarding of the contracts in the organization (Mean= 3.216;

std= 1.098). The tenders and awarded contractors are advertised in the local news papers (Mean= 3.876; std= 1.356). The organization allowed the legal process to be taken in case of any queries concerning awarding of the tenders (Mean= 3.576; std= 1.115). The study findings are in agreement with literature review by Shu *et al.*,(2011) who indicated tha lack of transparency in public procurement is a major impediment to sustained economic growth through investment and trade. Lack of transparency in procurement activities can be the source of unwholesome activities such as corruption, scandal and abuse of public resources. Transparency in public procurement is about information. Odhiambo and Kamau (2005) agree that ethical procurement has promoted transparency and minimized the opaque processes that encouraged malfeasance. The study established that transparency procurement practices of the state corporations in Kenya is characterized by transparency, supplier confidentiality, inaccessibility to reliable information about the procurement by all players (suppliers), and communication with both successful and unsuccessful bidders.

**Table 3: Procurement Ethics Statistics**

Procurement Ethics	Mean	Std. Dev
The organization stakeholders understand the actual means by which contracts are evaluated and awarded	4.129	1.432
The organization safe-guards the supplier confidentiality.	3.908	1.467
There is equity and fairness on awarding of the contracts in the organization	3.216	1.098
The tenders and awarded contractors are advertised in the local news papers	3.876	1.356
The organization allows the legal process to be taken in case of any queries concerning awarding of the tenders	3.576	1.115

**Procurement Planning**

The study sought to assess the influence of procurement planning on the implementation of contract management practices in the state corporations in Kenya. This section presents findings to statements posed in this regard with responses

given on a five-point likert scale (where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). The scores of ‘strongly disagree’ and ‘disagree’ were taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of ‘Neutral’ were taken to represent a

statement equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' were taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0.

According to Table 4 the study established that the Procurement planning set in motion the entire procurement process in the organization (Mean=4.234; Std=.987). Thorough needs assessment was undertaken by the respective heads for goods and services needed (Mean=3.908; Std=.234). The user departments clearly specify when to utilize the required goods and services (Mean=4.234; Std=.127). Budget approval is obtained for the required items before purchase in the organization (Mean=4.213; Std=.098). There is adherence to the procurement plans in the organization (Mean= 4.287; Std=.007). The study findings imply that procurement planning does influence implementation of procurement

contract management practices in the state corporations in Kenya.

The study findings are in tandem with literature review by Byokusheka (2010) and Basheka (2004) argued that employees involvement is very critical in formulation of procurement plans and the top management need to have necessary leadership skill which would enable them involve all employees in decision making. The study finally indicated that the procurement thresholds are being observed to a small extent especially in the deciding which procurement method should be applied. This implies that the organization is not fully adhering to the procurement rules relating to procurement threshold. The findings are contrary to PPADA (2015) which indicates that the organizations must fully comply to the laid down procurement rules and regulation.

**Table 4: Procurement Planning Statistics**

Procurement Planning	Mean	Std. Dev
Procurement planning set in motion the entire procurement process in the organization	4.234	.987
Thorough needs assessment is undertaken by the respective heads for goods and services needed	3.908	.234
The user departments clearly specify when to utilize the required goods and services	4.234	.127
Budget approval is obtained for the required items before purchase in the organization	4.123	.098
There is adherence to the procurement plans in the organization	4.287	.007

#### **Implementation of Procurement Contract Management Practices**

The study sought to examine the determinants of procurement contract management practices in the state corporations in Kenya, attributed to the influence of ICT Integration, Supplier Relationship Management, Procurement Ethics and Procurement Planning. The study was particularly interested in three key indicators, namely reduction of costs, order fulfillment and timely provision of services. Findings in Table 5 below revealed improved performance across the 5 year period running from the year 2014 to 2018. On reduction of costs, a majority of respondents affirmed having improved from less than 10% in 2014 (41.9%), to growth by 10% in 2015

(34.8%), then by more than 10% in 2016 (39.0%) and 2018 (36.2%). Order fulfillment also recorded improvement with a majority affirming to less than 10% in 2014 (42.3%) and 2015 (37.7%), to 10% in 2016 (36.1%) then more than 10% in 2017 (41.1%) and 2018 (37.5%). A similar trend was recorded on timely delivery of services, growing from less than 10% (44.1%) in 2014, to more than 10% in 2015 (36.4%), 2016 (40.4%) and 2018 (37.3%). Supply deficits further recorded positive growth with a majority affirming to less than 10% in 2014 (37.9%) and 2015 (35.9%), to 10% in 2016 (35.9%) and 2017 (35.3%) then by more than 10% in 2018 (36.2%). It was deduced from the findings that key supply chain areas have considerably improved with the adoption

of the procurement practices. Accordingly Muia (2013) argues that the procurement management practices on efficient and effective service delivery within public sector organizations is undisputable over the years. The existence of sound procurement

system requires the existence of competent workforce highly equipped with relevant skills for specified procurement activities (Makabira & Waiganjo, 2014).

**Table 5: Implementation of Procurement Management Practices**

<b>Reduction of Costs</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Improved by less than 10%	41.9	37.9	33.8	29.7	29.1
Improved by 10%	33.2	29.6	34.8	31.3	34.7
Improved by more than 10%	24.9	31.5	31.4	39.0	36.2
<b>Order Fulfillment</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Improved by less than 10%	42.3	37.7	31.6	30.7	29.5
Improved by 10%	31.8	32.9	36.1	28.2	33
Improved by more than 10%	25.9	29.4	32.3	41.1	37.5
<b>Timely Provision of Services</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Improved by less than 10%	44.1	35.2	33.4	25.7	27.1
Improved by 10%	31.7	32.6	30.2	33.9	35.6
Improved by more than 10%	23.5	32.2	36.4	40.4	37.3

### Multiple Regression Analysis

The study adopted a multiple regression analysis so as to establish the relationship of independent variables and dependent variable. The study applied SPSS to code, enter and compute the measurements of the multiple regression analysis. According to the model summary, the coefficient of determination ( $R^2$ ) is used to measure how far the regression model's ability to explain the variation of the independent variables. The coefficient of determination is between

zero and one. The data showed that the high R square is 0.691. It showed that the independent variables in the study were able to explain 69.10% variation in the implementation of procurement contract management practices while the remaining 30.90% is explained by the variables or other aspects outside the model. This implied that these variables are very significant and they therefore need to be considered in any effort to boost implementation of procurement contract management practices.

**Table 6: Model Summary**

Model	R	$R^2$	Adjusted $R^2$	Std. Error of the Estimate
	.831	.691	.643	.076

### Analysis of Variance (ANOVA)

The study further used Analysis of Variance (ANOVA) in order to test the significance of the overall regression model. Green and Salkind (2013) posit that Analysis of Variance helps in determining the significance of relationship between the research variables. The results of Analysis of Variance (ANOVA) revealed that the significance of the F-test was done to test the effect of independent variables

on the dependent variable simultaneously. The F-statistic test basically shows whether all the independent variables included in the model jointly influence on the dependent variable. Based on the study results of the ANOVA Test or F-test in Table 7, obtained F-count (calculated) value was 69.888 greater the F-critical value (table) (10.008) with significance of 0.001. Since the significance level of  $0.001 < 0.05$  we conclude that the set of independent

variables affect the implementation of procurement contract management practices (Y-dependent variable) and this shows that the overall model was significant. Thus, the four variables played a

significant role in the implementation of procurement contract management practices in the state corporations in Kenya.

**Table 7: ANOVA (Results)**

Model		Sum of Squares	d.f	Mean Square	F	Sig.
3	Regression	52.584	4	13.146	69.888	.008
	Residual	23.514	125	.1881		
	Total	76.098	129			

NB: F-critical Value = 10.008;

The results of multiple regression analysis obtained regression coefficients t value and significance level. The study conducted a multiple regression analysis so as to determine the relationship between the dependent variable and independent variables. The general form of the equation was to predict implementation of procurement contract management practices from ICT integration, procurement ethics, supplier relationship management and procurement planning is:  $(Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon)$  becomes:  $Y = 12.662 + 0.500X_1 + 0.566X_2 + 0.532X_3 + 0.680X_4 + 4.350$ . This indicates that implementation of procurement contract management practices = 12.662 + 0.500\* ICT Integration + 0.566\*Supplier Relationship Management) + 0.532\*Procurement Ethics + 0.680\*Procurement Planning + 4.350. From the study findings on the regression established, taking all factors into account (independent variables) constant at zero implementation of procurement contract management practices would be 12.662. The data findings analyzed also shows that taking all

other independent variables at zero, a unit increase in ICT Integration would lead to a 0.500 increase in implementation of procurement contract management practices; a unit increase in supplier relationship management will lead to a 0.566 increase in implementation of procurement contract management practices, a unit increase in procurement ethics will lead to 0.532 increase in implementation of procurement contract management practices and a unit increase in procurement planning would lead to 0.680 increase in implementation of procurement contract management practices. This infers that procurement planning contributed most to implementation of procurement contract management practices. Based at 5% level of significance, ICT integration had a .007 level of significance; supplier relationship management showed a .003 level of significance, procurement ethics show a .005 level of significance and procurement planning show a .000 level of significance hence the most significant factor was procurement planning.000.

**Table 8: Coefficient Results**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	$\beta$	Std. Error	$\beta$		
(Constant)	12.662	4.350		2.905	.000
ICT Integration	.500	.865	.665	3.908	.007
Supplier Relationship Management	.566	.130	.654	4.345	.003

Procurement Ethics	.532	.126	.455	4.234	.005
Procurement Planning	.680	.125	.332	5.432	.000

## CONCLUSIONS

The study concluded that ICT integration is important factor that affects implementation of procurement contract management practices in the state corporations in Kenya. The regression coefficients of the study show that ICT integration has a significant influence on implementation of procurement contract management practices in the state corporations in Kenya. This implied that increasing levels of ICT Integration by a unit would increase the levels of implementation of procurement contract management practices in the state corporations in Kenya.

In addition, concluded that supplier relationship management is important factor that affects implementation of procurement contract management practices in the state corporations in Kenya. The regression coefficients of the study show that supplier relationship management has a significant influence on implementation of procurement contract management practices in the state corporations in Kenya. This implied that increasing levels of supplier relationship management by a unit would increase the levels of implementation of procurement contract management practices in the state corporations in Kenya.

Further, procurement ethics is important factor that affects implementation of procurement contract management practices in the state corporations in Kenya. The regression coefficients of the study showed that procurement ethics has a significant influence on implementation of procurement contract management practices in the state corporations in Kenya. This implied that increasing levels of procurement ethics by a unit would increase the levels of implementation of procurement contract

management practices in the state corporations in Kenya.

Finally, study concluded that procurement planning is important factor that affects implementation of procurement contract management practices in the state corporations in Kenya. The regression coefficients of the study show that procurement planning has a significant influence on implementation of procurement contract management practices in the state corporations in Kenya. This implied that increasing levels of procurement planning by a unit would increase the levels of implementation of procurement contract management practices in the state corporations in Kenya.

## RECOMMENDATIONS

There is need for the organizations to ensure that there is adequate IT infrastructure, adequate level of automation for the procurement staff in the organization. This will facilitate procurement functions such as E-procurement to reduce procurement costs and enhance procurement usage to improve service delivery.

The study recommended that state corporations should have adequate supplier base which is important to improve performance of its suppliers. The state corporations should be concerned with the supplier credit terms to enhance timely delivery of services. The state corporations should strive to make timely dispute resolution with suppliers to enhance service delivery.

The study recommended that the organization stakeholders should understand the actual means by which contracts are evaluated and awarded. The organization should safe-guard the supplier confidentiality. There should be equity and fairness on awarding of the contracts in the organization. The

tenders and awarded contractors should be advertised in the local news papers concerning awarding of the tenders.

Procurement planning is usually the first stage of procurement process and therefore organization need to develop the skills of the employees on developing quality procurement plans based on the approved budgets. The top level and lower level employees should be involved in formulation and development of the procurement plans so as to make the process of implementation easier and acceptable by all employees. The procurement personnel's in organization need to carefully study and understand the applicable procurement thresholds in different situations and relevant procurement method applicable.

#### **Areas for Further Research**

The study was a milestone for further research in the procurement management in the public sector in

Africa and particularly in Kenya. The findings demonstrated the important factors to the implementation of procurement management practices in the state corporations in Kenya to include; ICT Integration, supplier relationship management, procurement ethics and procurement planning. The current study should therefore be expanded further in future in order to determine the determinants of implementation of procurement contract management practices in the state corporations in Kenya. Existing literature indicates that as a future avenue of research, there is need to undertake similar research in other government institutions and public sector organizations in Kenya and other countries in order to establish whether the explored factors can be generalized to affect implementation of procurement contract management practices.

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