

## **COMPARATIVE ANALYSIS ON THE INFLUENCE OF TOP MANAGEMENT ON THE IMPLEMENTATION OF E-PROCUREMENT BETWEEN NATIONAL AND COUNTY GOVERNMENTS IN KENYA**

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### **Abstract**

Over the last few years, the internet has changed the way business is done in every industry. E-procurement has dramatically changed the way purchasing is done. Both public and private sector institutions have embraced the benefits accrued from E-procurement practices. The Kenyan government has recognized the importance of adopting of ICT in service delivery to the public and its citizens as enshrined in the Constitution and the Public Procurement laws and regulations. However, even given the potential benefits of e-procurement, most of the Government Ministries and County Governments including parastatals have not effectively implemented the e-procurement practices. This has greatly influenced the effectiveness of the procurement processes in public sector. With the advent of devolution in 2013, Kenya operates within two levels of government: i.e National and County governments. These governments are operated by different systems and people. Although IFMIS should be used in both levels of government, implementation of e-procurement has been done at different extents. This study pursued a comparative approach between National and County on how top management influences the implementation of e-procurement. The study found that the level of commitment towards implementation of the e-procurement was generally low in both levels of government. This could be attributed by little allocation of funds towards implementation of the e-procurement system, minimal supervision and low levels of commitment by the management of the both County governments and national government. The study found that top management was more influential at the county level than at the national level. The study also found that top management could influence implementation of e-procurement significantly at both national and county governments. However, the county top could influence the implementation of the e-procurement system more than top management of entities run by the National government.

**Key words:** Top management, Implementation, E-procurement, Influence

## Introduction

Information Technology applications are increasingly becoming the cornerstone of government operations and Information technologies have permeated all sectors of the economy and are fundamentally changing the orientation, tools, processes, principles, leadership style and patterns of communication within and outside government. In advanced countries, e-government has replaced the bureaucratic principle and brings user-satisfaction and control, information and Knowledge sharing, interdependent team work, and so on (Stephen&Hellen, 2011). Different governments have adopted the concept of e-procurement to improve transactions and reduce costs in a business. These are aspects of procurement supported by various forms of electronic communication and takes up forms such as electronic data Interchange, enterprise resource planning, e-sourcing, e-tendering, e-informing, among others (Uyarra& Flanagan,2010).

Globally the use of e-procurement has gained prominence. For example in United Kingdom (UK) the Government commissioned a number of high profile reviews to explore its potential within the public sector (Wahid, 2010). Following these reviews, the UK Government set an ambitious target (Eadie *et al*, 2010) whereby 90 per cent of routine items would be purchased electronically by March 2012. Despite the compelling nature of the case for public sector e-procurement that has been made both by formal, governmental-sponsored reviews (Eadie *et al* , 2010), 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 recent study of government purchasing strategies found that only: 13 per cent of orders are sent electronically; 3 per cent of invoices are received and processed electronically and 6 per cent of tenders are transacted electronically (Eadie *et al* , 2010).

In Africa, there are still bureaucratic principles and functional rationality; “physical departmentalization and management by rule of mandate” (Ndou, 2011). Countries in sub-Saharan Africa have not adequately restructured their public bureaucracies in response to the demands of the information society, and “many of the governments are still hierarchical and lack accountability and transparency” (Asogwa, 2013). In many developed countries, e-government is replacing the traditional bureaucracies. According to Mutula (2010), in South Africa, E-procurement is in the formative stage of development. Key challenges facing government include creating access, internal efficiency and human resource development.

In Tanzania, since 1994 the government of Tanzania has implemented an ambitious reform program to improve public sector financial management, which initially focused on introducing effective and efficient budget formulation and expenditure management systems and processes. In 1998/99, the government decided to introduce an Integrated Financial Management System (IFMIS) Suleiman (2013) , in ten selected MDAs and e-procurement being one of the components of IFMIS. The system has now become the generic public sector financial management system used by the entire public sector. At the local government level, the system has been introduced to 32 local authorities, and a roll-out to an additional 30 authorities was expected to be completed by the end of 2004 (Suleiman, 2013).

In Tanzania both the authorities and donors perceive the e-procurement as a critical tool for achieving accountability in the public sector (Mohammed, 2015). The Commitment Control System has led to the elimination of overspending, and a substantial reduction in domestic arrears. Currently, the e-procurement in Tanzania appears to be the most successfully implemented system in Anglophone African countries (Mohammed, 2015). Donors are now more receptive to the idea of using government

systems to channel funds than ever before. However there is a need to consolidate and deepen the system and build the capacity to ensure its long-term sustainability (Mohammed, 2015).

In Kenya, a good progress has been made on implementation of e-procurement. According to Treasury (2014) the procure to pay (P2P) system was part of the initial IFMIS system implementation. It has overcome significant challenges from the initial implementation that only covered the purchase order, to the current end-to-end implementation, which covers the entire procurement cycle from the development of the procurement plans to payments, reconciliation and resolution of supplier's issues (Treasury, 2014). In a report by Treasury (2014) the initial e-procurement implementation operated in a silo environment in Government departments and lacked a strategic vision at the organizational level. According to Ochieng&Muehle.(2014) the purchase Order (PO) module was also not sufficiently interlinked with the Accounts Payable (AP) module and thus required significant manual interventions especially in the requisition and payable approval processes. The requisition menu within the PO module could also not be used due to legislative challenges. The e-procurement system was therefore not reliable and useful enough and required to be re-designed and re-engineered (Treasury, 2014).

According to Treasury, (2014) during the mid-term review, key lessons were also drawn from both successes and challenges. Some of these lessons include the importance of implementation of change management strategies in facilitation of the adoption of the e-procurement systems, need for e-procurement system development and implementation to be based on a county's legislative and regulatory frameworks for public financial management reforms, need for quality assurance systems to sustain systems performance and integrity, involvement of key stakeholders in the development, testing and deployment of the system ensures adopting and ownership, skills transfer to the government team from vendors is paramount, appropriate communication regarding the system development and implementation is crucial, leadership and top management support is important for successful implementation of e-procurement (Treasury,2014)

### **Problem statement**

The Government of Kenya introduced E-procurement so as to increase transparency and competition, save on costs, reduce over expenditure and inventory, improve transactional effectiveness, facilitate auditing and bring uniformity in procurement among other objectives. While the initiative was well thought, there seems to be problems at implementation as only 10% of all MDAs are operating partially on e-procurement with none of the Parastatals interviewed using e-procurement (Ochieng& Muehle,2014). Despite the number of initiatives and resources being deployed towards e-procurement implementation in Public Institutions in Kenya the implementation rate has been very slow.

Although laws such as the Constitution (2010) and the Public Procurement and Asset Disposal Act (2015) requires that when a state organ contracts for goods or services it shall apply a transparent system, over 90% of all procurements in the public sector are still undertaken manually with minimal transparency achieved (PPOA,2015).According to an assessment of the procurement systems in Kenya by PPOA (2015), most public institutions were still using manual system in procurement of goods and services which was not transparent, cost effective and competitive as compared to e-procurement. The study found that most ministries for example ministry of Defense and Health, e-procurement implementation had totally failed. Out of Seventy (70) public entities visited only six (6) were using e-procurement representing 8% with a majority either having tried and or failed while all parastatals had not even attempted to start using e-procurement.

The inefficiencies brought about by failure to implement E-procurement in public entities has led to failure to achieve the desired objectives resulting in massive loss of Public funds as was the case in the National Youth Service (KENAO 2016), accrued pending bills of Ksh.36.billion and 112 billion by National and County Governments respectively (OCOB,2015). This has also resulted to MDAs failing to account for Ksh.60 billion (KENAO,2016) in the financial year 2014-2015.

### Objectives of the study

The objective of this study was to establish the influence of top management on implementation of e-procurement at both levels of government.

- i. To compare the contribution of top management support towards e- procurement implementation between National and County Governments.

### Conceptual Framework

The hypothesised relationship between top management and the implementation of the e-procurement is shown in figure 1.1.

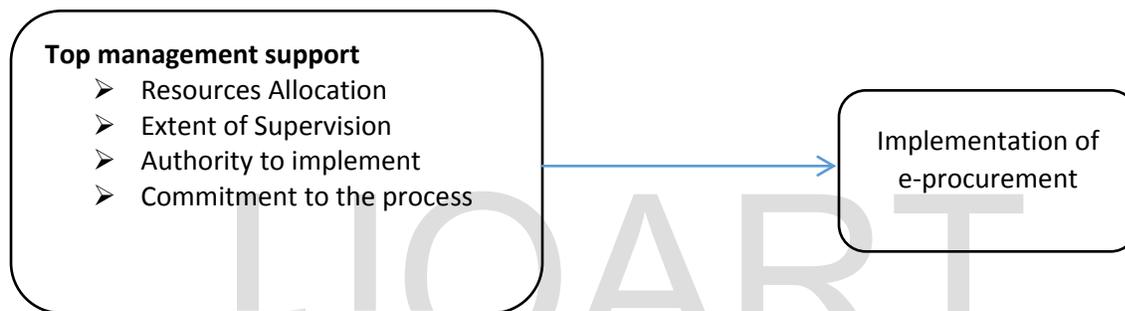


Figure 1.1 Conceptual Framework

### Theoretical background

#### Reinforcement Theory

Reinforcement Theory suggests that successes in achieving goals, rewards act as positive incentives and reinforce the successful behavior, which if repeated the next time a similar need arises. Expectancy Theory was originally developed by (Coates , 1994) and states that for there to be a heightened motivation to perform, individuals have to be able to change their behavior; feel confident that a change in their behavior will produce a reward and value the reward sufficiently to justify the change in behaviour (Redmond , 2010).

It is found that positive reinforcement, both intrinsically and extrinsically is positively linked with the performance of employees. Positive reinforcement is highly effective in strengthening and increasing behaviors. The type of reinforcement tools incorporate salary, performance-based incentives and fringe benefits. All of these encourage employees to present their best to the corporate and to sustain at the peak. Reinforcement theory is an instrument used by managers to increase or decrease employees' behaviors (Redmond, 2010). As performance and effectiveness are more emphasized, it is important to understand and utilize these concepts in motivating staff. Positive reinforcement is seen to be the most effective way of motivating staffs to perform better in organizations. Employees are encouraged to do better as they know when each desired behavior is shown, they will be rewarded. The rewards can be

intrinsic or extrinsic, or a combination of both. Rewards can be bonus based on performance, additional benefits, verbal encouragement, and empowerment (Coates, 1994).

Employees feel satisfied when their work is recognized and their hard work is paid for. Punishment is another technique applied to reduce or remove certain behavior. This theory supports the variable top management support towards implementation of E-procurement since it discusses how top management can support E-procurement implementation through giving of incentives and fringe benefits to staff while implementing E-procurement hence their performance will be high as a way of boosting performance.

### **Top Management support on implementation of E-procurement**

Research into the implementation of information system (IS) innovations considers management support as a critical factor in successful implementation (Dorasamet *al* 2012). The research argues that management support is critical because the implementation of IS innovations is resource intensive. Substantial material and managerial resources are required not only to develop IS applications and infrastructures, but also to support end users during implementation. Such resources are more likely to be forthcoming when the change enjoys management support. In addition, symbolic actions of support by senior managers contribute to successful implementation.

These actions legitimize IS innovations, signal management commitment to successful implementation, and serve to convince end users to expend the effort required to adopt the innovations (Nyadimo 2011). Such actions could be in the form of a visible association with the project, active championship, organizational communications, or personal use of technologies (Bert, Fenema and Soeters, 2014). Finally, support and supervision of end users during implementation also contributes to implementation success (Shalle&Irayo 2013). Managers need to work closely with end users to mandate, negotiate, persuade, motivate, and support them in adopting IS innovations. Management support is also considered critical for conceptualizing work processes and for changing existing routines and processes that are critical for successful implementation (Ruth, 2012).

Arasa andAchuora, (2012) explore ways in which institutional context and individual actions interact to shape the implementation of IS innovations. Key aspects of the institutional context, such as workflow patterns, work procedures, routines, reward systems, and control and coordination mechanisms both constrain the implementation of technology and are adapted to accommodate new technology. The process of mutual adaptation of technology and institutional context involves two distinct sets of processes (Moseet *al* 2013). The first includes actions taken by users to appropriate technology features and to adapt technologies to accomplish work.

The structuration of technology by users in this manner draws upon and reproduces existing institutional contexts (Baldrige& Burnham 2012). The second set of processes includes actions to reshape the institutional context ((Baldrige& Burnham 2012). These meta-structuration actions include changes to key aspects of the institutional context, such as workflow patterns, work procedures, Successful IS Implementation routines, organization structures, control and coordination mechanisms, and reward structures (Moseet *al* 2013). Meta-structuration actions are critical to the successful implementation of new technology in organizations (Moseet *al* 2013). Here, drawing on the above research, it is proposed that management support is critical in undertaking meta-structuration actions.

The development of institutional mechanisms, including control and coordination mechanisms to regulate task performance, is a key management responsibility (AboelMaged,2010). Further, managerial interventions are undertaken, in part, to regulate organizational performance, which is sensitive to the

fit between task requirements and the mechanisms to regulate task performance (Gardenal, 2010). It follows that management interventions that shape the institutional context are powerful influences on implementation success (Osmonbekovet *al.* 2012).

### **Empirical review**

The top management team is responsible for setting the vision and goals, bringing about collective commitment for change in processes and organizational structures, and formulating the policies and strategies necessary to put an e-procurement initiative in place (Muinde& Shale, 2014). If the e-procurement system does not have the full support of the top management team, there is every reason for it to fail. It is important to make sure that the top management has given full support for the adoption of e-procurement. Considerable attention and support should be provided by senior management to ensure that procurement reforms have been well understood in the agency (Khanapuriet *al.*, 2011).

Doherty *et al* (2013) in a study on institutional response to electronic procurement in the public sector used the term top management championship to define managerial beliefs about e-commerce initiatives in firms and participation in those initiatives. Top management championship positively influences extent of organizational assimilation of web technologies in e-commerce strategies and activities. Managerial productivity and strategic decision aids are defined in the article of (Oketch, 2014) as important factors in e-commerce adoption in organizations.

In a study on e-procurement readiness factors in Kenya's Public sector (Orina, 2013), it was found out that top management support is also a crucial factor that influences success of e-procurement implementation. There is little doubt that senior management leadership is critical to the success of an e-Procurement implementation. The top management team (steering committee) must involve the project manager, any consultants working with the committee, and agency staff to develop an implementation strategy. Furthermore, the executive management team is responsible for setting the vision and goals, bringing about collective commitment for change in process and organizational structures, and formulating the policies and strategies necessary to put an e-Procurement initiative in place.

In a study on predicting e-procurement adoption in a developing country (Aboeimaget,2010) suggested that top management can stimulate change by communicating and reinforcing values through an articulated vision for the organization. Top management support is critical for creating a supportive climate for the adoption of new technologies. Top management support, organizational adaptation, and training of employees are examples of issues for the successful implementation of an organization IT system (Shalle&Irayo 2013). Jeyaraj (2010) found that top management support to be one of the best predictors of organization adoption of Information System innovations. Top management can stimulate change by communicating and reinforcing ideas concerning changes from the status quo.

According to Shalle&Irayo (2013) top managers nowadays continuously emphasize to adapt to the Internet applications; they often advise employees to be sensitive to competitors' initiatives with regard to e-business; top managers insist that their employees must bring more of their business practices online in order to meet customers' future needs; they are willing to try to provide the necessary resources for implementing e-business practices; they often advise employees to keep track of the latest developments in Internet technology and Internet related business practices, and incorporating e-business practices in company. Top manager emphasis on e-business, can facilitate performance gains from e-business adoption.

Basheka and Sabitii (2011) in a study on compliance to public procurement reforms in developing countries found out that Supply managers and internal stakeholders can easily drive user adoption and system compliance through significant change management efforts and ongoing education of end users. This is because of the interactions between suppliers and businesses entities supplied to and those that manufacture or supply to them in a web known as tiering of suppliers. Suppliers therefore become highly active internal marketers of e-procurement systems because of several interactions especially in the case of public procurement. Suppliers if involved early in e-procurement initiatives are therefore able to play an active role in the process's refinement and efforts in change management (Busheka&Sabitii, 2011).

Particular benefits of e-procurement in the public sector are thought to include greater transparency in procurement through electronic publishing of tender notices and contract awards. This in turn is likely to enhance accountability and reduce the instances of corruption and costs associated with the process or processes to be automated in order to understand the probable outcomes of e-procurement adoption or enhancement (Vaidya *et al*, 2011). There is little doubt that top management support is critical to the success of an e-Procurement implementation. This study would wish to establish the relationship between top management support and e-procurement implementation.

### Research methodology

The study adopted a descriptive research design. According to Nachmias and Nachmias (2009), the descriptive survey method if well used, provide reliable, valid and theoretical meaningful information. For this study, the population of interest was 28,010 public officers working in various public entities both at National and County Government offices across the Country and suppliers of goods, works and services to the public entities. The choice of the population was influenced by the fact that Supply chain management officers were the key players in e-procurement since they were the ones whoundertakel the procurement process and make approvals at various stages of the procurement process in the system.

Stratified sampling and simple random sampling techniques were applied in selection of respondents because of the heterogeneous nature of the population and institutions under the study. First, the Ministries and County Government were treated as strata upon which the respondents were selected. Ministries were stratified into ten (10) economic sectors and County Governments into three (3) regions after which one (1) ministry from each economic sector was sampled. In addition, ten (10) counties were selected based on the proportion of each County in each strata by use of simple random selection. The suppliers were stratified into Youth, Women and People living with disabilities known as the disadvantaged groups. Stratification was used because the population was structured into various heterogeneous units, hence the need for sample diversity. The sample size required was calculated according to Yamane (1967) formula.

$$n = N / [1 + N (e)^2]$$
$$n = 5510 / [1 + 5510 * 0.05]^2$$
$$n = 373$$

Where:

N= Target Population

n=required size

e= error term

The study had a sample size of respondents as illustrated in Table 1.1.

Table 1: 1The Sample Design

Officers	Population Size	Target Population Size	Sample Proportion	Sample Size
Supply Chain Management officers	870	870	0.158	59
Finance & accounts	1540	1540	0.279	104
Administrative officer	200	200	0.036	14
ICT Officers	400	400	0.073	27
Registered Suppliers	25,000	2,500	0.454	169
<b>Total</b>	<b>28,010</b>	<b>5,510</b>		<b>373</b>

The study used questionnaires because they are flexible and facilitates the capture of in-depth knowledge of the respondents, promotes respondent cooperation and allows the study to probe further for clarification of issues. The closed ended questions were used to test the rating of various attributes and this helped in reducing the number of related responses in order to obtain more varied responses. The open-ended questions provide additional information that may not have been captured in the closed-ended questions. The study adopted drop and pick questionnaire method so as to enhance the response rate. The coded data was then processed using the Statistical Package for Social Sciences (SPSS version 22). Descriptive statistics percentages, median and mode were used to determine the extent to which the top management influenced e-procurement in public entities. Inferential statistics, regression and correlation were applied to determine the extent to which the top management impacted on the implementation of e-procurement in public entities while independent t test was carried out to examine whether the extent of management commitment and support differed between the counties and the national government.

### Results and interpretation

#### The constituents of the respondents

The respondents who took part in this study constituted different stakeholders involved in procurement either as a staff or supplier. The staff members were useful as they gave the experience with the implementation of e-procurement in their respect places of work while the suppliers were equally important in giving information on the experience of using e-procurement while preparing tenders or bids. According to table 1.2, majority of the staff members were drawn from the County governments (66.7%) while majority of the suppliers were youths or youth groups. Women accounted for 33.3% of the suppliers while people with disability accounted for 20.5%. The sample shows a highly representative sample consisting of suppliers and staff members working in both levels of government.

Table 1: 2Designation of the respondents

Category	Percentage
Staff	
National government	33.3%
County government	66.7%
Total	100%
Suppliers	
Youth	46.2%
Women	33.3%
People with disability	20.5%
Total	100%

**Factor analysis and Reliability**

For data results to be generalizable, the sample size should be adequate, representative and reliable. In this section, each variable was tested independently as shown in the following discussions. Factor analysis is a data reduction method of grouping indicators into smaller groups to allow better management of the data. A factor loading of more than 0.5 was considered was retained and those variables which had factor loading of less than 0.5 were removed. Reliability was tested using Cronbach Alpha. According to Zinbarg(2005) an alpha coefficient of 0.80 or higher implies that the data is reliable and generalizable.

**Table 1: 3 Factor analysis and reliability –Top management support**

	Factor loadings	Cronbach Alpha
Percentage of the total budget of the organization allocated to (IFMIS) e-procurement implementation activities	.685	0.911
Positive level of commitment of top management towards allocation of other resources (finance, human resource and time) towards e-procurement(IFMIS).	.915	
Percentage of (IFMIS) e-procurement implementation contributed by top management.	.923	
Positive level of commitment of top management towards e-procurement implementation (IFMIS)	.919	
Level of supervision by top management towards e-procurement implementation (IFMIS)	.852	

All the factor loadings in table 1.3 were higher than 0.5 and thus they were all retained for further analysis. The Cronbach Alpha value of top management support indicators was 0.911 which was far much over the threshold of 0.7 for reliability test. Thus the data collected on top management was considered reliable and useful for generalization.

**Test of normality**

Normality is a critical characteristic in parametric tests. In this study, Normality test was done numerically using Shapiro –Wilk test. All the factors were considered normally distributed since the respective p values were all less than 0.5. Thus the data for the factors could be used in other parametric tests such as regression.

**Table 1: 4 Test of normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Top Management	.146	288	.000	.905	288	.000

a. Lilliefors Significance Correction

**Top management support and e-procurement**

The researcher inquired from the respondents on which level of management was responsible for the implementation of e-procurement.

**Table 1: 5 Level of management responsible for implementing e-procurement**

	National government	County government
Top Management	37	36.8
Middle Management	44.4	43.4
Low Management	5.6	10.4
Don't know	9.3	6.6
None	3.7	2.8
Total	100.0	100.0

Table 1.5 shows that most of the respondents (43.3%) indicated middle management was the one concerned with the implementation of e-procurement. This category was closely followed by 35.4% of the respondents who in their places of work the one responsible for implementation of e-procurement system were the top managers. This shows the implementation of e-procurement was in most of the government places the sole responsibility of the top and the middle level management.

**Table 1: 6 Descriptive analysis-Top management and implementation of e-procurement**

Indicator	Government	0-20%	20-30%	30-40%	40-50%	Over 50%	MD	M	SKW
Percentage of the total budget of the organization allocated to (IFMIS) e-procurement implementation activities	National	42%	10%	13%	19%	16%	2	1	0.33
	County	41%	15%	14%	7%	24%	2	1	0.46
Positive level of commitment of top management towards allocation of other resources (finance, human resource and time) towards e-procurement(IFMIS)	National	26%	15%	18%	15%	27%	3	5	0.00
	County	28%	10%	19%	22%	21%	3	1	-0.10
Percentage of (IFMIS) e-procurement implementation contributed by top management	National	20%	18%	14%	30%	19%	3	4	-0.19
	County	23%	10%	15%	28%	25%	4	4	-0.35
Positive level of commitment of top management towards e-procurement implementation (IFMIS)	National	25%	15%	18%	17%	25%	3	Ma	-0.03
	County	23%	8%	15%	24%	30%	4	5	-0.40
Level of supervision by top management towards e-procurement implementation (IFMIS)	National	28%	14%	12%	19%	28%	3	Ma	-0.08
	County	28%	9%	18%	17%	29%	3	5	-0.17

**Key: MD=Median, M=Mode, SKW=Skewness, Ma=Multiple modal values**

Table 1.6 shows the level of management support on implementation of e-procurement system. The data was collected in a likert scale of five points and thus it was a categorical in nature (ordinal). Thus it

used median as the average or central value of the respondents and assessment. The mode was used to indicate the response which had majority of the respondents prescribed into.

According to the results, approximately same proportion of respondents in both national (42%) and county (41%) governments allocate less than 20% of their total budgets towards implementation of e-procurement (IFMIS) related activities implying some low resource support from both levels of governments. The median and modal values for both levels of government were the same implying almost the same levels of resource allocation towards implementation of the IFMIS. However, slightly more respondents at the counties (24%) compared to national level (16%) indicated that their counties allocated more than 50% of their budget towards implementation of IFMIS.

On the level of commitment of the top management in allocating resources (such as finances, human resources, time among others) towards implementation of e-procurement. The study found that slightly more respondents at the county governments (28%) compared to national government (26%) agreed that top management showed less than 20% commitment of the resources to implement e-procurement. Also less number of respondents at the counties (21%) compared to 27% at national level indicated a top-management commitment level of 50% in allocation of resources to support e-procurement. The median values were same but the modal value for the county was 1 while that of the National government was 5 implying that top management were more committed at the national level than at county governments to allocate resources to support implementation of the e-procurement.

A close examination of the contribution of the top management on implementation of the e-procurement shows that less contribution of the top management was approximately the same in both counties (23%) and national government (20%). However, more respondents at counties (25%) compared to national level (19%) indicated that a better contribution (over 50%) of the top management towards implementation of e-procurement. The median values were more at county governments than at national government. This may imply that top management at the counties had made more contribution than at the national government.

The commitment levels of the top management towards implementation of e-procurement was almost the same in both national and county governments. The least commitment was more at national government (25%) than at the county level (23%). More commitment was at county level (30%) than at national level (25%). The median values were also more at the county level compared to national level implying that commitment of the top management was more in the counties than at the national government.

Supervision is a critical component in any activity and process. The results shows almost the same level of supervision on implementation of the e-procurement in both levels of the government. The median value was 3 for both levels indicating that central position of supervision of the top management was between 30-40 %. This shows the low level of supervision by the top management in both levels of government.

### **Comparative analysis of top management support—Independent t-test ((Testing of Hypothesis)**

The researcher did an independent t-test to examine the statistical differences on the extent of top management support on e-procurement in both levels of government. This was useful in testing the 1<sup>st</sup> hypothesis of the study which was stated as:

H<sub>0</sub>-There is no significant difference in top management support on the implementation of e-procurement between the National and County Governments.

H<sub>1</sub>-There is a significant difference in top management support on the implementation of e-procurement between the National and County Governments.

**Table 1: 7 Independent Samples Test-Top Management Support**

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference (N-C)	Std. Error Difference
Equal variances assumed	.679	.411	-.754	281	.451	-.12548	.16640
Equal variances not assumed			-.758	270.574	.449	-.12548	.16564

**Key: N=National level, C=County level**

The test was conducted at 95% confidence level. The criteria of inferences was that the null was not to be rejected if the value of p would be less than 0.05 and vice versa. From table 1.7, the Levene test of equality of variances shows that the variances are equal ( $p > 0.05$ ). The corresponding t statistics value was  $t(278) = 0.742$ ,  $p = 0.459$ . Thus there was no significant statistical differences between top management support on e-procurement between National and County governments. Thus, the study failed to reject the null hypothesis that there was no significant statistical differences on the level of top management support on e-procurement in both levels of the government.

**Effect of top management Support on implementation of e-procurement**

The study adopted a simple linear regression to test the effect of top management support on adoption and implementation of e-procurement system.

**Table 1: 8 Model Summary- Effect of Top Management on Implementation of e-procurement system**

Category	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
National government	1	.462	.214	.207	1.21100
County government	1	.697	.486	.482	1.03111

The model summary shows the values of R and R square. The R shows the correlation between the dependent variable and the independent while the R square shows the amount of variation the independent variable accounts for the dependent variable. The results are split for both levels of government to allow comparison and inferences. According to table 1.8, the R square for National government is 0.462 and for Counties is 0.697. This means that top management accounts for 46.2% and 69.7% of changes in implementation of e-procurement in National and County respectively. However, top management is not the only predictor of the e-procurement implementation. Thus other variables may be added into the model.

**Table 1: 9 ANOVA -Effect of Top Management and Implementation of e-procurement system**

Category	Model		Sum of Squares	df	Mean Square	F	Sig.
National government	1	Regression	48.184	1	48.184	32.856	.000
		Residual	177.449	121	1.467		
		Total	225.633	122			
County government	1	Regression	154.710	1	154.710	145.514	.000
		Residual	163.732	154	1.063		
		Total	318.442	155			

Table 1.9 shows the ANOVA table of the regression model. This confirms whether there is any independent variable or variables in a model which are significant predictors of the dependent variable. If there is, then the model is deemed fit. In this case, the F statistic had a p value of 0.000 for both levels of government. This means that top management was statistically significant ( $p < 0.05$ ) in influencing the implementation of e-procurement in both levels of the government.

**Table 1: 10 Coefficients- Effect of Top Management and Implementation of e-procurement system**

Category	Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
			B	Std. Error	Beta		
National government	1	(Constant)	1.751	.269		6.510	.000
		top.mngt2	.461	.080	.462	5.732	.000
County government	1	(Constant)	1.006	.203		4.966	.000
		top.mngt2	.710	.059	.697	12.063	.000

The coefficients of the regression output were examined to examine the exact contribution of top management support on implementation of e-procurement in both levels of the government as shown in table 1.10. The coefficients of the output at National government was 0.461 while that at Counties was 0.710. This shows the support of the top management at County governments is more influential than at the National government.

**Discussion of the findings**

The first objective of the study was to compare the influence of the top management on the implementation of the e-procurement in National and County governments. The study found that in both governments, implementation of e-procurement was mostly undertaken by the middle managers. Dorasamet *al* (2012) indicated that management support is critical because the implementation of IS innovations is resource intensive.

From the study, in most of the government agencies implementation of e-procurement is allocated less than 20% of the total budget. The level of commitment of top management towards allocation of other resources (finance, human and time) on implementation of e-procurement was less than 20% for the most of the government agencies. This shows that the level of management support on the implementation of e-procurement was low and thus likely to derail the implementation of the e-procurement. According to Khanapuri *et al* , 2011) considerable attention and support should be provided by senior management to ensure that procurement reforms have been well understood in the agency. Despite the seemingly dismal commitment of the top management on implementation of the e-

procurement, the study found that in most of the agencies the top management had contributed towards implementation of e-procurement by around 40-50%.

Comparing the top management support in both levels of the government on implementation of e-procurement, the study found that in both levels of the government most of the entities allocated less than 20% of the total budget towards implementation of e-procurement. However, more commitment of the top managers was seen at national government than in the counties to allocate resources on implementing e-procurement. Orina (2013) who argued that top management support was a crucial factor that influenced success of e-procurement implementation through setting the vision and goals, bringing about collective commitment for change in process and organizational structures, and formulating the policies and strategies necessary to put an e-Procurement initiative in place.

The contribution and commitment of the top management on the implementation of the e-procurement was approximately the same in both levels of the government. However, it was slightly higher in the county governments meaning that the top managers at the county governments had quite some influence on the implementation of the e-procurement. Ruth (2012) argued that management support was considered critical for conceptualizing work processes and for changing existing routines and processes that are critical for successful implementation. Thus the higher the level of commitment at the county level relative to that at national level would imply that if the factors remained constant, the county governments would be slightly more successful in implementing e-procurement than national governments agencies.

Shalle and Irayo (2013) held that support and supervision of end users during implementation of programs contributed to the success of the implementation efforts. In this study, the level of supervision by the top management was low in both levels of government implying that although the managers were perceived to be committed to implement e-procurement, they did little to allocate resources and even supervise the implementation of the e-procurement in both levels of the government. This further showed that commitment of the top management on the implementation of the e-procurement largely low.

An independent t test on the effect of the top management support in both National and County governments showed no significant statistical differences. This shows that the extent to which top management influenced implementation of e-procurement was almost the same in both levels of government. The regression test showed that top management influenced the implementation of the e-procurement more in the County governments than in the National government. This is possibly true because in the County government, the use of IFMIS can be highly influenced by the County executive who have direct influence while in the National Government, the heads of corporations, agencies and ministries may not have that direct influence to affect implementation of the IFMIS system. The results imply that management interventions provide powerful influences on implementation success (Osmonbekovet *al.* 2012). It thus extremely critical for top management to be involved in management, implementation and supervision of the e-procurement.

## Conclusions of the study

The support and commitment of the top management in both levels of government was low. Although the management creates an illusion that they support the implementation of the e-procurement, the commitment on the amount of financial allocation against the total budget, the willingness of the management and even the level of supervision of the management on the implementation of the IFMIS was generally low. The extent of commitment of top management in both levels of government was approximately more or less the same. The top management has significant influence on how government entities implement e-procurement. Noticeably, the influence of top management on the implementation of e-procurement was more at the county government than at the national level.

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