



**ANTECEDENTS OF EFFECTIVE ELECTRONIC GOVERNMENT PROCUREMENT  
IMPLEMENTATION IN KIAMBU COUNTY GOVERNMENT, KENYA**

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**Abstract**

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*Despite the World Bank elucidation of the reasons why governments should adopt e-procurement in the purchasing processes, the diverse potential offered by e-government procurement (e-GP) rests somewhat unacknowledged in many countries, and specifically so in the developing nations which are characterized by low levels of economic growth and industrialization, deprived infrastructure, unsophisticated technology, and unskilled human resources to name a few. Kenya is one of the developing nations where e-GP rests comparatively unappreciated; a challenge that is even compounded by the fact that, the national government devolved procurement responsibilities to the respective counties as stipulated and directed in the constitution. There are obstacles to the efficient adoption of e-GP within this context. In this respect, the current study sought to identify the key issues that could affect the success of the e-GP implementation and adoption process in the perspective of public sector, with special focus on Kiambu County government. All variables (e-GP planning, e-GP change management, e-GP policies, and e-GP HRM practices) had strong positive significant relationship with efficient e-GP implementation indicating that sound management plans guided by well-defined procedures and handled by trained and experienced HR professionals would lead to efficient e-GP implementation. In addition, e-GP HRM was the most significant predictor followed by e-GP planning and lastly e-GP policies). On the basis of these findings, it could be concluded that, for efficient e-GP implementation, e-GP HRM practices plays a vital role. However, the effect of e-GP change management was positive but insignificant demonstrating that in presence of e-GP planning, e-GP policies and e-GP HRM practices, changes in the procurement process would be well catered for.*

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**Keywords:** electronic government procurement, e-GP policies, e-GP planning, e-GP HRM

## **Background of the Study**

Electronic Government Procurement (e-GP) has been recognized as the main areas in the government-to-business (G2B) category, and it receives much attention from researchers (Turban & King, 2003), also being called electronic public procurement. While there are various forms of e-Procurement that borders on one or many stages of the procurement process such as e-Tendering, e-Auction and e-Marketplace, e-Procurement can be seen in a wider scope and depth as an end-to-end solution that puts together and streamlines many procurement processes throughout the organization. Many global companies and organizations have realized that time and cost savings can be achieved by having a link with major suppliers through private networks such as electronic data interchange [EDI]. The key driving catalysts for continued growth of e-GP vary from increased flexibility, higher and quicker levels of information sharing, faster and efficient service delivery to production cost efficiency and user customization and personalization (Kalakota & Robinson, 2000).

Given the benefits, global, regional and local governments have taken major strides to implement e-GP systems. The benefits of e-GP are expected to accelerate the rate of adoption, but this is not always the case as governments are not willing to commit significant scarce resources. Some studies in Kenya e-Procurement have revealed several challenges associated with its implementation, for example, Kipyego (2012), in his study on factors affecting implementation of electronic procurement systems in public sector found that costs associated with the process was found to be a major hindrance. The study observed that training of users and management support has a direct influence. However, formal recognition and acceptance, supported with legislations of the electronic implementation should be emphasized. Similarly, proper integration of all government agencies needs to be encouraged for faster and successful implementation (Kipyego, 2012).

Although, Kenya has made major steps in this area through the launch of Integrated Financial Management Information System (IFMIS); a system that was first rolled out to Kenyan government ministries in 2003 and to the county governments in 2013 and was meant to ensure public financial resources are used prudently and accountably, successful implementation has been a challenge. To ensure youth, women and persons living with disability benefit from Government procurement, every public institution in Kenya must comply with the 30% preferential procurement policy to provide opportunities to the target groups (Kenyan Constitution, 2010). While the successful implementation of e-GP remains an item bottom on the agenda of many public-sector organizations regardless of the benefits. These challenges have inspired the current research in order to assess the antecedents that are more likely to influence the successful implementation of e-GP.

## **Antecedent of e-GP Implementation**

According to Khanapuri, Nayak, Soni, Sharma, and Soni (2011) there are a number of essentials required for efficient adoption of e-Government procurement system. They include e-GP planning, e-GP policies, e-GP change management programme, and e-GP Human Resource

Management (HRM). World Bank (WB) (2004) has argued that e-GP planning should be based on clear assessment of existing procurement environment. A strategic implementation plan comprise of a strategy that is linked to all organs of an institution; and is developed through a concerted effort of all the parties involved.

Any policy on e-procurement is expected to provide essential instruction to all levels of an institution. A policy document provides a roadmap to follow when implementing a particular system and thus identifies why an institution is choosing to modernize its procurement functions and also to invest huge amount of capital in e-procurement. Hampshire County Council and Makgill (2004) have argued that an institution can use a policy as a communication mechanism in respect of the vision of e-procurement within it, thus starting to prepare for the changes that they will face.

Another important ingredient that would fuel the implementation of e-GP system is e-GP change management programme. This refers to a system that is very important in anticipating and dealing with the psychological, cultural and technological obstacles that can arise in an organization. If an organization lacks a clear change management programme, there can be a substantial waste of time, resources and eventually lead to employee dissatisfaction and loss of morale (Archer, 2005).

Human Resource Management is another important antecedent in the successful achievement of efficient e-GP implementation that is within the scope of this study. In all the previous discussed antecedents, it is very important to pay special attention to HRM issues, specifically the selection of appropriate staff training and programmes of education because any lack of required skill may prove to be costly to an organization (Moon, 2002).

### **Kiambu County Government**

The county is formerly the Central Province of Kenya and its capital is Kiambu and its largest town is Thika. The county neighbors Nairobi County and has a population of 1,623,282. The county government offices are located in Thika town. The town is an industrial hub to many manufacturing companies and is the largest in East and Central Africa.

### **Study Objectives**

The general objective of the study is to assess the antecedents of successful implementation of e-GP with special focus on Kiambu County government of Kenya. The specific objectives of this research were to identify the effect of planning on efficient e-GP implementation, examine the relationship between the County government policies and efficient e-GP implementation, and determine the influence of change management programme on e-GP adoption.

### **Theoretical Review**

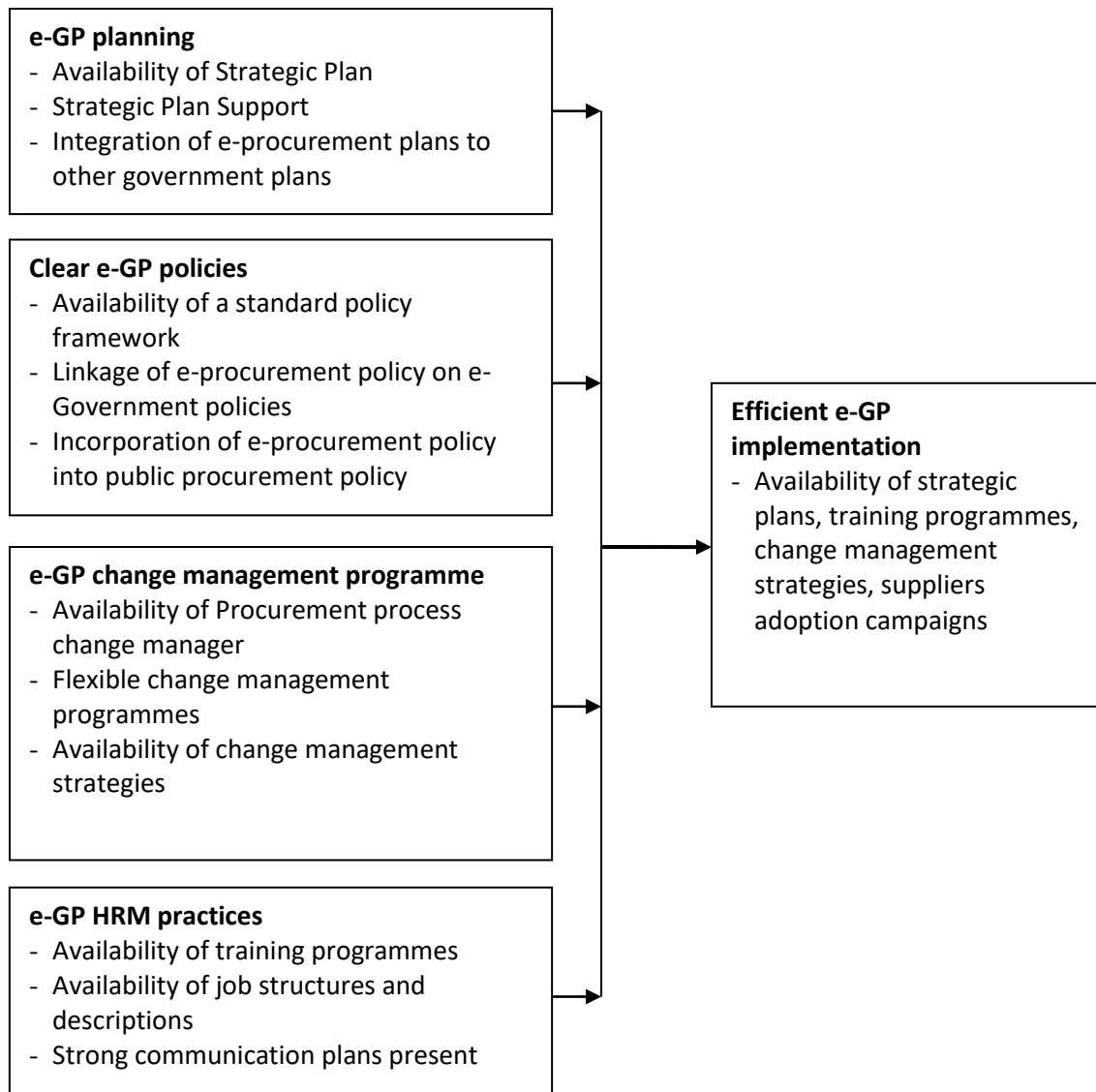
This study was guided by two theories to explain the aspect of e-government procurement implementation. **Disruption Innovation Theory** - Trott (2011) has argued that successful

implementation of any innovation is dependent on a thorough understanding of the type of innovation to be implemented and as such requires extensive planning.

Technology Acceptance Model (TAM) - Technology Acceptance Model (TAM) was coined by Davis (1989) and is one of the most famous models to predict implementation and acceptance of a technology based system in an organization.

### Conceptual Framework

Based on the study’s objectives, a conceptual framework was developed. According to Mathieson (2001), a conceptual framework is a virtual or written product that explains either graphically or narrative form the many things to be studied which include factors, concepts or variables and the presumed relationship among them.. This relationship is presented in Figure 1.



## Research Design

This study adopted descriptive survey design and self-administered questionnaires were used to collect quantitative data. The study targeted staff working in the procurement offices of the County government. The data was analyzed using descriptive statistics (mean and standard deviations), Pearson correlation ( $r$ ) and multiple regression analysis. Correlation analysis was used to establish the strength and the nature of the relationships between the study variables (e-GP planning, e-GP policies, e-GP change management, e-GP HRM and e-GP implementation). Multiple regression analysis was used to establish the weight of each independent variable on efficient e-GP implementation.

## Descriptive Analysis of e-GP Planning Construct

Descriptive analysis of each construct was conducted in order to establish the means and standard deviations. This was done in order to establish the overall respondents' levels of agreement with the items of each construct. Descriptive analysis results of e-GP planning construct are presented in Table 1.

*Table 1: Means and Standard Deviations of e-GP Planning Construct*

<b>Constructs</b>	<b>Mean</b>	<b>SD</b>
The availability of strategic plan, which sets deadlines, responsibilities and financing for your organisation's e-procurement	4.53	0.18
All of your organisation's available plan for e-procurement has the support and involvement of Stakeholders	4.60	0.21
Any of your organisation's available plans for e-procurement is linked to other government plans for managing and delivering services (e.g. financial systems plans)	4.36	0.95

**Notes:**  $n=32$

Results demonstrated in table 1 revealed overall means for all constructs above 4.00. This indicated that respondents agreed with the items of e-GP construct indicating availability of supported strategic plan which directs the way the County government runs its procurement activities.

## Descriptive Analysis of e-GP Policies Construct

Results in table 2 reveals the means and the standard deviations of the e-GP policies construct. Analysis of this construct revealed means above 4.00 indicating that respondents were in agreement with the items of e-GP policies. In particular, respondents showed high level of agreement with the fact that e-procurement policies are linked to e-commerce and e-government

systems (Mean = 4.60, SD = 0.71). Additionally, respondents also rated highly the County's ability to incorporate the e-procurement policy in the existing public procurement policy (Mean = 4.56, SD = 1.05).

*Table 2: Means and Standard Deviations of e-GP Policies Construct*

<b>Constructs</b>	<b>Mean</b>	<b>SD</b>
Your organisation has developed a general policy framework that works as the basic standard for the electronic government procurement potential.	4.23	0.88
Your organisation's e-procurement policy is linked to policies on e-Commerce, e-government	4.60	0.71
Your organisation has managed to incorporate the e-procurement policy into the existing public procurement policy	4.56	1.05

**Notes:**  $n=32$

### **Descriptive Analysis of e-GP Change Management Programme Construct**

In this questions, respondents were asked to express their level of agreement with eight items of e-GP change management programme. Means and standard deviations for this construct are presented in table 3.

*Table 3: Means and Standard Deviations of e-GP Change Management*

<b>Constructs</b>	<b>Mean</b>	<b>SD</b>
Your organisation has appointed a change manager to manage change and provide training.	4.63	0.98
Your organisation's change management programme is ongoing improvement through promoting and introducing new features	3.21	0.81
Your organisation has a recognisable change management strategy in operation to assist	4.66	0.45
The range of expertise required to plan and implement a strategic e-procurement plan is available to government.	4.52	0.85
Your organisation has management controls for monitoring compliance, correctness, quality, and risk	4.55	1.23
Your organisation has documented all the operational and management controls that measure, monitor and report on the progress of e-Procurement implementation and procurement performance.	4.36	1.20
Your organisation has launched supplier adoption campaigns (e.g. educating suppliers, providing incentives etc.) to encourage larger as well as SME and indigenous suppliers to adopt e-procurement	3.12	0.23

**Notes:**  $n=32$

As shown in table 3, participants revealed a high level of agreement with ‘the organisation has a recognisable change management strategy in operation to assist’ (Mean = 4.66, SD = 0.45) indicating that the County government procurement has a strategy to deal with changes in the environment. Also, respondents agreed that the County government procurement department had employed a change management personnel (Mean = 4.63, SD = 0.98), and has management controls for monitoring compliance, correctness, quality, and risk (Mean = 4.55, SD = 1.23). However, respondents were undecided with ‘the County has launched supplier adoption campaigns (such as educating suppliers, and providing incentives) to encourage larger as well as SME and indigenous suppliers to adopt e-procurement (Mean = 3.12, SD = 0.23).

### **Descriptive Analysis of e-GP HRM Construct**

Means and standard deviations of e-GP Human Resource Management scale are shown in table 4.

*Table 4: Means and Standard Deviations of e-GP HRM Construct*

<b>Constructs</b>	<b>Mean</b>	<b>SD</b>
Your organisation has an education and training programme for executives, managers and staff in adopting e-GP	4.73	0.28
Your organisation has identified the appropriate stakeholders and understood the different business rules as they apply to e-procurement	4.20	0.71
Your organisation has reviewed the jobs and responsibilities of e-procurement managers and staff to ensure a viable career structure is in place	4.16	0.65
Your organisation has identified at which level each stakeholder can or should be involved in the planning and implementation process	4.44	1.23

**Notes:**  $n=32$

Examination of means for each item of this scale revealed values greater than 4.00 indicating that participants agreed with the four items of this scale. As can be seen in table 4, participants revealed a high level of agreement with ‘organisation has an education and training programme for executives, managers and staff in adopting e-GP’ (Mean = 4.73, SD = 0.28). Findings related to ‘organisation has identified at which level each stakeholder can or should be involved in the planning and implementation process’ of e-GP revealed levels of agreement (Mean = 4.44, SD = 1.23).

### **Descriptive Analysis of e-GP Implementation Construct**

Results on the e-GP implementation scale are presented in table 5. Means and standard deviations indicated that the County government has adhered to the principles of e-GP and that the process if implementation was ongoing.

*Table 5: Means and Standard Deviations of e-GP Implementation Construct*

<b>Constructs</b>	<b>Mean</b>	<b>SD</b>
The availability of a strategic plan, which sets deadlines, responsibilities and financing for your organisation's e-procurement	4.23	1.18
Your organisation has benchmarked and re-engineered the procurement process to suit the e-procurement process	4.10	1.21
Your organisation has established the business case, formulating e-procurement implementation strategy and documenting formal action/communication plan for the organisational use of e-procurement	4.36	1.95
Your organisation has a recognisable change management strategy in operation to assist.	3.78	1.23
Your organisation has appointed a change manager to manage change and provide training.	3.98	1.35
Your organisation's change management programme is ongoing improvement through promoting and introducing new features	3.45	1.36
Your organisation has an education and training programme for executives, managers and staff	4.26	0.23
Your organisation has launched supplier adoption campaigns (e.g. educating suppliers, providing incentives etc.) to encourage larger as well as SME and indigenous suppliers to adopt e-Procurement	4.36	0.45

**Notes:** *n*=32

### **Comparison of Overall Means**

Table 6 indicates the comparison of the overall means for all the scales used in the study. Results indicated that all scales had means above 4.00 showing that respondents approved the availability of e-GP planning, e-GP policies, e-GP change management, and e-GP HRM. Moreover, results revealed a high level of agreement with e-GP planning (Mean = 4.50, SD = 0.45) followed by e-GP policies (Mean = 4.46, SD = 0.88).

*Table 6: Constructs Overall Means and Standard Deviations*

<b>Constructs</b>	<b>Mean</b>	<b>SD</b>	<b>Mean Ranking</b>
e-GP Planning	4.50	0.45	1
e-GP Policies	4.46	0.88	2
e-GP Change Management	4.34	0.82	4
e-GP HRM	4.38	0.72	3

**Notes:** *n*=32



## Correlation Results

In order to achieve the study objectives, five separate research questions were set at 5% significance level. Pearson correlation analysis was conducted to show the strength of the association exhibited by the study variables in order address the research questions. These results are demonstrated in table 7. Correlations between variables are significant at 5% level.

*Table 7: Inter-construct Correlations*

Correlations		1	2	3	4	5
1. e-GP Implementation	r	1				
	P – value					
2. e-GP Planning	r	<b>.854*</b>	1			
	P – value	.000				
3. e-GP Policies	r	<b>.620*</b>	<b>.500*</b>	1		
	P – value	.000	.003			
4. e-GP Change Management Programme	r	<b>.875*</b>	<b>.812*</b>	<b>.466*</b>	1	
	P – value	.000	.000	.003		
5. e-GP HRM	r	<b>.623*</b>	<b>.523*</b>	<b>.625*</b>	<b>.451*</b>	1
	P – value	.000	.001	.000	.004	

*Notes:* \*Correlation is significant at the 0.05 level (2-tailed). *r* = Pearson Correlation Coefficient. N = 32

Results in table 7 revealed significant positive correlations among the independent variables (e-GP planning, e-GP policies, e-GP change management and e-GP Human Resource Management) and the dependent variable (efficient e-GP Implementation) considered in the study.

### Relationship between e-GP Planning and e-GP Implementation

From table 7, e-GP planning has a significant positive correlation with efficient e-GP implementation ( $r = 0.854$ ,  $P - \text{value} = .000$ ). The correlation coefficient was very strong and positive. This indicated that availability of e-GP planning in the County government procurement processes results to efficient e-GP implementation.

### Relationship between e-GP Policies and e-GP Implementation

Results in table 7 revealed a significant positive correlation between e-GP policies and efficient e-GP implementation ( $r = 0.620$ ,  $P - \text{value} = .000$ ). These results indicated a strong positive correlation showing that presence of e-GP policies available to govern the electronic procurement processes in the County government offices would make the entire process efficient and reliable.

### Relationship between e-GP Change Management and e-GP Implementation

Pearson correlation results exhibited in table 7 revealed a significant positive correlation between e-GP change management and efficient e-GP implementation in Kiambu County government offices. Additionally, the correlation was very strong and direct which showed availability of change management strategy, management of procurement changes through proper training and availability of expertise to deal with the changes would all lead to increased efficient e-GP implementation. Also, Pearson results indicated that correlation coefficient for e-GP change management was very strong ( $r = .875$ ) when compared with those of e-GP planning ( $r = .854$ ), e-GP policies ( $r = .620$ ) and e-GP implementation ( $r = .623$ ). This indicated that, to some extent, availability of strategies to manage changes in the procurement processes would result to greater effects on the efficient e-GP implementation in the procurement processes of Kiambu County government. This accentuated the importance of e-GP change management in the entire process of e-GP implementation making it more efficient and reliable.

### Relationship between e-GP HRM and e-GP Implementation

Correlation results demonstrated in table 7 showed a significant positive relationship between e-GP HRM and efficient e-GP implementation ( $r = 0.623$ ,  $P$  – value = .000) in Kiambu County government procurement processes. Results also indicated that the correlation was strong and direct showing that the presence of an education and training programme for all involved procurement staff members, a clear understanding of business rules and applied to e-procurement, availability of a viable career structure of e-procurement managers and staff, and a clear-cut strategy of involving identified stakeholders in the planning and e-GP implementation process would all lead to increased efficiency in the entire e-GP implementation process.

### Regression Analysis

Regression analysis was conducted to determine how each antecedent in the model affected efficient e-GP implementation in the County government and results are presented in table 8.

Table 8: Model Summary

Model	R	Change Statistics					
		R Square	Adjusted R Square	Std. Error of the Estimate	Square Change	Sig. F Change	
1	.897 <sup>a</sup>	.847	.822	2.76923	.822	52.085	.000

a. Predictors: (Constant) e-GP planning, e-GP policies, e-GP change management and e-GP Human Resource Management

The regression model hypothesized that e-GP planning, e-GP policies, e-GP change management and e-GP Human Resource Management were accountable for changes in the efficient e-GP implementation in the County government offices. As shown in table 8, e-GP planning, e-GP policies, e-GP change management and e-GP Human Resource Management accounts for 84.7% ( $R^2 = .847$ ) of the variation in efficient e-GP implementation in the County procurement offices.

Analysis of Variance (ANOVA) test was also conducted to determine whether the model works in explaining the relationship among the independent variables (e-GP planning, e-GP policies, e-GP change management and e-GP Human Resource Management) and the dependent variable (efficient e-GP implementation) as shown in Table 9.

**Table 9: Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	$\beta$	Std. Error	Beta	t	
1 (Constant)	0.356	0.301		1.667	<b>.046*</b>
e-GP planning	0.085	0.132	0.112	0.712	<b>.003*</b>
e-GP policies	0.074	0.074	0.136	1.661	<b>.008*</b>
e-GP change management	0.512	0.096	0.714	4.425	.602
e-GP HRM	0.156	0.064	0.216	2.256	<b>.000*</b>

a. Dependent Variable: Efficient e-GP implementation

As shown in table 9, ANOVA results revealed that the overall regression model was significant ( $R^2 = .847$ ,  $F = 52.085$ ,  $p < .001$ ). The implication is that each independent variable contributes significantly to changes in efficient e-GP implementation. This indicated that the regression model had a predictive power and thus accounted for significantly more variance in efficient e-GP implementation than would be expected by chance. The following regression model equation is derived from table 9.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where:

Y = the dependent variable (job involvement)

$X_1$ ,  $X_2$ , and  $X_3$  = e.GP planning, e-GP policies, and e-GP HRM respectively

$\beta_1$ ,  $\beta_2$ , and  $\beta_3$  = regression coefficients or change induced in Y by  $X_1$ ,  $X_2$ , and  $X_3$  respectively

e = error term

Overall regression model equation:

$Y$  (efficient e-GP implementation) = 0.356 + 0.085 e-GP planning + 0.074 e-GP policies + 0.156 e-GP HRM + 0.301.

### **Research Question 1: Effects of e-GP planning on efficient e-GP implementation**

In order to assess the effect of e-GP planning on efficient e-GP implementation, multiple regression analysis was used. Regression results revealed significant results on the effects of e-GP planning on efficient e-GP implementation ( $\beta = 0.085$ ,  $p$  – value = .003). Looking at the Pearson correlation results reveal e-GP planning had a significant very strong positive correlation with efficient e-GP implementation ( $r = 0.854$ ,  $P$  – value = .000) meaning that the more the availability of strategic plans governing e-GP process the more efficiency in the whole implementation process. While this was the case, the beta weights for e-GP planning in the overall regression model was direct and significant ( $\beta = 0.085$ ,  $p$  – value = .003). This means that, when in the presence of the other antecedents in the regression model, availability of e-GP strategic plans results to increased efficiency of e-GP implementation.

Results on e-GP planning are consistent with previous studies. According to Coopey and Burgoyne (2000) have revealed the importance of a strategic plan for efficient implementation of e-procurement systems in an organization. It is worthy to note that efficient implementation of e-GP is connected to a sound procurement planning. In this regard, this study findings supported Davilla et al. (2002) that for any organization to be successful in its procurement operations, it must take a professional view of its role in the holistic business which must encompass a strong and sound strategic planning.

### **Research Question 2: Relationship between e-GP policies and efficient e-GP implementation**

Regression results in on the influence of e-GP policies on efficient e-GP implementation revealed significant coefficients ( $\beta = 0.074$ ,  $p$  – value = .008). In addition, Pearson results revealed significant strong positive correlations ( $r = 0.620$ ,  $P$  – value = .000) showing that increased presence of e-GP policies would result to increased efficiency of e-GP implementation. Along similar lines, the beta weight for e-GP policies in the overall regression model was positive and significant ( $\beta = 0.074$ ,  $p$  – value = .008) which indicated that availability of e-GP policies would increase the efficiency of e-GP implementation in Kiambu County government in the midst of e-GP planning, e-GP change management, and e-GP HRM.

Regression results of e-GP policies in this study agrees with those of Hampshire County and Makgil (2004) who argued that e-procurement policy gives a roadmap and communications mechanism, thus preparing involved personnel for the changes that would be faced in the entire implementation process. However, the study findings are inconsistent with Al-Moalla and Li (2010) study entitled: ‘organizational issues with electronic government procurement: a case study of the UAE’ which found out insignificant positive relationship between e-GP policies and e-GP implementation.

### **Research Question 3: Influence of Change Management Programme on Effective Implementation of e-GP**

Table 9 shows insignificant positive regression results of the influence of e-GP change management on efficient e-GP implementation ( $\beta = 0.512$ ,  $p - \text{value} = .602$ ). However, correlation results between e-GP change management and efficient e-GP implementation revealed a very strong positive significant relationship ( $r = 0.854$ ,  $P - \text{value} = .000$ ) meaning that the more availability of change management plans the more efficiency in e-GP implementation. While this is the case, the regression beta weight for this variable in the overall regression model was positive and insignificant demonstrating that, in the midst of other variables considered in the study (e-GP planning, e-GP policies and e-GP HRM), availability of change management programmes does not always lead to efficient e-GP implementation. However, these findings are contrary to Al-Moalla and Li (2010) results which found significant positive relationships between e-GP change management and efficient e-GP implementation.

#### **4.11.4 Research Question 4: Effects of e-GP HRM on e-GP Implementation**

Regression results in table 9 on the influence of e-GP HRM on efficient e-GP implementation revealed significant coefficients ( $\beta = 0.156$ ,  $p - \text{value} = .000$ ). In addition, Pearson results in Table 4.9 revealed significant strong positive correlations ( $r = 0.623$ ,  $P - \text{value} = .000$ ) demonstrating that increased availability of e-GP Human Resource Management would result to increased efficiency of e-GP implementation. In the same tune, the beta weight for e-GP HRM in the overall regression model was positive and significant indicating that availability of e-GP HRM would increase the efficiency of e-GP implementation in Kiambu County government in the presence of e-GP planning, e-GP change management, and e-GP policies.

Of the three variables that were significant in the regression model, e-GP HRM was the most significant predictor of efficient e-GP implementation when compared with e-GP policies and e-GP planning. These results supports Heeks (1999) and Moon (2002) that issues to give more importance include the selection of appropriate training for the staff because any deficiency in skills required to effectively use e-government systems could bring serious problems in the implementation of e-GP. This indicated that, a well and professional training programme where all procurement personnel are involved should be at the forefront in the County government agenda in order to ensure efficiency in e-GP implementation.

### **Summary of Findings**

Analysis of the data collected showed that e-GP planning has a very strong significant positive correlation with efficient e-GP implementation. Furthermore, regression analysis revealed positive significant relationship between e-GP planning and e-GP implementation. This demonstrates that availability of e-GP planning would enhance the efficiency of e-GP implementation. It worth noting that e-GP planning provides a concrete foundation on which to anchor all procurement processes in an organization. Availability of e-GP planning would

facilitate the creation of a sound procurement strategy that is incorporated at the core of an organization's procurement plan. Along similar lines, it allows vetting of the needed expertise to run the e-GP processes.

On research objective two, it was to examine the relationship between county government policies and effective implementation e-GP. Results have indicated a positive relationship between e-GP policies and efficient e-GP implementation indicating that availability of e-GP policies provides standardization in the procurement process and ensures that these processes run in accordance with predefined procurement plans. Adherence to e-GP polices eliminates room for errors in the procurement process and cycle and therefore provide transparency, accountability, impartiality and fairness in the procurement process. One thing that forms the core of the procurement process is tender evaluation. Availability of e-GP policies ensures efficiency in tender evaluation by providing a standard criteria which act as a reference point to effectively assess different suppliers' bids, therefore providing transparency which could be used in defense should legal problems be raised by dissatisfied suppliers.

Research objective three was to determine the influence of change management programme on the effective implementation of e-GP. Pearson correlation analysis of data collected from the respondents showed that e-GP change management have very strong positive significant relationship with efficient e-GP implementation. Respondents confirmed that the County government has extensive change management system in the procurement processes and has put in place a personnel in charge of such changes. However, further analysis using multiple regression analysis revealed positive insignificant relationships between e-GP policies and efficient e-GP implementation. This indicated that, in the presence of e-GP planning, e-GP policies and e-GP Human Resource Management, availability of change management programmes does not always lead to efficient e-GP implementation. This could be attributed to the fact that in the presence of sound strategic plans, policies and well managed HR, change management could be well implemented using these variables.

Lastly, research objective four was to assess the effect of Human Resource Management [HRM] practices on the effective implementation of e-GP. It was confirmed that e-GP HRM has a strong positive correlation with efficient e-GP implementation. This indicated that the more the availability of e-GP HRM the more the efficiency of e-GP implementation. For efficient e-GP implementation, procurement and e-GP HRM need to work together. Many organizations face the challenges of managing human capital. To better manage human resources, HR and procurement professionals should work together in order to develop sound management strategies. Availability of e-GP HRM ensures efficiency in the implementation of e-GP where HR and procurement professionals work together for a common good. Effective e-GP HRM provides a good platform for efficient e-GP implementation process.

## **Conclusions**

The research drew the conclusions based on the research questions which had been formulated from the objectives. Foremost, electronic government procurement (e-GP) is an important

system in e-government procurement process and therefore requires a lot of attention to ensure its success. Based on the aforementioned research findings, the following conclusions can be made. The presence of good and sound planning may lead to increased efficiency of e-GP implementation in an organization.

Following the empirical investigation, it was discovered that three independent variables (e-GP planning, e-GP policies and e-GP HRM) had a significant influence on efficient e-GP implementation. This implies that the County government can improve efficient e-GP implementation by enhancing e-GP planning, e-GP policies and e-GP HRM.

Last but not the least, it can be concluded that special attention would also need to be given to ensuring e-GP HRM, as it was determined that this factor was the most significant predictor of efficient e-GP implementation. Proper management of human resources, hiring qualified procurement personnel and periodical staff training on e-procurement could have major implications on the efficiency of e-GP implementation.

### **Managerial Implications**

Considering the above mentioned findings, there are a number of implications to the management of County governments in Kenya. Firstly, e-GP HRM seems to have the largest influence on efficient e-GP implementation. As a result, procurement managers should take this into account and develop appropriate actions. To that end, they should predominantly need to develop strategies and put procedures in place to ensure that personnel involved in the procurement process have the requisite skills for efficient e-GP implementation. In order to achieve this objective, employees could for example be periodically trained in order to embrace the e-procurement systems and to be able to incorporate changes in the procurement processes.

In addition to e-GP HRM, managers of County governments should pay attention to the other two significant variables investigated (e-GP planning and e-GP policies), as the analysis of the empirical results showed that, consistent with the literature review, they too could have an impact on efficient e-GP implementation. For example, correct procedures and infrastructure should be put in place to ensure that procurement processes are mounted on sound management plans and policies.

### **Suggestions for Future Research**

Several recommendations for further research are made to address areas the present study did not look into, yet they are important. First, the findings although insightful are not generalizable across the other Counties in Kenya because only one case (Kiambu County) was chosen. Additionally, the findings are primarily based on the views of key informants in the procurement offices – views of other personnel that interact with the procurement offices were not gathered. Therefore, there is need to conduct a similar research on the variables investigated in the study using multiple County governments across the country in order to form a holistic understanding about e-GP implementation. Secondly, more in-depth studies need to be conducted in order to find out the influence of other factors such as leadership and governance. Lastly, a study need to

be conducted employing different data collection techniques where more than one data collection tool is involved. This can be achieved by use of both questionnaires and interview guides in order to gather more in-depth responses.

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