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ORGANIZATIONAL INTERNAL FACTORS, CHANGE MANAGEMENT AND ADOPTION OF E-GOVERNMENT FOR IMPROVED SERVICE DELIVERY IN KAJIADO COUNTY, KENYA

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Abstract

Rapid growth in technology in the last two decades has made governments to start e-government initiatives as a way of ensuring effective and efficient operations. The adoption of e-government necessitates various changes in an organization. Successful adoption of E-government requires planning for both technical and cultural change. Change management strategies can help overcome resistance to change which is brought about by perceived risk and habits. The purpose of this study was to examine the moderating effect of change management on the relationship between organization internal factors and adoption of E-government. The study was based on pragmatic paradigm. Descriptive survey was used in this study. A sample of 335 respondents was drawn from the target population of 2660 employees from the devolved 10 ministries in Kajiado County using Cochran (2007) formulae. Quantitative data was collected through open and crossed-ended questionnaires while qualitative data was collected through an interview guide. Regression models and correlation were used to analyze inferential data and test hypotheses. Qualitative data was analyzed using content analysis. The results revealed that change management moderates the relationship between organizational internal factors and the adoption of e-government in the County Government of Kajiado. The study recommends that the County government of Kajiado should make use of change management practices such as employee involvement in decision making and provision of on-job training. In addition, the County government top management should show support for the use of e-government and show leadership on the same.

Key Words: *Change Management, E-government, Service Delivery, Internal Factors*

Introduction

Over the last decades, dramatic advances in the information and communication technology (ICT) especially the internet and the World Wide Web (WWW) has profoundly changed the perception and way in which information is shared, and services are rendered by both public and private organizations. One important issue on the research studies has been the use of the web by the public sector, in the form of digital government or E-government (Jeyaraj, Rottman & Laicity, 2006). E-government was conceptualized in 1993 in the United States. Since then, many government around the world embarked on projects that introduce E-government initiatives that could enhance government operations; making it more accountable and less corrupt through transparency; as well as providing convenient and cost-effective services. E-government involves the use of information and communication technology and the internet to improve the

delivery of government services to citizens, businesses, and government agencies, 24 hours a day, seven days a week. E-government or digital government is a complex and multidimensional concept. Envisioned for only government websites originally, but through various definitions other technologies have been included to be part of E-government.

Africa continent is said to be lagging behind globally with its E-government Development Index (EGDI) at 0.2882 falling far below the highest European EGDI of 0.7241. This is attributed to the global challenges that face Africa such as food security, climate change and poverty. Many countries in Africa have not realized the benefits of E-government. However, some countries in Africa have been ranked best in adoption of E-government, these includes Mauritius, Tunisia, south Africa, Morocco and Seychelles, rated high due to their commitment in E-government, high level of human capital as well their technological and telecommunication infrastructure.

Successful adoption of E-government requires planning for both technical and cultural change. Change management strategies can help overcome resistance to change which is brought about by perceived risk and habits. This can be attributed by change of government processes and functions that break the silos, bureaucracy and cultures in government organizations. There is a need to look at E-government as a organizational change issue rather than a technological issue as it entails evolution of from office and back office IT infrastructure. There are multiple models of change process: The AKDAR Model published in the year 2006 was identified as a model for change in government, business, and community. The model outlines five steps for change management process namely; Awareness (awareness of the need to change), Knowledge (Knowledge of how to change), Desire (Desire to participate and support the change), Ability (Ability to implement the change on a day-to-day basis) and Reinforcement (Reinforcement the change to keep the change in place). This model works on two dimensional processes: Business and People. These can be achieved through Training, Communication and Creating an Incentives and Rewards Scheme. According to American Management Association (1994), leadership is key to successful change followed closely by corporate values and communication.

Kenya is ranked number 119th globally while position 10th in Africa (United Nations E-government Survey 2016). It's E-government strategy was approved in year 2004 and the National ICT policy in year 2006 under the Ministry of Information and Communications (MoICT). There is a high rate of failure of E-government projects, particularly in developing countries, despite the advantages and benefits that E-government technology provides. A report on E-government implementation projects in developing countries indicated that 35% failed, 50% partly failed, and only 15% were successful (Heeks, 2003). Raguseo & Ferro (2011) noted that public administration is lagging behind the private sector in the usage of ICTs for conducting their back-office activities. Most of them have not fully incorporated ICT in automating their activities. According to Raguseo (2011) operational features, new managerial skills, new abilities of defining adequate policies, new capabilities of planning activities to conduct, new aptitudes to increase the citizens' involvement in public activities as well as the availabilities of new ICTs, combined with the organizational changes and the new competences creation is necessary for public administration to overcome organizational internal barriers in order to realize the value of E-government adoption

Nograšek (2011) noted that although there is awareness that E-government is more than using ICT and putting public services on the web, the impressive growth of E-government exists in the making of information and services available to people. According to Apostolou, et al., (2011), E-government services pose unique challenges to change management because they require the co-evolution of the front office service and related back office IT infrastructure. Kifle and Low

Kim Cheng (2009) analyzed the core factors of leadership in E-government implementation in twelve ministries in Brunei and identified that poor change management strategy is an area that had been overlooked in Brunei E-government. The Government had no strategy on how to handle changes brought by technology, like changes in policy, culture, mindset, organizational structure and process; pen and paper was still treated as the official tool. Therefore, there is a need to address the change of management as a critical factor in adoption of technology.

The study was guided by the following research hypothesis:

H_A1The strength of the relationship between organization internal factors and adoption of E-government is dependent on change management.

Related Work

Adoption of E-government for service delivery

E-government or digital government refers to the use of ICT, IT and other web-based technologies to improve efficiency and effectiveness of service delivery in the public sector. It's the use of internet and other technological devices by governments to deliver services to the public (Young-Jin and SeangTae, 2007, Bhatnagar, 2004). Digital government or E-government entails computerizing the back and front office using ICT tools as well as modifying organization internal operation processes of the public sector (Liikanen, 2003). It also involves office automation through online services and transactions to improve government services (Huang, 2010). The government is able to become more responsive, transparent and accountable to the public through open government data initiatives as well as reduce bureaucracy. Government is able to increase its efficiency and offer better quality services. Successful implementation and adoption of E-government benefits all stakeholders such as employees, citizens, NGO, communities as well as businesses.

Adoption of technology has two aspects, adoption at organization level and adoption at individual level (Fichman, 1992). Organization adoption deals with analyzing adoption decisions by large aggregates such as companies, business units, agencies or departments, whereas individual adoption deals with an individual behavioral intention to adopt an innovation or actual adoption behavior (Fichman ,1992). According to Hall and Khan (2003), contributions of new technology innovations in organizational performance can be realized if and when the new technology is widely accepted and adopted. The understanding of organization and individual decisions to adopt technology is essential for technological change management. To successfully implement and adopt E-government for service delivery, the government must have a vision and the system must be accepted and adopted by the intended users (Graafland-Essers & Ettedgui, 2003). Kyobe (2011) found that capacity to "adopt and use ICT" and "exposure" is remarkable determinants of adoption of ICT in South Africa. ICT adoption in the developing nations is influenced by income, availability of computer and internet skills. E-government adoption brings fundamental change in the public-sector structure, its culture and values and ways of conduction business. The radical change is surrounded by human, cultural, organizational, political and technological issues that must be dealt with for successful adoption. It brings about transformation changes to process, structure, culture and individual behavior in the public sector (Abdullah, Rogerson, Fairweather, & Prior, 2006)

E-government adoption has no universal model applicable to all countries and regions. According to Moon (2002) and Layne and Lee (2001) many government around the world adopted E-government solutions ranging from simple website, one-way communication, two-way communication and integrated websites with online transactions. Many scholars such as Lyne and Lee (2001) and Moon (2002) came up with stages of E-government development

stages, with a general agreement on essential stages such as publishing, transactional and integration, however the approaches in terms of technological and organizational perspectives seems to differ in the E-government life cycle.

Change management and Adoption of E-government

Change management is defined as the acquirement of new skills, using new tools and applying new principles in managing people which is the human element of any organization in order to achieve the desired outcome/change, as success is dependent on the employees' behavior. (Department of Administrative Reforms & Public Grievances Ministry of Personnel, Public Grievances and Pensions Government of India, 2010). According to Sacheva (2009), Change management is a structured approach to transitioning individuals, teams, and organizations from the current state to the desired future state with the aim of empowering employees to accept and embrace changes in their current business environment. With rapidly changing technology, digital transformation and great improvement in the world of information and communication technologies, the way business operates have totally changed. The government have realized the importance and the value of changing from traditional government to into electronic government. Change management have become a critical factor for implementation and adoption of E-government. Change management has been liked to organizational success as organization adapts to changing business requirement in a competitive market place. Competition being the main driver for change to achieve a competitive edge. According to Conklin (2007, January), some organization embrace change to become competitive leaders while others resist, only to endure it when it's very necessary. Changes comes with the level of commitment. Senior leaders with forward looking vision and adaptability are able to drive change in an organization. Change management is not easy as it consumes time and energy, though valuable to the organization in this competitive world and imbalance occurs that lead to discontinuity in performance but eventually through unforeseen and unplanned event, the environment is able to force change.

According to Dwivedi and Lal (2007), transformation in the public sector from the bureaucratic to E-government includes shifting the processes; the orientation of the government should be changed from being cost-efficient to be more user friendly and flexible, the hierarchy and the organizational chart has to change from being a vertical, functional and departmentalized one into a horizontal one with information shared, teams and networking across the different departments and sectors, the leadership style has to be democratic with more facilitation, coordination with innovative skills rather than a high command and control from managers in higher positions over their subordinates, the internal communication between the employees has to be a multidirectional one and direct with central coordination not a top down and hierarchical communication, in order to increase efficiency and reduce time. This call for the traditional bureaucratic, hierarchical model to be replaced by a more competitive, knowledge-based economy with more flexibility and a customer-(citizen) oriented strategy with a focus on teamwork and participation beside empowering rather than serving (Kaufman, 1977; Ho, 2002).

In 2006, Prosci developed a five-step AKDAR Model that constitutes the following: awareness of the need to change, desire to participate and support to change, knowledge of how to change, ability to implement the change on a day-to-day basis, and reinforcement to keep change in place. While many models exist, this study will adopt AKDAR which has been noted as a practical answer to effective change management for individuals and organizations. Understanding why change is necessary is the first step of successful stage, planned communication is essential in the awareness stage. Full awareness can cause a desire to support and be part of the change. The third stage can be achieved through training by transferring

knowledge through coaching, forums and mentoring. These addresses two types of knowledge; knowledge on how to change and knowledge on how to perform once the change is implemented. The ability is the difference between theory and practice, therefore its essential to support individual actual performance after the theory. To sustain change, the models calls for reinforcement, to ensure change is sustained and individuals do not revert to old ways. This can be dome through feedback, rewards, recognition, measuring performance and taking corrective actions. According to Dwivedi and Lal (2007), resistance to change is a barrier to successful change, employees fear moving from known to unknown. To overcome this challenge, the government should consider providing incentives and many benefits to employees as well as establishing well-structured plans. This can encourage employees to take part in the change.

Conceptual framework

The aim of this study is to investigate the influence of organizational internal factors and moderating influence of change management in the adoption of E-government in county government. The variables in the study were was organizational internal factors, change management and adoption of e-government for service delivery. The relationship between the study variables is shown in Figure 2.

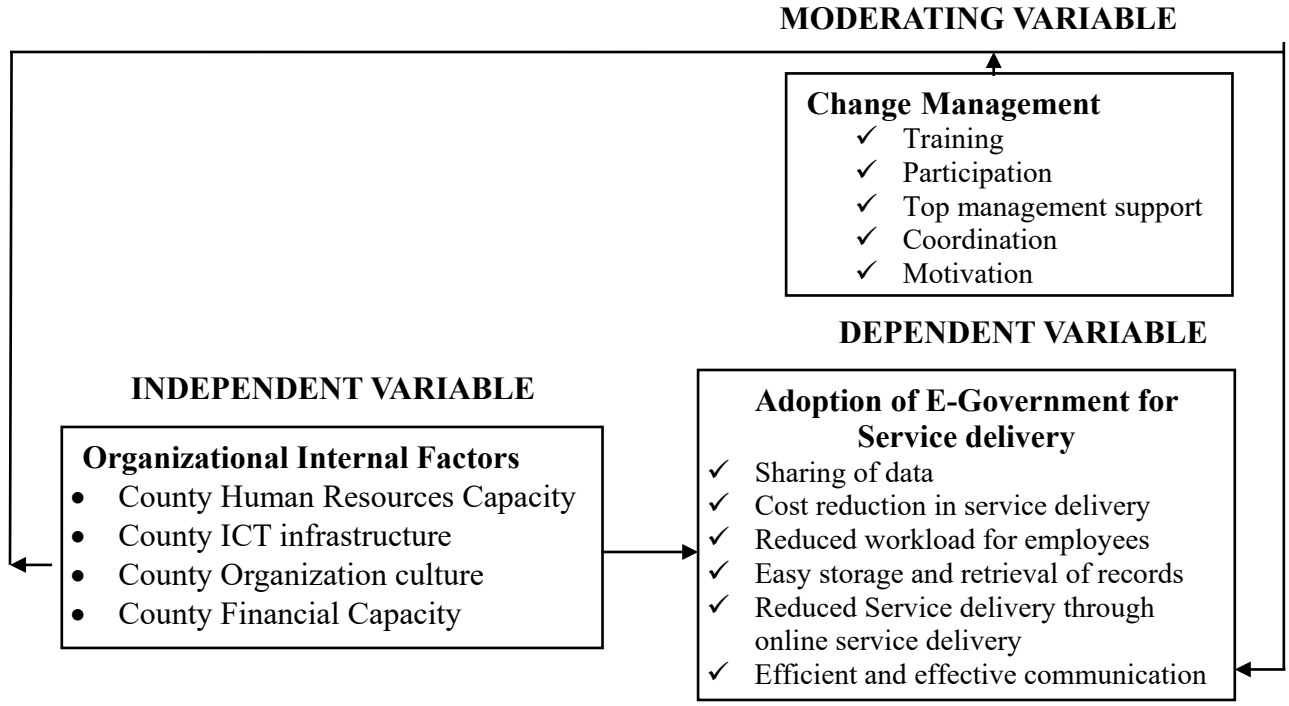

Figure 1: Conceptual Framework

Research Methodology

The study adopted mixed method approach which used pragmatic system of philosophy. According to Johnson & Onwuegbuzie (2004), in a single study the researcher can combine quantitative and qualitative methods, approaches and techniques to make logic inquiry of induction, deduction and abduction. The study also combined a correlational and cross-sectional descriptive survey research design. This enabled the study to use inferential and descriptive analysis of data for better results. The Target population for this study was employees of Kajiado County government. The total population for this study was in forty-three departments and 2660 employees working in said departments within the devolved ministries.

The sample size for the employees working under the county government of Kajiado in various department under the ten ministries was based on Cochran (2007) formulae. The same is verified in the formula below:

$$n = \frac{Z^2 * p * q}{e^2}$$

Where; n =refer to the desired sample size when the entire survey population is greater than 10,000; Z =the standard normal deviate usually set at 1.96 which corresponds to the 95% confidence level; p=Target population estimated to have a particular characteristic, 50% is normally used because it is the recommended measure if there is lack of reasonable estimate; q =1.0 – p; e =degree of accuracy desired in this context set at 0.05.

The sample size of 335 employees was obtained by substituting in the formula above as indicated below:

$n=\frac{(1.96)^2(0.5)(0.5)}{(0.05)^2}$= 384

Where the above sample size was be adjusted using equation 2:

$nf= \frac{n}{1+\frac{(n-1)}{N}}$

Where: nf= the sample size; n= the sample size in equation 1; and N= is the population size

Given that the population of interest is 2660 (population size N=2660), the corrected sample size was obtained as illustrated mathematically using Krejcie and Morgan model as:

$nf = \frac{n}{1+\frac{(n-1)}{N}}$

n= 384/ [1+ (384/2660)]

n= 335

This study adopted mixed method of sampling, that is, proportional sampling technique, simple random sampling technique, and purposive sampling technique. For this study, a proportional sampling was used to sample of the respondents in each department. From a sample of 335 respondents, one (1) respondent was purposively selected in each department who particularly deals with ICT to provide unique information on how E-government services are carried out in their department. This contributed to 43 respondents who provided information through responding to questions designed in the interview guide. On the other hand, random sampling technique was used to select 292 respondents from the departments; these respondents formed the part of respondent that answered the questions captured through the questionnaire concerning how E-government services are handled.

Table 1: Selected Samples

Ministry of Government	No. of Department	No. of employees per department	Samples
Ministry of Agriculture, Livestock, Fisheries and Cooperative	4	273	34
Ministry of Health services, Medical Services and Public Health	2	1045	132
Ministry ICT Gender and Social Services	5	20	3
Ministry of Education, Youths, Sports and Social Services	4	733	93
Ministry of Public Works, Roads and Transport, Housing and Energy	5	76	9
Ministry of Environment, Water and Irrigation	2	77	10

Ministry of Trade, Tourism, Culture & Wildlife	4	48	6
Ministry of Public Services Administration and Citizen Participation and E-government .	3	162	20
Ministry of County Treasury	5	196	24
Ministry of Land, Physical Planning and Natural Resources	7	30	4
Total	**43**	**2660**	**335**

This study used primary data, where data was collected using a structured questionnaire and an interview guide. A pilot testing was conducted using the questionnaire to 35 employees of various departments in a nearby County-Kiambu to test the reliability and validity of the questionnaire. The pilot study was conducted through random sampling. According to Creswell (2013), the pilot test should constitute 10% of the sample, therefore, the pilot test is within the recommendation. The study used both content and constructs validity to ascertain the validity of the instrument. To ensure content validity, the questionnaire was be given to experts in the area of project planning and management to give their views and suggestions for improvement of the questionnaire. Construct validity was ensured by reviewing empirical and theoretical literature in order to understand the relevant concept by constructing instruments items based on previous studies. The research instruments in this study were examined by the supervisors and other experts in research methodology. Reliability analysis was also carried out using the Alpha coefficient (Cronbach's alpha, 2007). Higher scores generate more reliable scale. According to Nunnaly (1978), a score of 0.7 is an acceptable reliability coefficient.

Qualitative data was analyzed based on the content matter of the responses. Responses with common themes or patterns were grouped together into coherent categories. Quantitative data was presented in tables and explanation in prose. Data collected was coded and entered into Statistical Packages for Social Scientists (SPSS Version 17.0) and analyzed using descriptive and inferential statistics. Descriptive statistics involved use of absolute and relative (percentages) frequencies, measures of central tendency and dispersion (mean and standard deviation respectively). Inferential statistics such as correlation and regression analysis were used to establish the nature and magnitude of the relationships between the variables and to test the hypothesized relationships. The research hypotheses were tested at 95% level of confidence. Pearson's product moment correlation (r) was derived to show the nature and strength of the relationship. Coefficient of determination (R2) was used to measure the amount of variation in the dependent variable explained by the independent variable.

To test the moderating effect of change management on the relationship between human resource capacity, ICT infrastructure, organizational culture, financial capacity and adoption of E-government in county government multiple regressions analysis will be conducted as put forward by Baron and Kenny. The first regression model (model 3.6) introduces change management as an explanatory variable. The model will be specified as follows:

$E\text{-gov}= \beta_{13+}\beta_{14}E\text{-gov}+\beta_{15}CM+\mu$

Where,

E-gov=E-government adoption

CM= composite score of Change Management

β_{13} =Constant

β_{14}-β_{15} = Beta Coefficients (slope)

The second regression model introduced change management as a moderator. The model will be specified as follows:

$E\text{-gov}= \beta_{6+} [\beta_{17}HRC+\beta_{10}ICTi+ \beta_{11}OC+ \beta_{12}FC]\beta_{13}CM+\mu$

Where;

The variables remain as defined and **[**β_{17}HRC+β_{10}ICTi+ β_{11}OC+ β_{12} FC**]***CM

β_{16} = Constant

β_{17}-β_{19} = Beta Coefficients (slope)

Research Findings and Discussions

The study sample size was 335 employees working in various departments in the County Government Kajiado. Out of 335 questionnaires which were distributed, 282 were duly filled and returned. Therefore, the response rate was 83.92%. According to Nulty (2011), a response rate of 75 per cent is adequate for analysis, for making conclusions and making inferences about a population. In addition, Fincham (2010) indicates that a response rate of 60% and above is acceptable for analysis. This implies that the response rate (83.92%) was adequate for analysis, drawing conclusions and reporting.

Demographic Information

The background information consisted of the respondents' age, gender, highest level of education, their level of ICT training and duration in the organization.

Distribution of Respondents' Age and Gender

The study sought to understand the background information of the respondents based on their age and gender. As a result, the respondents we asked to indicate their age as per the given age brackets and also were required to indicate their gender. Data derived was presented in Table 2.

Table 2: Distribution of Respondents by Age and Gender

Category	Frequency	Percent
Age		
18 - 24	18	6.4
25 - 34	126	44.7
35 - 44	84	29.8
45 - 55	42	14.9
55+	12	4.3
Total	**282**	**100.0**
Gender		
Male	174	61.7
Female	108	38.3
Total	**282**	**100.0**

Table 2 shows that a good number 126 (44.7%) of respondents were between 25 and 34 years of age, followed by 84 (29.8%) who were between ages 35 and 44. Ages between 18 to 24 and above 55 years recorded very few respondents of 18 (6.4%) and 12 (4.3%) respectively. The findings indicate that majority of the respondents were between ages 25 and 55 years with the youth aged below 34 years forming majority. According to Venkatesh, et al. (2003) in the UTAUT theory, age of individuals moderates technology adoption, where the young individuals tend to adopt technology more and better than the older people. Most of the staff in the County government of Kajiado were youth (below 34 years), which implies that most of the staff in Kajiado County were adopters of technology. This is contrary to Njoroge, Nyonje and Gakuu (2015) findings that technology was more acceptable among the older people as compared to the younger generations.

Table 2 also shows that 174 (61.7%) of the respondents were male while 108 (38.3%) were female. The findings indicate that majority of the respondents (employees working in Kajiado County government) were male. This showed that there was a relatively skewed distribution in

favor of men while the female formed the minority. According to UTAUT theory, gender moderates the adoption of technology. While performance expectancy influences behavioral intention to adopt a technology among men, effort expectancy influences behavioral intention to adoption a technoliogy among women. Nonetheless, men are considered in the UTAUT theory as better and easier adopters of technology that women. This is in agreement with Njoroge, Nyonje and Gakuu (2015) findings that men were better adopters of biogas technology than women.

Respondents' Highest Level of Education and ICT Training

The study sought to determine the level of education and ICT training of the respondents. As such the respondents were requested to indicate their highest level of education and ICT training based on the stated categories in each case. The data driven was as presented in Table 3.

Table 3: Respondents' Highest Level of Education and ICT Training

Category	Frequency	Percent
Highest level of education		
Post University	42	14.9
University	135	47.9
Higher National Diploma	27	9.6
Diploma	57	20.2
Certificate	21	7.4
Total	**282**	**100.0**
level of ICT training		
Degree	33	11.7
Diploma in ICT	60	21.3
Certificate Proficiency packages	168	59.6
Others (specify)	21	7.4
Total	**282**	**100.0**

Table 3 shows that a good number of the respondents 135 (47.9%) had undergraduate degrees, followed by 57 (20.2%) with diploma certificates, and 42 (14.9%) with post graduate degrees. In addition, 27 (9.6%) had higher National diploma certificates and 21 (7.4%) had other academic certificates. The findings indicate that majority of the employees had undergraduate and post graduate degrees. More educated individuals are considered to be better adopters of technology as compared to the less educated. Differences in personality traits including level of education determine the way individuals behave, think and make decisions regarding adoption of technology. These findings agree with Njoroge, Nyonje and Gakuu (2015) findings that the more educated people are the better they adopt technology. This implies that the staff in the County government of Kajiado were easier adopters of technology as most of them had at least an undergraduate degree.

Table 3 shows that majority of the respondents, 168 (59.6%), had proficiency package certificates, followed by 60 (21.3%) with diploma certificates in ICT and 33 (11.7%) with ICT degrees. In addition, 21 (7.4%) of the respondents had other forms of training on Information and Communication Technology. The findings indicate that majority of the respondents in this study had proficiency package certificates in ICT. As indicated by Davis (1989) in the Technology Acceptance Model, skills and knowledge on perceived usefulness and perceived ease of use, which is influenced by Level of ICT training, influence behavioral intention to adopt or not to adopt technology. This implies that most of the staff working in the County government of Kajiado were adopters of technology.

Respondents' Department of Work and Duration

The study sought to establish the departments in which the respondents were working as well as the duration of time they had been working in their organization's departments. Therefore, the respondents were requested to indicate their departments as well as the duration of time they had working in their organization as per the categories presented. The data driven was as presented in Table 4.

Table 4: Respondents Department or Work and Duration

Category	Frequency	Per cent
Department of work		
Administration	84	29.8
Procurement	15	5.3
ICT	6	2.1
Finance	45	16.0
HR	3	1.1
Others (Specify)	129	45.7
Total	**282**	**100.0**
Duration in the organization		
Less than 1 year	12	4.3
I year	12	4.3
2 years	63	22.3
3 years	42	14.9
more than 4 years	153	54.3
Total	**282**	**100.0**

Table 4 shows that a good number of the respondents 129 (45.7%) were working in other departments other than the ones indicated in the study, followed by 84 (29.8%) working in administration department, 45 (16.0%) working in the department of finance, 15 (5.3%) working in the procurement department. ICT department recorded very few respondents of 6 (2.1%) and human resource department recorded 3 (1.1%). The findings indicated that less than half of the respondents were working in administration, procurement, information and communication technology, finance and human resource.

Table 4 shows that majority of the respondents 153(54.3%) had worked in their departments for more than 4 years, followed by 63 (22.3%) who had worked for 2 years, 42 (14.9%) who had worked for 3 years, 12 (4.3%) indicated for one year and the same percent indicated for a period less than one year. The findings show that majority of the respondents in this study had been working in the County Government of Kajiado for a period of four years.

Adoption of E-government for Service Delivery

The study sought to obtain the extent of implementation of E-government in the provision of services in various ministries. As such, the respondents were requested to indicate the extent to which the implementation of E-government affected provision of services in their respective ministries. The data driven was as presented in Table 5.

Table 5: Adoption of E-government for Service Delivery

	Frequency	Percent
Very little extent	57	20.2
little extent	18	6.4
Moderate	63	22.3
Great extent	96	34.0

Very great extent	48	17.0
Total	**282**	**100.0**

Table 5 shows that a good number of the respondents 96 (34%) indicated that implementation of E-government affected provision of services in their ministries to great extent, followed 57 (20.2%) with very little extent, 48 (17%) with very great extent and 18 (6.4%) with little extent. The findings show that the implementation of E-government affected provision of services in various ministries to great extent and very great extent.

Influence of Adoption of E-government for Service Delivery

The study sought to determine influence of Adoption of E-government on Service Delivery in the County government of Kajiado. As such, the respondents were requested to indicate the influence of E-government adoption on service delivery in the County. Table 6 presents the results.

Table 6: Influence of Adoption of E-government for Service Delivery

	Mean	**Std. Deviation**
E-government has reduced cost of delivering services	3.776	1.104
Major function we do in our ministry are done electronically	3.712	1.079
This ministry I work in has an electronic payroll system that's pays salaries and keeps records for tax information	4.074	1.134
The county government has established an e-learning platform that enable staff access information in regards to training and learning opportunities	2.914	1.262
Management of records and sharing of information has improved immensely since implementation of E-government systems	3.648	1.100
Time taken to process any transaction has been reduced as the government has implemented E-government in service delivery	3.585	1.116
Am able to store and retrieve records when delivering services	3.819	1.011
Through E-government suppliers can bid for various government tenders electronically	3.744	1.140
There is a website developed that publishes information and gives the public access to different services	3.329	1.334
Since introduction of E-government , the nature of my work has gradually moved from handling a lot of paper to being paperless	3.606	1.152
Electronic communication has improved service delivery	3.946	0.951
Composite	**3.650**	**1.125**

Table 7 shows that the staffs agreed with a mean of 4.074 and a standard deviation of 1.134 that their ministries have electronic payroll system that pays salaries and keeps records for tax information. This implies that the County government of Kajiado had adopted electronic payroll system in payment of salaries and record keeping. They also agreed with a mean of 3.946 and a standard deviation of 0.951 that electronic communication has improved service delivery. This implies that the County government of Kajiado had adopted electronic communication, which is an important component of e-government. These findings agree with Liikanen (2003) argument that E-government entails computerizing the back and front office using ICT tools as well as modifying organization internal operation processes of the public sector. Moreover, the respondents that they were able to store and retrieve records when delivering services as shown by a mean of 3.819 and a standard deviation of 1.011. The adoption of electronic record keeping

enabled easier storage and retrieval of records thus improving service delivery in the County government of Kajiado.

With a mean of 3.776 and a standard deviation of 1.104 the respondents agreed that E-government has reduced cost of delivering services. The respondents further agreed with a mean of 3.744 and a standard deviation of 1.140 that through E-government suppliers can bid for various government tenders electronically. This implies that the adoption of e-government had led to an improvement in the tendering process and in the reduction of cost in service delivery. Further, the respondents agreed that major function in their ministries were done electronically as shown by a mean of 3.712 and a standard deviation of 1.079. With a mean of 3.648 and a standard deviation of 1.100 the respondents agreed that management of records and sharing of information has improved immensely since implementation of E-government systems. Besides enabling easier storage and retrieval of information, electronic record keeping enabled easier sharing of information in the County government of Kajiado. They also agreed that since the introduction of E-government, the nature of their work has gradually moved from handling a lot of paper to being paperless as shown by a mean of 3.606 and a standard deviation of 1.152. This implies that the adoption of egovernment led to a reduction in the utilization of paper. These findings are in line with Huang (2010) argument that E-government involves office automation through online services and transactions to improve government services.

Further, they agreed that time taken to process any transaction has been reduced as the government has implemented E-government in service delivery as shown by a mean of 3.585 and a standard deviation of 1.116. This implies that the adoption of e-government in the County government of Kajiado led to timely delivery of services. These findings concur with Huang (2010) argument that by use of E-government, the government is able to increase its efficiency and offer better quality services. However, they moderately agreed that there was a website developed that published information and gave the public access to different services as shown by a mean of 3.329 and a standard deviation of 1.334. These findings agree with Layne and Lee (2001) argument that many governments around the world adopted E-government solutions ranging from simple website, one-way communication, two-way communication and integrated websites with online transactions. Finally, the moderately agreed that the County government has established an e-learning platform that enable staff access information with regards to training and learning opportunities as shown by a mean of 2.914 and a standard deviation of 1.262. This implies that the establishment of e-learning platform that enable staff access information with regards to training and learning opportunities was not as effective as it should be.

Organizational Change Management

The objective of this study was to determine the moderating influence of Change management on the relationship between organizational internal factors and the adoption of E-government in the County Government of Kajiado.

Extent of Change Management Influence on Adoption of E-Government

The respondents were asked to indicate the extent in which change management influenced adoption of e-government in the County. According to the results as shown in Table 7, 56.4% of the respondents indicated that change management influenced adoption of E-government in the County to a great extent, 29.8% indicated to very great extent, 11.7% indicated to a moderate extent while 2.1% of the staffs indicated to very low extent. This implies that change management influences the adoption of e-government in the County Government of Kajiado to a great extent.

Table 7: Organization Change Management and Adoption of E-Government

	Frequency	Percent
Very low	6	2.1
Low	33	11.7
Great	159	56.4
Very Great	84	29.8
Total	**282**	**100.0**

Influence of Change Management on Adoption of E-government

The employees were further requested to indicate their level of agreement on various statements on the influence of change management aspects on the adoption of E-government. The results as shown in Table 8, show that the respondents agreed with a mean of 4.244 and a standard deviation of 0.885 the employees agreed that lack of clarity of a vision, inadequate support of the top management, the process change, official secrets, un-measurable benefits, disjointed systems and departments, fear of job loss, fears of loss power, changes in job profile, cultural gap, comfort influenced the adoption of e-government. They also agreed that e-government adoption require organizational leaders' commitment and willingness to change entrenched public structures and transaction processes as shown by a mean of 4.244 and a standard deviation of 0.943. In addition, with a mean of 4.223 and a standard deviation of 0.878, they agreed that changes brought by new technologies and their potentials into e-government processes have to be into the core of change management strategy.

In addition, they agreed that e-government adoption calls for strong leadership at different levels to provide a strategic mission, vision and goals for operational implementation of innovation and change management in public administration as shown by a mean of 4.127 and a standard deviation of 0.926. With a mean of 4.074 and a standard deviation of 0.926 the staffs indicated that poor change management strategy was one of the causes why success rate of e-government projects was dismal. They further agreed that there was a strong need to adequately address the change of management issues when managing adoption of e-government as shown by a mean of 4.031 and a standard deviation of 0.906.

Moreover, with a mean of 3.925 and a standard deviation of 0.982 the respondents agreed that change management was a critical factor for implementation and adoption of e-government in the County government. They further agreed that the role of leadership in e-government was critical success factor of change management in E-government implementation as shown by a mean of 3.893 and a standard deviation of 1.048.

Further, with a mean of 3.851 and a standard deviation of 0.968 they agreed that change management has led to digital transformation and great improvement in the world of information and communication technologies such as adoption of e-government in the County government. They indicated that change management was a missing aspect in e-government implementation and adoption as shown by a mean of 3.702 and a standard deviation of 1.120. However, they moderately agreed that employees were involved in decision making, and there was a clearly defined reward system for innovations in support of e-government as shown by a mean of 3.425 and a standard deviation of 1.310.

Table 8: Change Management Aspects and Adoption of e-government

	Mean	Std. Deviation
Change management is a critical factor for implementation and adoption of e-government in the county government	3.925	.982
Change management has led to digital transformation and great improvement in the world of information and communication technologies such as adoption of e-government in the county government	3.851	.968
Role of leadership in e-government is critical success factor of change management in e-government implementation	3.893	1.048
Poor change management strategy is one of the causes why success rate of e-government projects is dismal	4.074	.926
There is a strong need to adequately address the change of management issues when managing adoption of e-government	4.031	.906
Changes brought by new technologies and their potentials into e-government processes have to be into the core of change management strategy	4.223	.878
E-government adoption calls for strong leadership at different levels to provide a strategic mission, vision and goals for operational implementation of innovation and change management in public administration	4.127	.926
lack of clarity of a vision, inadequately support of the top management, the process change, official secrets, un-measurable benefits, disjointed systems and departments, fear of job loss, fears of loss power, changes in job profile, cultural gap, comfort	4.244	.885
E-government adoption requires organizational leaders' commitment and willingness to change entrenched public structures and transaction processes	4.244	.943
Change managements is a missing aspect in e-government implementation and adoption	3.702	1.120
Employees are involved in decision making, and there's a clearly defined reward system for innovations in support of e-government	3.425	1.310

Correlation Analysis for Change Management and Adoption of E-Government

Correlation analysis was used to examine the existence of an association between organizational change management and adoption of e-government in the County government of Kajiado. A shown in Table 9 the results show that there is an association between organizational change management and adoption of e-government in the County government of Kajiado (r=0.344, p-value=0.000).

Table 9: Correlation Coefficients for Change Management and Adoption of E-Government

		Adoption of e-government for service delivery	County Organizational change management
Adoption of e-government for service delivery	Pearson Correlation	1	.344**
	Sig. (2-tailed)		.000
	N	282	282
County Organizational change	Pearson Correlation	.344**	1

management	Sig. (2-tailed)	.000	
	N	282	282

**. Correlation is significant at the 0.01 level (2-tailed).

Moderating Effect Regression Analysis

The first model included: human resource, County ICT Infrastructure, County Organizational culture, County financial capacity and County Organizational change management. Their R squares was 0.783, which this implied that 78.3% of the adoption of e-government in service delivery could be explained by human resource, ICT infrastructure, organizational culture, financial capacity and organizational change management. However, in the second model which constituted of human resource, ICT infrastructure, organizational culture, financial capacity, organizational change management, human resource capacity * organizational change management, ICT infrastructures * organizational change management, organizational culture * organizational change management and financial capacity * organizational change management, the r-squared was 0.813. This implies that the introduction of organizational change management in the second model led to an increase in r-squared, showing that organizational change management moderates the relationship between organizational factors and the adoption of e-government in the county government of Kajiado.

Table 10: Model Summary for Moderating Effect of Organizational Change Management

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.885[a]	.783	.779	.33187
2	.901[b]	.813	.806	.31094

From the findings, the F-calculated for the first model was 199.648 and for the second model was. 131.063. Since the F-calculated for the two models was less than the F-critical (2.36), we can conclude that the two models were good fit for the data and hence they could be used in predicting the moderating effect of change management on the combined influence of human resource, County ICT Infrastructure, County organizational culture and, County financial capacity on the adoption of e-government.

Table 11: ANOVA for Moderating Effect of Organizational Change Management

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	109.944	5	21.989	199.648	.000[b]
	Residual	30.398	276	.110		
	Total	140.341	281			
2	Regression	114.044	9	12.672	131.063	.000[c]
	Residual	26.298	272	.097		
	Total	140.341	281			

In the first model, by substituting the beta values as well as the constant term, model 1 emanating from the first step in regression modeling would be as follows:

$Y= -0.570+0.176X_1+0.\ 564X_2+0.147X_3+0.334X_4-0.075X_5$

The findings show that human resource has a significant influence adoption of e-government as shown by a regression coefficient of 0.176 (p-value=0.000). In addition, County ICT Infrastructure has a significance influence on adoption of e-government as shown by a regression confident of 0.564 (p-value=0.000), Moreover, County organizational culture has a significance influence on adoption of e-government as shown by a regression coefficient of 0.147 (p-value=0.000). Further, the result indicated that County financial capacity has a positive and significance influence on the adoption of e-government as shown by a regression coefficient of 0.334 (p-value=0.000). Finally, the results indicated that County organizational change

management has a positive and significance influence on the adoption of e-government as shown by a regression coefficient of -0.075 (p-value=0.000).

In the second regression model, by substituting the beta values as well as the constant term, model 2 emanating from the second step in regression modeling was as follows:

$Y=-2.557+0.758X_1-0.589X_2-0.748X_3+0.673X_4-0.821Z-0.141X_1*Z+0.291X_2*Z+0.226X_3*Z-0.107X_4*Z$

The model indicated that human resource has an inverse influence on the adoption of e-government as shown by a regression coefficient of this -0.758. Moreover, the results also indicated that County ICT infrastructure has an inverse influence on the adoption of e-government as shown by a regression coefficient of -0.589. In addition, County organizational culture has an inverse influence of the adoption of e- government as shown by a regression coefficient of -0.748.

Further, the findings indicated that County financial capacity has a positive and significance influence as shown by a regression coefficient of 0.673. Finally, the results also indicated that County Organizational change management has an inverse influence of the adoption of e-government as shown by a regression coefficient of -0.821. The interaction between human resource capacity and organizational change management has an inverse influence on the adoption of e-government as shown by a regression coefficient of -0.141. The interaction between ICT Infrastructures and organizational change management has a positive influence on the adoption of e-government as shown by a regression coefficient of 0.291. The interaction between organizational culture and organizational change management has a positive influence on the adoption of e-government as shown by a regression coefficient of 0.226. The interaction between financial capacity and organizational change management has an inverse influence on the adoption of e-government as shown by a regression coefficient of -0.107.

Table 12: Coefficients for Moderating Effect of Organizational Change Management

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.570	.170		-3.356	.001
	Human Resource	.176	.040	.155	4.367	.000
	County ICT Infrastructure	.564	.051	.469	11.029	.000
	County Organizational culture	.147	.047	.145	3.101	.002
	County Financial Capacity	.334	.042	.328	7.888	.000
	County Organizational change management	-.075	.049	-.064	-1.547	.123
2	(Constant)	2.557	.697		3.668	.000
	Human Resource	.758	.240	.666	3.154	.002
	County ICT Infrastructure	-.589	.345	-.490	-1.705	.089
	County Organizational culture	-.748	.170	-.740	-4.411	.000
	County Financial Capacity	.673	.236	.661	2.853	.005
	County Organizational change management	-.821	.182	-.692	-4.504	.000
	Human resource capacity * Organizational change management	-.141	.059	-.723	-2.367	.019

ICT Infrastructures * Organizational change management	.291	.085	1.442	3.405	.001
Organizational culture * Organizational change management	.226	.043	1.362	5.281	.000
Financial capacity * Organizational change management	-.107	.062	-.617	-1.729	.085

a. Dependent Variable: Adoption of e-government for service delivery

Qualitative Analysis on Change Management

The key informants were requested to indicate how change management influences the adoption of e-Government in the county government. From the findings, they indicated that the culture is conducive to support the ICT operations. As part of addressing the challenge of illiteracy in the county government, people are trained on how to use the system. However, some key informants indicated that there were no on job trainings, just orientation when a system comes. In addition, the key informants indicated that there was lack of motivation in the organization.

The respondents recommended the involvement of all stakeholders in decision making. They also recommended proper training of end users- it should not be like all the top management making all the decision. Since there was poor communication (top-down approach), there should be room for bottom-up communication. The key informants also recommended preventive maintenance like ICT support and backups. They also recommended more research on the e-extension or how the systems break-down after a lot of funds are invested.

Discussions on Moderating Effect of Change Management

The study found that the strength of the relationship between organization internal factors and adoption of E-government is dependent on change management. Moreover, the study found that change management was a critical factor for implementation and adoption of e-government in the County government. According to Sacheva (2009), Change management is a structured approach to transitioning individuals, teams, and organizations from the current state to the desired future state with the aim of empowering employees to accept and embrace changes in their current business environment.

The study also found that the employees agreed that lack of clarity of a vision, inadequate support of the top management, the process change, official secrets, un-measurable benefits, disjointed systems and departments, fear of job loss, fears of loss power, changes in job profile, cultural gap, comfort influenced the adoption of e-government. In addition, e-government adoption requires organizational leaders' commitment and willingness to change entrenched public structures and transaction processes. Further, changes brought by new technologies and their potentials into e-government processes have to be into the core of change management strategy.

The study also found that the role of leadership in e-government was critical success factor of change management in E-government implementation. In addition, the study found that e-government adoption calls for strong leadership at different levels to provide a strategic mission, vision and goals for operational implementation of innovation and change management in public administration. These findings agree with Nograšek (2011) argument that the transformation to E-government requires organizational leaders' commitment and willingness to change entrenched public structures and transaction processes

The study found that poor change management strategy was one of the causes why success rate of e-government projects was dismal. In addition, the study established that there was a strong need to adequately address the change of management issues when managing adoption of e-

government. These findings concur with Conklin (2007) findings that change management have become a critical factor for implementation and adoption of E-government

Further, the study revealed that change management has led to digital transformation and great improvement in the world of information and communication technologies such as adoption of e-government in the County government. The study established that change management was a missing aspect in e-government implementation and adoption. However, employees were moderately involved in decision making, and there was no clearly defined reward system for innovations in support of e-government.

Conclusions and Recommendations

The objective of the study was to determine the moderating influence of change management on the relationship between organizational internal factors and the adoption of e-government in the County Government of Kajiado. The inferential statistics revealed that change management moderates the relationship between organizational internal factors and the adoption of e-government in the County Government of Kajiado.

The study found that information technology standards were crucial for e-government adoption. The study recommends that the government of Kenya should develop ICT policy specifically for County governments so as to ensure that challenges such as slow network, lack of infrastructure and power interruptions are addressed. This will help in ensuring that there is efficiency and effectiveness in service delivery in various ministries in the County government. The study found that there was resistance to change in the adoption of e-government. Therefore, the study recommends that the County government of Kajiado should make use of change management practices such as employee involvement in decision making and provision of on-job training. In addition, the County government top management should show support for the use of e-government and show leadership on the same.

Suggestions for Further Research

The study was delimited to Kajiado County, which is one of the counties in Kenya. All county governments in Kenya are expected to use e-government. Different counties in Kenya have different experiences in the adoption of e-government due to differences in resources, community cultures, and literacy levels among other factors. Therefore, similar studies should be conducted in other country governments of Kenya on the influence of organizational internal factors on the adoption of e-government and how change management moderates the relationship between organizational internal factors and adoption of E-government. The government of Kenya has developed various policies regarding the adoption of e-government. These policies include ICT policy. Therefore, further studies should be conducted to assess the role of change management in the implementation of government policies such as ICT policies.

References

Abdullah, A., Rogerson, S., Fairweather, N. B., & Prior, M. (2006). The motivations for change towards E-government adoption: Case studies from Saudi Arabia. *In E-government Workshop* (Vol. 6, No. 1, pp. 1-21).

Cochran, W.G. (2007). *Sampling Techniques*. 3rd Ed. New Delhi: Wiley India Pvt. Limited

Conklin, W. A. (2007, January). Barriers to Adoption of E-government. In *System Sciences, 2007. HICSS 2007. 40th Annual Hawaii International Conference on* (pp. 98-98). IEEE

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly, 13*(3), 319-339.

Dwivedi, Y. & Lal, B. (2007). Socio-economic determinants of broadband adoption. *Industrial Management and Data Systems,* 107(5), 654–671.

Fichman, R. G. (1992, December). Information technology diffusion: a review of empirical research. In *ICIS* (pp. 195-206).

Graafland-Essers, I., & Ettedgui, E. (2003). *Benchmarking E-government in Europe and the US* (No. 1733). Rand Corporation.

Hall, B. H., & Khan, B. (2003). *Adoption of new technology* (No. w9730). National bureau of economic research.

Huang, Z. (2010). A comprehensive analysis of U.S. counties' e-Government portals: development status and functionalities. *European Journal of Information Systems, 16*, 49-164.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, *33*(7), 14-26.

Layne, K., & Lee, J. (2001). Developing fully functional E-government: A four stage model. *Government information quarterly*, *18*(2), 122-136.

Liikanen, E. (2003). E-government and the European Union. *Rivista online UPGrade*, *4*(2), 21-28.

Moon, M. J. (2002). The evolution of e-government among municipalities: rhetoric or reality?. *Public administration review*, *62*(4), 424-433.

Njoroge, R.W., Nyonje, R.O. & Gakuu, C.M. (2015) Adoption of Biogas Technology Projects among Rural Household of Lanet Location- Nakuru County. *African Journal of Project Planning and Management, 1*(1), 51 – 74.

Nograšek, J. (2011). Change management as a critical success factor in E-government implementation. *Business Systems Research*, *2*(2), 13-24.

Nulty, D.D. (2011). The adequacy of response rates to online and paper surveys: what can be done? *Assessment & Evaluation in Higher Education, 33*(3), 301–314.

Sacheva, S. (2009). Change Management for e-Governance. *I-Ways Journal of E-government Policy and Regulation*, *32*(2), 109-117.

Venkatesh, V., Morris, M.G., Davis, F.D., & Davis, G.B. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly, 27*, 425-478.

Wairiuko, J. W. (2014). *Factors influencing integration of information and communication technology in teaching and learning in public secondary schools in Kenya: a case of Kajiado central sub-county*.

Young-Jin, S., & Seang-Tae, K. (2007). E-government Concepts, Measures, and Best Practicies. In *Global E-government : Theory, Applications and Benchmarking* (pp. 340-369). IGI Global.