



EFFECT OF E-PROCUREMENT AND E-COMMUNICATION ON SERVICE DELIVERY IN THARAKA NITHI COUNTY GOVERNMENT–KENYA

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Abstract

The purpose of this research study was to identify the effect of e-government on adoption of E-government in the Kenya's public sector. The study was guided by two research questions that are as follows: To what extent does e-procurement and e-communication in Kenya. The study used descriptive research design. The target population comprised of 70 officers in all four county government departments. Stratified random sampling method was used to select the population. The respondents included senior management officers, and technicians in the Ministries. Data was collected using a structured questionnaire. Collecting and analyzing data from 10 respondents to measure its level of reliability and relevance first piloted the questionnaire. Data was analyzed using Statistical Package for Social Sciences (SPSS) and interpreted in frequencies and percentages. The study findings led to the conclusion that e-government strategy had a positive impact on service delivery as it ensured timely delivery of service, credibility, and dependability. Through immediate feedback, the county government was able to improve on its services.

Keywords: E-government, E-procurement, E-communication, Service delivery, Kenya

INTRODUCTION

The emergence of Information and Communication Technology has provided means for faster and better communication, efficient storage, retrieval and processing of data and exchange and utilization of information to its users, be they individuals, groups, businesses, organizations or governments. ICTs have to be used in order to create and deliver a service, which is useful and has an effective impact for the businesses and for the citizens. Information and communications technology (ICT) is an integral component of government operations and service delivery. ICT is increasingly used as a strategic tool to more efficiently support any Government's priorities and program delivery. In order to have a successful e-Government, the Information and Communication Technology (ICT) solutions, which are at the very core of the e-Government infrastructure, have to be reachable by all citizens (Reffat, 2016).

E-government strategy is an important aspect for developing countries such as Kenya. As noted by Waema (2012), the government of Kenya has recognized e-government as key driver to the provision of effective and accessible services to citizens, business organizations and public agencies. For instance, the Kenya Vision 2030 recognizes ICT as a key pillar to development and success of government service provision. As a result of this, commendable efforts have been made on e-applications, capacity building and infrastructural growth by government agencies. Moreover, the foundation for e-government legal framework for devolved units is premised in the new constitution of Kenya of 2010, which rebuilt the nation's political and managerial structure by devolving a great deal of power to the new county government entities, and which sets out some core principles of administration.

Petroleum Firms in Kenya

The World Bank (2014) defines e-governance as the utilization of information technologies (such as Wide Area Networks, the Internet, and mobile computing) by government agencies in order to transform relationships with citizens, and delivery of businesses, services and other forms of governance to the public. E-governance is defined as the means through which rendering of government services and information to the public is done using electronic means (Nkwe, 2011). Information technologies in governance can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management resulting in greater transparency, and accountability (World Bank, 2014).

The global information technology report (2015) cites a positive correlation between a country's ICTs usage and its economic and social growth (Dutta, Geiger and Lanvin, 2015).

To this end, governments are making investments ICTs in the public sector so as to improve the delivery of services online and enhance e-participation of citizens. Consequently, electronic government (e-government) initiatives have increased in developing countries such as Ghana, Senegal, Brazil, India, Chile, Argentina, the Philippines, and Malaysia, among others, where they are reaping the benefits of using ICTs in the delivery of public sector services (UN, 2014).

E-government has several meanings. One narrow definition focuses only on Internet applications inside government. However, narrow definition sometimes is expanded to include the use of the Internet in restructuring government-citizen interactions and related political relationships (Farelo & Morris, 2016). A broader definition looks at e-government as the use of ICT to strengthen government performance in areas such as more effective and more efficient provision of services, opening new channels for people to access government and official information, and making government more accountable to its citizens. Kumar and Best (2016) defined e-Government as the use of information and communication technologies (ICTs) in the public sector to improve its operations and delivery of services.

Statement of the Problem Statement

Globally, the focus on service delivery is becoming intertwined with an emphasis on achieving cost savings and enhancing efficiency in service delivery. The role of e governance in public service delivery has accordingly been revisited to enable effective inter-organizational linkages and consolidation of government systems through e-government services. Initially the political and managerial focus was on developing e-services within each public institution, with limited consideration being given to cross-organizational coherence, the focus today has clearly shifted towards coordinated services offering one-stop shops to citizens and businesses. Now citizens and businesses around the world are increasingly demanding that their governments follow suit. While e-government has resulted in efficiency gains in some instances, much of the research reports that cost savings have been sporadic, uneven and often overshadowed by both upfront and escalating investments.

Furthermore, studies have indicated that service provision among several government agencies is still poor. Moreover, no specific studies have addressed the effect of e-government strategy on service provision in devolved units. Therefore, this study assessed the effect of e-government strategy on service delivery in devolved units using Tharaka-Nithi county as a case in study.

Objective of the Study

- i) To investigate the effect of e-procurement strategy on service delivery in Tharaka Nithi County.
- ii) To investigate the effect of e-communication strategy on service delivery in Tharaka Nithi County

LITERATURE REVIEW

Expectancy-disconfirmation theory (EDT)

Expectancy-disconfirmation theory (EDT) is of the view that satisfaction is determined by the level of discrepancy between the expectancy and perceived performance (Bhattacharjee, 2001). The theory adopted the idea that consumers' satisfaction is determined by product/service performance, customers' expectations before consumption, and the gap between performance and expectations. This theory has its roots in motivation theory that postulated that people are driven by the desire to satisfy their needs (Maslow, 1954) or that their behaviour was directed at the achievement of relevant goals. It was later conceptualized by Oliver (1977) to measure post-purchase customer satisfaction from perceived quality of products or services.

Satisfaction level is as a result of the difference between expected and perceived performance (Oliver, 1977). Disconfirmation can either be positive or negative. Positive disconfirmation occurs if the customer is satisfied if the performance of product/service is equal to his/her expectations while negative disconfirmation occurs when the product/service performance is perceived to be below his/her expectation. On the other hand, the customer is said to be highly satisfied if the expectations exceed perceived performance.

Technology Acceptance Model

This theory was propounded by Davis (1989) and Davis, Bagozzi and Warshaw (1989) to predict the acceptability of an information system. TAM has proven to be a theoretical model in helping to explain user behaviour of Information Technology (Legris, Ingham, & Collette, 2003). TAM is an extension of Theory of Reasoned Action (TRA) propounded by Ajzen and Fishbein (1980) to understand an individual's voluntary behaviour and the basic motivation to perform an action which according to them is influenced by our attitudes and subjective norms (Ajzen & Fishbein, 1980). Technology Acceptance Model suggests that the acceptability of an information system is determined by two main factors: perceived usefulness and perceived ease of (Vankatesh, Morris, & Davis, 2003).

Perceived usefulness is defined as the degree to which a person believes that the use of a system improves his output. Perceived ease of use refers to the degree to which a person believes that the use of a system will be effortless (Davis, Bagozzi, & Warshaw, 1989). Therefore, the decision to use an information system is determined by the person's attitude towards the system and the impact it may have on his or her performance at work. If the system is capable of improving performance at work, then it will easily be adopted and used. The purpose of this model is to assess the acceptability of e-government system in terms of usefulness and to identify the changes which must be incorporated to the system in order to make it acceptable and applicable to the users.

E-procurement and Service delivery

Adoption of e-procurement plays a significant role in improving the effectiveness and efficiency of organizations' procurement functions. Procurement department could contribute tremendously to the organization's vision and the bottom line if it adopts proper technologies. Technology adoption helps procurement department to buy all that is required in the organization at the right time, price, place, quantity and quality for all departments and users within the organization. An organization could derive great benefits from e-procurement and thus be able to serve their customers (both internal and external) better.

Motanya, (2019) on a study to assess the effect of trade finance on profitability of Kenyan petroleum companies in Kenya, while citing a study done by in a study on the effect of liquidity between supplier and clients noted that clients usually get concessions while negotiating credit terms. Thus the supplier must always have an incentive to promote payments made in a timely manner to avoid liquidity problems. On the other hand, if the procurement department is inefficient in its acquisition of goods and services or even works, other departments would be adversely, sometimes severely affected

Barngetuny and Kimutai (2015) sought to investigate the effects of E-procurement on supply chain management performance in Elgeyo Marakwet County. The study was conducted on public entities in Elgeyo Marakwet County. The study was limited to e-procurement and supply chain management performance. The study adopted the use of questionnaires and interview schedules to collect primary data. The research also adopted descriptive design to collect the quantitative and qualitative data that describes the effects of e-procurement and supply chain management. The target population for this study was employees in public entities in Elgeyo Marakwet County; this included the County Government of Elgeyo Marakwet and Iten County Referral Hospital. This study also adopted stratified sampling technique where the study population was stratified into

management and non-management strata. Then purposive sampling was used to select 30 employees of Elgeyo Marakwet County and 10 employees from County referral hospital Iten. Data collected was done through both qualitative and quantitative. Qualitative data was analyzed through content analysis. Quantitative data was analyzed through the use of frequency distribution, mean scores and standard deviations. With the help of Statistical Package for Social Science (SPSS) the findings were then presented in form of frequency distribution tables, bar charts and pie charts. The data was finally summarized according to the study's specific objectives. The study established a correlation between all the variables of the study and the independent variables.

The e-procurement strategies are: e-tendering, e-invoicing, e-payment and e-communication. E-procurement software may make it possible to automate buying and selling. Companies participating expect to be able to control parts inventories more effectively, reduce purchasing agent overhead, and improve manufacturing cycles. E-procurement and the use of computers in procurement is gaining grounds and becoming more popular in today's business. According to Qrunfleh and Tarafdar (2014), modern business state that for any business firm to succeed they must embrace and incorporate Information Technology into day-to-day running of the enterprise. This reason coupled with many other positive effects has prompted many companies both locally and all over the world to adapt and implement IT in its procurement process and overall running of the business (Rita and Krapfel, 2015).

E-Communication and Serve Delivery

In line with global trends, Kenyans are consuming content on digital platforms (Nyamamu, 2014). The rise in internet usage and penetration in Kenya has been quite sharp, making the country the fourth in Africa behind Nigeria, Egypt and South Africa and position 33 in the world (International Telecommunication Union – ITU, 2014). Increasing internet penetration, mobile device proliferation and the convenience of consuming content anytime, anywhere are among the key drivers for this trend (Deloitte, 2015). According to the Communications Authority of Kenya, (2017), total internet subscriptions in Kenya rose by 10.2 percent in July 2017 to register 29.6 million subscribers as compared to the same period in the previous year. The report attributed the growth to increased use of mobile data services mainly by young people in addition to increasingly affordable internet tariffs, continued decrease in the price of smartphones as the well widespread availability of mobile phone handsets. The report's findings are corroborated by e-commerce retail giant Jumia Kenya who indicated that 58% of all phones that were sold in Kenya in the year 2015 were smartphones (Zab, 2015).

In the last two decades the spread of e -communication technologies together with increased digital connectivity has made governments to reassess the manner in which they function as well as network within and with outside establishments. Governments have had to employ technology to meet its citizen's demands through connection of government organizations and affiliations in the process of offering government services (Sá, Rocha, & Cota, 2015). Further, the services offered by government departments have continuously increased and the need to have these services accessed in a central point instead of widely dispersed organizations has also reached higher level.

Anuar (2015) investigated the impact of electronic procurement technologies usage and procurement practices on procurement performance in an organization. The project paper posited a model of the relationships between e-procurement technology (EPT) usage, procurement practices (PPR), and procurement performance (PP). A survey technique using questionnaires was used. The findings suggested that EPT usage and Procurement Practices positively affects procurement performance in an organization. The findings of this paper primarily pertain to the operational level of the organization. Future research was suggested to isolate the impact of individual EPTs on organization performance. Oyando, Kibet and Musiega (2014) sought to assess the factors that influence the performance of supplies unit with special focus on County Government of Kakamega. The study adopted a descriptive research design since the study intended to gather quantitative and qualitative data that would describe the effects of public procurement regulation on public procurement of devolved county governments in Kenya. The target population was the employees of Kakamega County Government.

RESEARCH METHODOLOGY

This study adopted a correlation research design. Quantitative approach was used. A research design functions as the research blue print for measurement and analysis of data. Kothari (2004) describe a research design as a plan and a structure of investigation conceived to find answers to research questions. According to Mugenda and Mugenda (2013), correlational research design is connected with providing solutions to the problems. The design also allowed the researcher to come up with descriptive statistics that can assist in explaining the relationship that exists among variables. Rowley (2002) indicates that a case study research is good for contemporary events when the relevant behaviour cannot be manipulated.

A population is defined as a complete set of individual cases or objects with some common observable characteristics (Mugenda & Mugenda, 2012). A particular population has some characteristics that differentiate it from other populations. The study focused on Tharaka

Nithi county government. The study targeted the procurement department and communication department and human resources department respectively taking a census as the departments were considered small hence possible to involve all the officers working in the said department.

Data collection instrument is a tool or tools used by a researcher to collect data for a study. This study was expected to collect primary data from the respondents through questionnaires. According to Kothari (2004) questionnaires give a detailed answer to complex problems. Additionally, questionnaires are also a popular method for data collection in deduction because of the relative ease and cost-effectiveness with which they are constructed and administered. Questionnaires give a relatively objective data and therefore, are most effective. The research used closed ended questionnaires to collect data from those concerned

A pilot test enables a researcher to pretest the instrument to be used to collect data prior a data collection exercise. This study subjected the questionnaire to content validity measure, where 12 individuals from County Government of Tharaka Nithi who were not included in the sample size. They were requested to assess the instrument to be used to measure the response of the study from the sample population. They were to alternately determine whether the set objectives represented the concept of the study (Mugenda & Mugenda, 2003).

The data collected was sorted and entered into the statistical packages for social sciences for analysis. Frequencies and percentages were used to analyze demographic data, establish the effect of e-governance on service delivery in the county government. The findings were presented in tables, pie charts and histograms. In order to establish the effect of e-governance on service delivery e, regression analysis was employed. The following regression equation was used: $SD = a + b_1 X_1 + b_2 X_2 + e$ Where SD = Service delivery (Better service delivery); $X_1 = E$ -procurement; $X_2 = E$ -communication $X_3 = e$ - HRM; $X_4 = e$ - health management.

FINDINGS

Respondents' Profile

The study sought to find general information about its sample population, which could help determine their fitness to respond to this study. Further, this data could indicate that the data collected from them can be dependable for analysis and drawing of conclusions.

Table 1: Gender of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	38	54.3	54.3	54.3
	Female	32	45.7	45.7	100.0
	Total	70	100.0	100.0	

From table 1 above, most of the respondents were male who were 38, which was 54.3%. The female respondents were 32, which represented 45.7%. The inclusion of males and females in the study served to create a gender balanced view of the e-governance platforms.

Access to E-governance platform

Table 2: Access to E-governance platform

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Office Computer	30	42.9	42.9	42.9
	Mobile Phone	23	32.9	32.9	75.7
	Home Computer	7	10.0	10.0	85.7
	Tablet	8	11.4	11.4	97.1
	Computer at Cyber Café	2	2.9	2.9	100.0
	Total	70	100.0	100.0	

Table 2 indicates how the respondents accessed the e-governance platform. Most respondents, 42.9% used office computers, which was an indication that the county government has made effort to provide computers to its staff. 32.9% of the respondents used their phones, 11.4% used tablets, 10% used their computers and only 2.9% used cyber café computers.

E-procurement and service delivery

Procurement is a sensitive area of service delivery in county governments. Most persons that do business with the county governments have expressed concerns on delay of procurement services like bidding of tenders and winning fairly as well as getting payments on time.

Table 3: The county offices use the e-procurement system often

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.4	1.4	1.4
	2	4	5.7	5.7	7.1
	3	27	38.6	38.6	45.7
	4	33	47.1	47.1	92.9
	5	5	7.1	7.1	100.0
	Total	70	100.0	100.0	

Table 3 indicates the extent to which the respondents agreed to the statement, The county offices use the e-procurement system often. Majority of the respondents, 47.1% agreed to the

statement, 38.6% were neutral, 7.1% strongly agreed, 5.7% disagreed and 1.4% strongly disagreed.

E-communication and service delivery

The study also looked into the aspect of e-communication strategy as an aspect of e-governance in improving service delivery in the county. The obtained results are indicated in the following tables.

Table 4: Cooperation between departments within the county has be improved due to e-communication

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	11	15.7	15.7	15.7
	3	17	24.3	24.3	40.0
	4	35	50.0	50.0	90.0
	5	7	10.0	10.0	100.0
	Total	70	100.0	100.0	

Table 4 presents the results obtained from the study concerning responses to the statement, Cooperation between departments within the county has be improved due to e-communication. The majority of the respondents, 50% agreed to the statement, these were followed by those that were neutral, 24.3%. 15.7% of the respondents disagreed to the statement and only 10% strongly agreed. There was no respondent that strongly disagreed to the statement.

Table 5: Planning has been made easy and timely due to e-communication

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	6	8.6	8.6	8.6
	3	25	35.7	35.7	44.3
	4	30	42.9	42.9	87.1
	5	9	12.9	12.9	100.0
	Total	70	100.0	100.0	

Table 5 presents the results obtained from the study concerning responses to the statement, Planning has been made easy and timely due to e-communication. The majority of the respondents, 42.9% agreed to the statement, these were followed by those that were neutral,

35.7%. 12.9% of the respondents strongly agreed to the statement and only 8.6% disagreed. There was no respondent strongly disagreeing to the statement.

Table 6: Regression Coefficients

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	2.943	.547		5.377	.000
	E-procurement	.094	.096	-.123	-.972	.335
	E-communication	.025	.094	-.034	-.268	.019

a. Dependent Variable: Service delivery

The established regression equation becomes;

$$Y = 2.943 + 0.094X_1 + 0.082X_2 + 0.206X_3 + 0.025X_4 + \epsilon$$

Where: Y= Service Delivery

X1= E-procurement

X2= E-communication, and

ϵ = Error Term

From the findings of the regression analysis if all factors; E-communication, E-procurement, were held constant, service delivery in Tharaka Nithi County would be at 2.943. An increase in e-procurement strategy would lead to an increase service delivery by 0.094. An increase in e-communication would lead to an increase in service delivery by 0.025.

CONCLUSION

On the effect of e-procurement strategy and service delivery in Tharaka Nithi, the findings from the study indicate that e-procurement in Tharaka Nithi advertises tenders online and allows for companies and people to submit their tender application online and they are able sort the applications and shortlist within a very short time, communicate and find a supplier within a short time. From the means obtained from the responses the responses ranges from, which is an indication that most of the respondents agreed that e-procurement strategy has an impact on service delivery in Tharaka Nithi County.

Concerning the effect of e-communication and service delivery in Tharaka Nithi, the study found out that most respondents agreed that e-communication had a notable and positive impact on service delivery in the county. This impact is attributed to the fact that the County allowed sharing of official communication through e-mails. Further, the county had an online

platform where the stakeholders could engage with the county freely. This allowed for easy operations and efficient service delivery to the public. Further, through the quick communication channels, the county government departments and offices had improved on their coordination, which resulted in better service delivery to the public.

The researcher proposes further studies on related variables among county government like e-health and service delivery, besides the relationship of e human resource management and service delivery among county governments as possible areas of further study.

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