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

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A Research Thesis Submitted to the Graduate School in Partial Fulfilment of the Requirement for the Award of the Degree of Doctor of Philosophy in Project Planning and Management of the University of Nairobi

2018
DECLARATION

This research thesis is my original work and has not been presented for any academic award in any other University.

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DEDICATION

In Loving memory my Mother Laura Wanjiru Wairiuko for being my pillars in my studies and my life as a whole, may her soul rest in eternal peace. To my daughter Naserian Leanne Wanjiru, thank you for your understanding, endurance, constant support and prayers, I love you.
ACKNOWLEDGEMENTS

This Research work would not have been possible without the help of many people who took part in the whole process. I am especially indebted to my supervisors Dr. Raphael Nyonje and Dr. Elisha Opiyo Omulo who offered diligent supervision, well thought ideas and tireless effort to guide and direct me through the whole exercise. My Special appreciation to my lecturers Prof. Kidombo, Pro. Gakuu, Dr. Dorothy Kyalo, Dr. Angeline Mulwa, Dr. Mbugua among many as well as the entire Staff of ODel Campus for their great support and guidance. My deep gratitude also goes to the County Government of Kajiado, the County Commissioner, the County director of Education, County Human resource, Sub-County administrators, heads of departments and all the employees working for the County Government of Kajiado for their support and response in providing necessary data and information that facilitated the realization of the study objectives.

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# TABLE OF CONTENTS

DECLARATION................................................................................................................................. ii  
DEDICATION................................................................................................................................. iii  
ACKNOWLEDGEMENTS................................................................................................................ iv  
TABLE OF CONTENTS................................................................................................................... v  
LIST OF TABLES ............................................................................................................................ x  
LIST OF FIGURES .......................................................................................................................... xii  
LIST OF ABBREVIATIONS AND ACRONYMS .......................................................................... xiii  
ABSTRACT ......................................................................................................................................... xiv  

CHAPTER ONE: INTRODUCTION ................................................................................................. 1  
1.1 Background of the study ........................................................................................................... 1  
1.1.1 Adoption of e-Government ................................................................................................. 6  
1.1.2 Human Resource Capacity ................................................................................................. 7  
1.1.3 ICT Infrastructure ................................................................................................................ 8  
1.1.4 Organizational Culture ........................................................................................................ 9  
1.1.5 Financial Capacity .............................................................................................................. 10  
1.1.6 Change Management .......................................................................................................... 10  
1.1.7 County Government of Kajiado ....................................................................................... 11  
1.2 Statement of the problem ........................................................................................................ 14  
1.3 Purpose of the study ................................................................................................................ 16  
1.4 Objectives of the study ............................................................................................................ 16  
1.5 Research Questions ................................................................................................................ 17  
1.6 Hypothesis of the study .......................................................................................................... 17  
1.7 Significance of the study ........................................................................................................ 18  
1.8 Assumptions of the study ....................................................................................................... 18  
1.9 Limitations of the study ......................................................................................................... 19  
1.10 Delimitations of the study .................................................................................................... 19
4.6 Human Resource Capacity and Adoption of e-Government ........................................ 81
   4.6.1 Extent of the Relationship between Human Resource Capacity and adoption of e-
         Government ........................................................................................................ 81
   4.6.2 Adequate Human Resource for Implementation and Adoption of e-Government ...... 82
   4.6.3 Relationship between Human Resource and Adoption of e-Government ............ 82
   4.6.4 Testing of Hypothesis ....................................................................................... 85
4.7 ICT Infrastructure and Adoption of e-Government ............................................... 87
   4.7.1 Adequacy of ICT infrastructure Resources to Facilitate Adoption of e-Government ..... 88
   4.7.2 Influence of Aspects of ICT Infrastructure on Adoption of e-Government ........... 88
   4.7.3 Testing Hypothesis ........................................................................................... 92
4.8 Organization Culture and Adoption of e-Government ............................................ 94
   4.8.1 Extent of Organization Culture Relationship with e-Government Adoption .......... 95
   4.8.2 Culture in Supporting Adoption and implementation of e-Government ............. 95
   4.8.3 Relationship between Aspects of Organization Culture and Adoption of e-Government 96
   4.8.4 Testing Hypothesis ........................................................................................... 99
4.9 Financial Capacity and Adoption of e-Government ................................................ 101
   4.9.1 Adequacy Financial Resources to Implement e-Government ............................ 101
   4.9.2 Relationship between Aspects of Financial Capacity and the Adoption of e-
         Government ......................................................................................................... 102
   4.9.3 Testing Hypothesis ........................................................................................... 105
4.10 Internal Organizational Factors and the Adoption of e-Government ....................... 108
4.11 Organizational Change Management, Internal Organizational Factors and Adoption of e-
        Government ........................................................................................................... 109
   4.11.1 Extent of Change Management Influence on Adoption of e-Government ............. 110
   4.11.2 Relationship between Change Management and Adoption of e-Government ....... 110
   4.11.3 Testing of Hypothesis ..................................................................................... 113
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS ...... 120

5.1 Introduction .............................................................................................................. 120
5.2 Summary of the Findings ......................................................................................... 120
5.3 Conclusions ............................................................................................................... 123
5.4 Contribution of the Study to Knowledge for Management ..................................... 124
5.5 Recommendations ................................................................................................ 124
  5.5.1 Recommendations for Policy ............................................................ 124
  5.5.2 Recommendations for Practice ............................................................ 125
  5.5.3 Suggestions for Further Research ......................................................... 126

REFERENCES ........................................................................................................... 127

APPENDICES ............................................................................................................. 150

Appendix I: University Introductory Letter ................................................................. 150
Appendix II: Letter of Introduction to the county ......................................................... 151
Appendix III: Research Clearance Permit: NACOSTI ................................................. 152
Appendix IV: Kajiado County Commissioner Authorization Letter ............................... 153
Appendix V: Kajiado County Director of Education Authorization Letter .................. 154
Appendix VI: Questionnaire for the Government of Kajiado County employees ........... 155
Appendix VII: Interview schedule for the government of Kajiado County Department heads ...................................................................................................................... 166
Appendix VIII: List of Devolved Ministries under the county government of Kajiado ...... 168
Appendix IX: Map of Kajiado ....................................................................................... 169
Appendix X: Krejcie and Morgan (1970) ..................................................................... 170
LIST OF TABLES

Table 2.1: Summary of the research gaps ................................................................. 48
Table 3.1: List of the Ministries in the County Government .................................... 55
Table 3.2: Samples size ............................................................................................ 58
Table 3.3: Results of Reliability Test ........................................................................ 61
Table 3.4: Moderation Decision Making Criteria .................................................... 65
Table 3.5: Operationalization Definition of Variables .............................................. 67
Table 4.1: Distribution of Respondents by Age and Gender .................................. 71
Table 4.2: Respondents’ Highest Level of Education and ICT Training ................. 72
Table 4.3: Respondents Department of Work and Duration of Working in their Department in the County ................................................................. 73
Table 4.4: Shapiro-Wilk Test .................................................................................. 75
Table 4.5: Collinearity Statistics .............................................................................. 76
Table 4.6: Breuschk-Pagan test for Heteroscedasticity ............................................. 76
Table 4.7: Extent of Adoption of e-Government Service Delivery ......................... 78
Table 4.8: Influence of Adoption of e-Government Service Delivery ...................... 79
Table 4.9: Extent of the Relationship between Human Resource Capacity and adoption of e-Government ........................................................................ 81
Table 4.10: Adequate Human Resource, Implementation and Adoption of ICT ........ 82
Table 4.11: Relationship between Human Resource and Adoption of e-Government .... 83
Table 4.12: Correlation Coefficients for Human Resource Capacity and adoption of e-Government ........................................................................ 85
Table 4.13: Model Summary for Human Resource and Adoption of e-Government .......... 86
Table 4.14: ANOVA for Human Resource and Adoption of e-Government ............. 87
Table 4.15: Coefficients for Human Resource and Adoption of e-Government ............. 87
Table 4.16: Adequacy of ICT infrastructure Resources to Facilitate Adoption of e-Government ...................................................................... 88
Table 4.17: Influence of Aspects of ICT Infrastructure on Adoption of e-Government ..... 89
Table 4.18: Correlation Coefficients for ICT Infrastructure and Adoption of e-Government ... 93
Table 4.19: Model Summary for ICT Infrastructure and Adoption of e-Government .......... 93
Table 4.20: Analysis of Variance for ICT Infrastructure and Adoption of e-Government ........ 94
Table 4.21: Coefficients for ICT Infrastructure and Adoption of e-Government ............. 94
Table 4.22: Extent of organization culture Relationship with e-Government Adoption ....... 95
Table 4.23: Culture in Supporting Adoption of e-Government ............................................. 95
Table 4.24: Relationship between Aspects of Organization Culture and Adoption of e-Government .................................................................................................................. 97
Table 4.25: Correlation Coefficients for Organizational Culture and adoption of e-Government ................................................................................................................................. 100
Table 4.26: Model Summary for Organizational Culture and Adoption of e-Government .... 100
Table 4.27: ANOVA for Organizational Culture and Adoption of e-Government ............... 101
Table 4.28: Coefficients for Organizational Culture and Adoption of e-Government ........ 101
Table 4.29: Adequacy Financial Resources for Implementation and adoption e-Government ................................................................................................................................. 102
Table 4.30: Relationship between Aspects of Financial Capacity and the Adoption of e-Government ................................................................................................................................. 103
Table 4.31: Correlation Coefficients for Financial Capacity and adoption of e-Government .............................................................. 106
Table 4.32: Model Summary for Financial Capacity and Adoption of e-Government ....... 106
Table 4.33: Analysis of Variance for Financial Capacity and Adoption of e-Government .... 107
Table 4.34: Coefficients for Financial Capacity and Adoption of e-Government .............. 107
Table 4.35: Model Summary for Joint influence of Internal Organizational Factors on the Adoption of e-Government ................................................................................................................................. 108
Table 4.36: ANOVA for Joint influence of Internal Organizational Factors on the Adoption of e-Government ................................................................................................................................. 108
Table 4.37: Coefficients for Joint influence of Internal Organizational Factors on the Adoption of e-Government ................................................................................................................................. 109
Table 4.38: Extent of Change Management Influence on Adoption of e-Government ....... 110
Table 4.39: Relationship between Change Management and Adoption of e-Government ..... 111
Table 4.40: Correlation Coefficients for Change Management and Adoption of e-Government ................................................................................................................................. 114
Table 4.41: Model Summary for Moderating influence of Organizational Change Management ................................................................................................................................. 115
Table 4.42: ANOVA for Moderating influence of Organizational Change Management..... 115
Table 4.43: Coefficients for Moderating influence of Organizational Change Management. 117
Table 5.1: Summary of the Research Findings ........................................................................ 121
LIST OF FIGURES

Figure 1: Technology acceptance model.................................................................37
Figure 2: Unified theory of acceptance and use of technology.................................38
Figure 3: Diffusion of Technology Innovation Model...............................................40
Figure 4: Human action and organizational properties interactions .......................41
Figure 5: Technology-Organization-Environment Framework ................................43
Figure 6: Conceptual Framework showing relationship between variables ..............44
**LIST OF ABBREVIATIONS AND ACRONYMS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CoK</td>
<td>Constitution of Kenya</td>
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<tr>
<td>DOI</td>
<td>Diffusion of Innovation</td>
</tr>
<tr>
<td>EAI</td>
<td>Enterprise Application Integration</td>
</tr>
<tr>
<td>EGDI</td>
<td>E-Government Development Index</td>
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<tr>
<td>EMIS</td>
<td>Education Management Information System</td>
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<tr>
<td>ERP</td>
<td>Enterprise resource planning</td>
</tr>
<tr>
<td>G2B</td>
<td>Government to Business</td>
</tr>
<tr>
<td>G2C</td>
<td>Government to Citizen</td>
</tr>
<tr>
<td>G2E</td>
<td>Government to Employees</td>
</tr>
<tr>
<td>G2G</td>
<td>Government to Government</td>
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<tr>
<td>HCI</td>
<td>Human Capital Index</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communications Technology</td>
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<tr>
<td>IDT</td>
<td>Innovation Diffusion Theory</td>
</tr>
<tr>
<td>IFMIS</td>
<td>Integrated Financial Management Information System</td>
</tr>
<tr>
<td>IPPD</td>
<td>Integrated Payroll and Personnel Database</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>ITAX</td>
<td>Integrated Taxation Management System</td>
</tr>
<tr>
<td>LAIFOMS</td>
<td>Local Authority Information Financial and Operations Management Systems</td>
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<tr>
<td>MoICT</td>
<td>Ministry of Information and communication Technology</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Corporation and development</td>
</tr>
<tr>
<td>OSI</td>
<td>Online Service Index</td>
</tr>
<tr>
<td>PEOU</td>
<td>Perceived Ease of Use</td>
</tr>
<tr>
<td>PU</td>
<td>Perceived Usefulness</td>
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<tr>
<td>TAM</td>
<td>Technology Acceptance Model</td>
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<tr>
<td>TII</td>
<td>Telecommunication Infrastructure Index</td>
</tr>
<tr>
<td>TOE</td>
<td>Technology-Organization-Environment</td>
</tr>
<tr>
<td>TR</td>
<td>Technical readiness</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UTAUT</td>
<td>Unified theory of acceptance and use of technology</td>
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ABSTRACT

Through advancement of ICT, many governments around the world embarked on projects that introduced e-Government initiatives for efficient and effective government operations geared towards making a government accountable and transparent as well as providing timely services which are more convenient and cost-effective. The purpose of this study was to establish the influence of selected internal organizational factors and moderating influence of change management in e-Government adoption in service delivery particularly in devolved County Government. The Organizational Internal factors include County Financial Capacity, County Human Resource Capacity, County Organization Culture and County ICT Infrastructure. The study adopted the TOE (Technology-Organization-Environment) framework to develop a hypothetical model to explain e-Government adoption. The study was guided by six research questions as follows: how does Human Resource Capacity influence adoption of e-Government in the County government of Kajiado?, To what extent does ICT Infrastructure influence adoption of e-Government in the County government of Kajiado?, How does Organization Culture influence adoption of e-Government in the County government of Kajiado?, To what extent does Financial capacity influence adoption of e-Government in the County government of Kajiado?, how does joint Human Resource, ICT Infrastructure, Organization Culture and Financial Capacity influence adoption of e-Government in the County Government of Kajiado? And how does Change management moderate the relationship between organizational 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 Ministries in Kajiado County. Quantitative data was collected through open and closed-ended questionnaires with Likert-type interval scale anchored on a five-point scale while qualitative data was collected through an interview guide. Data was analyzed using Statistical Package for Social Sciences (SPSS). Descriptive statistics were computed using frequencies, percentages, arithmetic mean and standard deviation. Statistical tools used were Pearson’s Product Moment Correlation(r), Simple regression, Multiple regression and stepwise regression (R²) while F-test was used to test hypothesis. Qualitative data was analyzed using content analysis. The study found that Human resource capacity had a strong positive influence on adoption of e-Government (r= 0.595, p-value=0.000). In addition, ICT Infrastructure had a strong positive influence on adoption of e-Government (r = 0.821, p-value=0.000). Further, the results indicated that Organizational Culture had a strong positive influence on adoption of e-Government (r = 0.562, p-value=0.000). The study revealed that Financial capacity had a strong positive influence on adoption of e-Government (r = 0.750, p-value=0.000). In addition, Organizational Change management moderates the influence of organizational internal factors (Human resource, ICT Infrastructure, Organizational Culture, Financial capacity) on adoption of e-Government in service delivery in the County government of Kajiado. The results indicated that Human resource, ICT Infrastructure, Organization Culture and Financial capacity have a joint influence on the adoption of e-Government in the County Government of Kajiado. The study recommends that the county government of Kajiado should develop frequent training programmes for all the employees in the County. In addition, the County government of Kajiado should make use of financial and non-financial rewards to motivate the employees. The County government of Kajiado should make sure there are enough computers for use in different ministries. In addition, the County should ensure availability of a more reliable network and internet services. Network and internet service providers should be selected on the basis of their infrastructure and ability to provide reliable services.
CHAPTER ONE: INTRODUCTION

1.1 Background of the study

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 and Laicity, 2006). E-Government was conceptualized in 1993 in the United States. Since then, many governments 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.

According to Bhatnagar (2004), definition of e-Government differs with different scholars based on the context. World Bank (2012) defines e-Government as; “The use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies 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. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions”. The impact of successful e-Government initiatives is attestable through improved citizen participation and better quality of life. It is therefore important for African governments to develop policies and frameworks that can support legislation of digital government which are linked to their strategic development plans. Like any other digital services, several scholars have classified e-Government into various types of services: Government to citizens (G2C), Government to Business (G2B), Government to Government (G2G) and
Government to Employees (G2E) that ensure internal efficiency and effectiveness in public administration (United States’ E-Government Strategy, 2003). G2G and G2E forms the backbone of e-Government and it’s the focus of this study. Governments at local and national level are enhancing and updating their internal systems and procedures through ICT in order to enable services that support government, citizens and businesses.

In order to assess e-Government status, indices have been developed (Torres, Pina and Royo, 2005) that rank countries based on their e-Government status. According to the United Nations e-Government Survey 2016, there has been a high increase in the number of countries using e-Government to provide online services through one-stop-web-portal platform. The report noted that in 2003, only 45 countries had one-stop-web-platform and only 33 countries could provide online transactions. According to the 2016 Survey, over 90 countries has one or more single entry web portal offering public services online while about 148 countries have advanced web portal that provide some form of online transaction services. Most countries in Europe were among the earliest adopters of e-Government. The Australian Government adopted one-stop-web national portal both at the federal and local levels, ranging from birth certifications to Medicare, taxation, job search, Child support and aged care services, among others (Government of Australia, 2015). They established Digital Transformation office as a commitment to advancing government commitment to transform services using “technology to make services easier, clear and faster for Australian families and businesses” (Government of Australia, 2016). The Republic of Korea through continuous innovation in e-Government came up with a plan to move over 750 e-Government services to the cloud. United States and Canada invested heavily in e-Government and digital infrastructure as a strategic national asset (The White House, 2009) making them highly ranked in America. According to the UN e-Government Survey (2016), countries are ranked on e-Government Development Index reports based on three components; scope and quality of online services (Online Service Index (OSI), status of telecommunication infrastructure (Telecommunication Infrastructure Index (TII) and existing human capacity (Human Capital Index (HCI). Developed countries such as USA, UK, Korea, Australia, Canada, Singapore, Argentina, Uruguay and Chile are the top leaders in adopting new technologies to achieve one stop government web portal where users are able to access information through single sign-on. Their success is attributed to their e-Government commitment, vision, goals and strategies as well as their high levels of human capital and robust telecommunications infrastructure.
Africa continent is said to be lagging behind globally with its 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. Bwalya (2009) examined factors affecting adoption of e-Government in Zambia. The findings revealed that inadequate ICT infrastructure, provision of content in English instead of local languages, poor change management procedures, non-contextualization of e-Government practices; contributed much to the delay in appropriate e-Government adoption in Zambia. In South African post-apartheid era, citizens continue to have high expectations of government in terms of improved delivery of service and closer consultation. Such expectations are found in every country, and in regard to this, Mutula and Mostert (2010) calls on all governments to recognize that implementation and adoption of e-Government systems accords them the opportunity to enhance service delivery and good governance. The implementation of e-Government has been widely acclaimed since it provides new impetus to deliver services quickly and efficiently (Evans and Yen, 2008). Through recognition of these benefits, various arms of the South African government embarked on a number of e-Government projects such as inter-alia, the Batho Pele portal, SARS e-filing, the e-Natis system, electronic processing of grant applications from remote sites, and a large number of departmental information websites.

Kenya was ranked number 119th globally while position 10th in Africa in E-Government Development Index (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). The objective of e-Government strategy was to modernize government to enhance transparency, accountability and good governance which would bring about result-oriented, efficient and citizen-centered services. Services offered through e-Government include online tax claims, online passport applications, online police operations, tax filling, driving licenses renewal, birth registration, among many. Several e-Government system projects and initiatives have been undertaken with an aim of enhancing democracy, efficiency and transparency of public administration and services. Some of the major
projects undertaken under the five-year plans includes Integrated Financial Management Information System (IFMIS) and Integrated Personnel and Payroll Database (IPPD) which are fully operational in the ministries, Local Authorities Integrated Financial Operations Management System (LAIFOMS), Education Management Information System (EMIS), Integrated Taxation Management Systems (ITMS) currently known as ITAX after making great improvement in design, online Recruitment and Selection System in the public service commission and the Border control System in the Ministry of state for Immigration and Registration of persons. For General administration, the e-Government include personnel, finance, procurement system, budget, email system among others. Most systems in Kenya run in individual departments like the case of national tax system, immigration information system, legal information system and education system.

Different theories have been used to explain adoption of e-Government in service delivery. This study was guided by TOE model which has been extensively used to study e-business. It has three components impacting the process of organization’s adoption, implementation and use of innovations, namely; technological, organizational and external environmental factors. Likewise, structuration theory was discussed in this study to enable a comprehensive understanding of the key antecedents in the adoption of e-Government systems. This theory will assist the practitioners in formulating and implementing appropriate strategies to cope with challenges of implementing and adopting digital government systems. Cohen and Levinthal (2000) argued that, patterns of human actions and dynamic meta-structures of the organization retain their influence in the life-cycle of digital government systems as they continue being adopted and evolved. The domination, legitimization and meta-structures of signification reinforce patterns of action and structures established to produce emergence of new structures or reproduce established behaviors and these actions may affect value creation through generated adoption behaviors. Structuration theory states that high absorption capacity can enhance e-Government adoption by using external information and applying it to organization needs. Additionally, Davis (1993) developed and validated the Technology Acceptance Model (TAM) to explain the mechanisms that influence and shape users’ acceptance/adoption and use of new technological infrastructure. TAM is an intention-based model developed specifically for explaining and/or predicting user acceptance of Computer technology. According to TAM, there are two specific factors that are fundamental determinants of users’ attitude toward using new technology and actual use of the system:
perceived usefulness and perceived ease of use relatively to new information system design features. TAM proposes that external factors such as perceived usefulness and perceived ease of use affect intention and the actual use of technology systems. A well-designed process and policies can be essential pre-conditions for ICT adoption on service deliver and organization performance. Other theories discussed in this study that influence user decision to use technology are: Diffusion of innovation (DOI) and Unified theory of acceptance and use of technology (UTAUT). However, there is a crucial factor which put at risk the success of the implementation. This factor tends to be users’ acceptance of the new process.

Most scholars have done studies on various factors that influence e-Government adoption across the globe. Basamh, Qudaih and Suhaimi (2014) explored adoption and implementation of e-Government in Saudi Arabia. The study identified infrastructure costs, computer literacy, privacy issues, accessibility, availability, and trust issues as some of the major challenges and obstacles that impede implementation and adoption of e-Government in the Kingdom of Saudi Arabia. Costs associated with implementation and adoption of e-Government negatively affect the e-readiness by various government departments. Overall, the study has clearly found out that the challenges affecting implementation and adoption of e-Government are not only related to the various government agencies, but they are also related to those using the e-Government services such as citizens and government employees.

In e-Government implementation and adoption, transformational effort involves all the major organizational dimensions such as people, structure, strategy, technology, processes and as well all the stakeholders (Tung and Rieck 2005). In his Model of Enterprise Application Integration (EAI), Kamal and Themistocleous (2006), noted that acquiring or adopting digital government systems was not sufficient to realize the anticipated benefits, implementation, adoption and use must be continuous in the organization and all the intended users. According to West (2004), many public organizations face challenges such as resistance to change, security, lack of top management support during implementation and adoption of new technology innovations. Therefore, for successful adoption of innovations, there is a need to have a clear understanding of the relative advantage and benefits of the innovations as well as organizations existing operations, absorptive capacity, managerial capabilities and information system standards required for the organization internal processes (Kamal and Themistocleous, 2006).
According to Chatterjee et al. (2002) adoption of e-Government, mobilization of attention and coordination of actions is needed across all stakeholders and internal organizational factors, including information system executives, top management, information system executives, members of the information system function, and members of the entire work groups in the organizations.

Therefore, adoption of e-Government for service delivery can be defined as the extent to which an organization uses e-Government systems to facilitate all the organizational strategies and activities. This definition focuses on the organizational success in incorporating e-Government systems into its organizational processes and its consistent in IT adoption at the organizational level (Armstrong and Sambamurthy, 1999).

Despite the disparity in the number of stages of e-Government implementation and adoption from many scholars and bodies ranging from static website to full transactional online web portal, e-Government is not a one step process due to diverse technological, social, organizational, economic and political aspects as well as the financial resources involved. The potential of e-Government as a tool for development relies much on three fundamental requirements - infrastructure, human capital, and connectivity (UN Global E-Government Survey 2016). Based on the literature, Hossain, Moon, Kim, and Choe (2011) noted that many studies on e-Government draws mainly from a weak or confused positivism and are mostly dominated by over optimism. They lack knowledge, practical guidelines, clarity and consistency about the methods of research as well as generalizations. According to Hossain et al (2011), some of the e-Government adoption factors need to be redefined since public and private organizations differ in many aspects in adoption of technology, therefore there is a need to address specific needs regards in public organizations.

1.1.1 Adoption of e-Government

E-Government refers to the use of information technologies (such as Wide Area Networks, the Internet and mobile computing) that have the ability to transform government relations with citizens, businesses, and other arms of government (World Bank, 2008). These technologies 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. The resulting benefits can be less corruption, increased
transparency, greater convenience, revenue growth, and/or cost reductions. Approximately 60% of e-Government system projects failed and those successful did not yield the expected outcomes (Heeks, 2003). According to Heeks (2003) major problems behind e-Government project failure in developing countries is the gap between the design and reality in terms of information technology, processes objectives and values, staffing and skills, management systems, and other resources such as time and money.

In Kenya, e-Government ensure faster processing and issuance of birth certificates, national identity cards, passports, registration of business names, and applications for marriage certificates, drivers’ licenses and police abstracts. e-Government also facilitates better communication between governments and businesses. Establishment of e-procurement portals facilitate G2G and B2B communication which permit smaller businesses to compete for government contracts as well as larger businesses. This creates an open market and stronger economy. Digitized systems necessitate moving away from heavily paper based systems to electronic ones. This allows the process to be handled by lesser employees and therefore reduce operating costs. Governments face the challenge of assessing local needs of the population living in remote areas and customizing e-governance solutions to meet those needs. Various factors influence adoption of e-Government services. They include performance expectancy, social influence, age and level of education as the more educated one tends to be, the more they accept technology.

1.1.2 Human Resource Capacity

The development of essential ICT skills among the organizational human resource is fundamental for successful e-Government implementation and adoption. Knowledge, skills and competences as well as underlying attitudes and motivations are necessary for e-Government adoption. Basic and advanced computer training should be conducted at all levels of organization, this will enable employees to use new applications, re-orientation to new work processes and methodologies. According to LaVigne (2001), to achieve successful e-Government adoption, five types of skills are needed; analytical skills, information management skills, technical skills, communication and presentation skills and project management skills. Top management equipped with ICT Skills are able to make better decision, allocate resources, support e-Government initiatives as well as encourage employees to adopt e-Government systems. E-Government initiatives are complex
projects that need project managers to design, plan and control the progress. It requires technology experts to transition e-Government from basic websites to high level integrated services allowing stakeholders to transact online. The level of IT expert determines implementation and adoption of e-Government. According to Alshehri and Drew (2010), addressing human development issues, require Knowledge management initiatives such as staff training to create and develop the basic skills for e-Government usage as well as maintain the IT experts. Ongoing access to training is a paramount as the technology advancement increases and new technologies, practices and competitive models emerge. Training can be done through; on job training, classroom training, panel discussions as well as e-learning through videos. Its therefore necessary to investigate the extent to which human resources capacity influence the adoption of e-Government.

1.1.3 ICT Infrastructure

One of the preconditions of e-Government implementation and adoption of any technology is availability of ICT infrastructure. ICT infrastructure include tangible hardware and the intangible software (Heeks 2001), which enable creation, acquisition, storage, dissemination, retrieval, manipulation and transmission of information (Zulu, 1994). Based on the IBM report on ICT Infrastructure (2001), ICT infrastructure for an e-Government involves technologies - with network readiness at the beginning - including application servers, hardware resources, software, operating systems, and Internet, websites and data centers. From the definition of e-Government, ICT infrastructure lies behind the effectiveness and success of e-Government adoption. Availability and accessibility of information and services 24/7 from anywhere are determined by high speed servers, high speed internet, power and power backups as well as well-designed web applications. ICT infrastructure enables government agencies to collaborate, interact and share information as well as facilitating the daily tasks that save employee’s time and effort. Adoption of e-Government depends on modern infrastructure. Internetworking is required to enable sharing of information and open up new channels of communication as well as delivering of new services (Ndou, 2004). Technological resources have been consistently identified as an important factor for successful information systems adoption. Parasuraman and Colby (2015) pointed that technology readiness (TR) is a critical factor in the implementation and adoption of innovative products and services. It determines organizational readiness to adopt and embrace technology. According to Mose, Njihia and Magutu (2013), private and public-sector organizations have been
utilizing information technology (IT) systems to streamline and automate their purchasing and other processes over the past years. Most government are adopting ERP. ERPs are large scale computer software and hardware systems that attempt to integrate all data and processes of an organization into a unified system housed in a centralized database which is accessed through a secure network. ERPs have capabilities for handling enterprise wide business processes ranging from functions such as manufacturing, logistics, distribution, inventory, shipping, invoicing and accounting.

1.1.4 Organizational Culture

Organization culture plays an important role in the successful adoption or failure to adopt any information system in an organization. Hofstede (1998), defines culture as “programming of the mind which distinguishes the members of one human group from another”. Schein (1992) defined it as a “pattern of shared set of basic assumptions learned by a group as it solved its problems of internal integration and external adaptation”. According to Schein, culture is associated with the organization’s sense of identity, its goal or core values, its primary ways of working and a set of shared assumptions.

Denison and Mishra’s (1995) developed a model emphasizing on cultural traits and values associated with organizational effectiveness. They identified four traits that can affect organizational culture namely; Mission, Adaptability, involvement and consistency. Organization’s Culture forms the personality of the organization and it becomes an asset if it supports the mission, the vision and strategic goals of that organization. A strong organization culture is crucial for organization development, the experience and history of its members help in coping with external adaptation and internal integration enabling the organization to survive turbulent situations. The implementation of devolution of services by the Government has seen County governments inherit a lot of debt, poor revenue collection and ineffective service delivery mechanisms from the previous councils and thus in order to improve service delivery, most County Governments have implemented e-Government in order to ensure faster and cheaper services and information to citizens, business partners, employees and other government agencies. This enables the counties to increase citizens participation in order to enrich the development process and the public e-Services which is expected to reduce conflict between the government and the locals who have been complaining of being sidelined by the government in
key decision making (Waithaka et al., 2013). With the Kenyan government being in two tiers, it has been now almost five years since the adoption of the County Government and this need to be evaluated about whether it has been able to improve the quality of services at the local level through the adoption of e-Government.

1.1.5 Financial Capacity

E-Government is a complex and expensive project that require availability of financial resources to support high cost technology systems, hardware, software’s, maintenance as well as Education and training. Al-Sobhi and Weerakkody (2010), noted that organizations require adequate economic resources such as sustainable funding as well as non-economic resources such as strategies, leadership support and project management skills to facilitate and promote the implementation and adoption of a successful e-Government systems. Lack of financial support is considered as one of significant obstacle to implementation and adoption of e-Government in many developing countries. Investing in technological innovation in private sector is driven by competition to achieve competitive edge. However, in the public sector the fundamental mandate is not business driven, and often, conflicting goals such as providing better services in education, health, environmental and many others compete for the same budget. Due to budget constrains most e-Government are funded from NGO whose funding is facilitated for a period causing problems of project sustainability. E-Government implementations and adoption takes time, without reliable funding the projects are likely to stall leading to failure. Lack of reliable separate allocated annual budget for ICT innovation can hinder implementation and adoption of e-Government systems. Therefore, there is a need to investigate financial implications in adopting of e-Government in the County Government.

1.1.6 Change Management

Change management is a structured approach to transitioning individuals, teams, and organizations from the current state to the desired future state (Sacheva, 2009). According to Hiatt and Creasey (2010), change management is a process of empowering employees to embrace and accept new changes in working environment. According to Apostolou, Mentzas, Stojanovic, Thoenssen, and Lobo (2011), change management is a critical success factor in software systems. E-Government initiatives and projects brings about tremendous change in terms of using new technologies, processes, people and departmental structures. Government around the world have
continued with transition from traditional government to digital government in line with the New public management model (Bevir et al., 2003; Gendron et al., 1999; Hood, 1991), to promote an accountable government, people driven services focusing on a citizen as a customer (Ciborra, 2003). 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 an organizational change issue rather than a technological issue as it entails evolution from office and back office IT infrastructure.

There are multiple models of change process: According to Hiatt (2006), the ADKAR 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) and Bear (2006), leadership is key to successful change followed closely by corporate values and communication.

**1.1.7 County Government of Kajiado**

The new Constitution of Kenya (CoK 2010) paved way for the realization of two levels of Government. The National Government and the devolved Government which provided the setup for the County Government. This involved the transferring of some selected functionalities as well as the resources from the National Governments to the 47 Counties listed in CoK 2010. Each of the 47 counties formed County Governments comprising of the County assemblies, County executives, and other relevant bodies that help in the governing of the County.

The County of Kajiado is one of the 47 counties in Kenya and is located in the southern part of Kenya. It borders Nairobi County to the North East, Narok County to the West, Nakuru and Kiambu Counties to the North, Taita Taveta County to the South East, Machakos and Makueni
Counties to the North East and east respectively, and the Republic of Tanzania to the South. It is situated between Longitudes 36° 5’ and 37° 5’ East and between Latitudes 10° 0’ and 30° 0’ South. The County covers an area of 21,900.9 square Kilometers (Km2). The County is divided into five administrative sub-counties namely: Kajiado Central, Kajiado North, Loitokitok, Isinya and Mashuuru, with a total of 17 administrative divisions. The County has an annual population growth rate of 5.5 percent with population in 2012 estimated at 807,069 of which 401,784 were females and 405,285 males. The main urban areas in the County are Kitengela, Ongata Rongai, Kiserian, Ngong, Loitokitok, Namanga, Isinya and Kajiado town. The 2012 projected urban population in the County stands at 191,827 which is 23.8 percent of the total population. Kajiado North constituency with a density of 1,369 persons per Km2 is the most densely populated. The density is projected to reach 2,087 persons per Km2 by 2017. This is due to presence of highly populated areas of Rongai, Ngong and Kiserian which are residential areas serving the Nairobi City. Kajiado West has a lowest density of 14 persons per Km2 due to its vast area. The area is sparsely populated due to harsh climatic conditions unfavorable for farming and settlement (CIDP 2013-2017).

The mobile network coverage in the County is approximately 60 percent, with all urban areas covered. Most of the rural areas are not covered by mobile network. According to the 2009 census, landline connectivity was 0.9 percent in Kajiado Central constituency, 0.6 percent in Loitokitok and 10.6 percent in Kajiado North. The main energy sources in the County are firewood, electricity, charcoal, solar and petroleum products. Out of 173,464 households across Kajiado County, only 69,098 households are connected to electricity accounting for 39.8 percent of the households, with highest number of households being in the urban areas. There is marked variation in housing in the urban, peri-urban and rural settlements. In urban centers there are both high-end settlements and sprawling slums. The peri urban areas have mainly permanent and semi-permanent houses. While in rural areas we have semi-permanent houses and manyattas. The wage earners are eight percent of the working population in the County which stood at 17,480 persons as at 2009 according the population and housing census report. This population works in formal and informal sectors. Most of the self-employed persons are engaged in livestock trade, business retail and wholesale trade, horticulture/floriculture, industrial activities and Jua kali and tourist sector-sale of beads. According to the same report, there were 40,299 persons (21,042 male and
19,257 female) unemployed. This accounted for 10.45 percent of the productive population in the County (CIDP 2013-2017).

The major challenges that impede achievement of these goals are: inadequate water supply; poor physical infrastructure; high illiteracy level; low level of diversification; inadequate marketing channels; poor coordination of development activities and inaccessibility to health services. The dilapidated physical infrastructure in the County is one of the major impediments to trade and investment. The County's poor and inadequate infrastructure (road, water supply, electricity telecommunications/ICT among others) has led to high cost of doing business and hindered harnessing of local potential and access to markets. The County with a road network of 2,344.2Km has only 300Km of tarmacked road. During rainy season, most of the earth roads are rendered impassable, which hampers movement of persons and goods. The County has low electricity connectivity especially in rural areas. High electricity connection tariffs hinder households, institutions and businesses from accessing electricity. This impairs their operations and growth (CIDP 2013-2017).

The County has a high illiteracy rate of 35 percent compared to the national illiteracy rate of 28.6 percent. This can be attributed to a combination of factors which include high drop outs rate, low transition rate and socio-cultural practices among others. The negative cultural practices such as Female Genital Mutilation (FGM) and early marriages are a major impediment to girl-child education and empowerment. In addition, young men embrace moranism while young boys take part in herding at the expense of education. There is poor coordination of development activities in the County leading to duplication of effort and wastage of resources. This is caused by lack of or poor communication among various development stakeholders in the County. There are high levels of poverty in the County with more than 47 percent of the population living below the poverty line. Major causes of poverty include illiteracy, frequent droughts, poor infrastructure and inadequate water resources. A major effect of poverty is high rate of school dropouts as parents are unable to raise school fees. The high dropouts subsequently result to child labour as the school going children work to supplement family income. In addition, the poor often experience nutrition related conditions that contribute to high morbidity rate among children and women. Poverty has also forced some people into commercial sex work thus exposing them to HIV/AIDS especially in the urban areas. This may result to increased number of orphaned and
vulnerable children and high dependency rates. Women’s ability to make economic decision is constrained by the fact that they are not the owners of productive resources like land and livestock. Wealth in the form of livestock and land are often owned by men (CIDP 2013-2017).

County Government of Kajiado like any other County in Kenya is mandated to implement and adopt e-Government despite the harsh conditions that are likely to create digital divide such as poor infrastructure, lower literacy levels, poor network and internet connection. This has caught researcher interest to investigate how organizational internal factors influence adoption of e-Government in Kajiado County.

1.2 Statement of the problem

Digital transformation is a paradigm shift throughout the world caused by rapid growth of ICT and many governments just like the private sector have realized the importance of e-Government as a tool for responsive governance. Implemented and adopted ICT has potential to transform delivery of services in public institutions. Benefits of e-Government adoption are undisputed. It’s evident that e-Government is an effective driver for economic growth and saves time as well as bringing accountability, effectiveness, and openness in government, but there are many challenges that hinder the exploration and realization of its opportunities such as ICT infrastructure, organization culture, human resource capacity, financial capacity as well as change management (Al-Sebie and Irani 2010; Gilbert et al.,2004; Ndou, 2004; Jaeger and Thompson, 2003). Research in e-Government has identified challenges such as lack of awareness (Reffat, 2003), access to e-services (Fang, 2002; Darrell, 2002; Silcock, 2001), usability of e-Government websites (Porter, 2002; Sampson, 2002), lack of trust (Navarra and Cornford, 2003; Bhattacherjee, 2002; Silcock 2001; InfoDev, 2002), security concerns (Harriss and Schwartz, 2000; Jarvenpaa,Tractinsky and Saarinen, 1999), resistance to change (Margetts and Dunleavy, 2002), lack of skills and funding (Federal Computer Weekly , 2001), data protection laws (Bonham et al., 2003; Harris and Schwartz, 2000), digital divide (Silcock, 2001; InfoDev, 2002; Carter and Bèlanger, 2005); lack of citizens’ interest (Porter, 2002; Sampson, 2002); lack of government support (Karunananda and Weerakkody, 2006) and lack of strategy and frameworks (Reffat, 2003; Damodaran et al., 2005) are hindering the adoption of e-Government in many countries.
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 and 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 and Ferro (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 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.

According to Lau (2003, November), Budget time horizons, can pose a problem on e-Government, most of these projects are multi-year in nature, and thus require commitments to spend resources over a long period, which sometimes is beyond the annual or multi-year budgeting horizon. Such projects represent a commitment to spend future revenues, and governments are understandably reluctant to tie up future spending. Government may not commit to have such spending unless on short term projects. The difficulty of measuring costs and potential benefits for e-Government projects makes it hard to develop funding cases for projects.
and compare alternatives in a budget-setting context. As many countries commit to IT investment, research on change management suggests that potential benefits of IT systems within organization remain unrealized (Hitt and Brynjolfsson, 1996). While Neufeld et al. (2007), noted that most IT projects, do not get close to achieving anticipated results. According to Aiman-Smith and Green (2002), the cost of projects in most cases exceeds initial budget due to time overruns leading to project failures.

Wood-Harper et al. (2004), declared that studying factors that lead to successful e-Government implementation and adoption is crucial. There a need to identify key success conditions, indicators and factors in order to develop an understanding on why and how e-Government initiatives should be successfully implemented and adopted in the County Government of Kajiado.

1.3 Purpose of the study

The purpose of the study was to establish the influence of organizational internal factors in adoption of e-Government and how change management moderates the relationship between organizational internal factors and adoption of e-Government.

1.4 Objectives of the study

The study was guided by the following objectives:

i. To establish how Human Resource Capacity influence adoption of e-Government in the County Government of Kajiado.

ii. To determine the extent to which ICT Infrastructure influence adoption of e-Government in the County Government of Kajiado.

iii. To assess how Organization Culture influence adoption of e-Government in the County Government of Kajiado.


vi. To determine how Change management moderates the relationship between organizational internal factors and the adoption of e-Government in the County Government of Kajiado.

1.5 Research Questions

The study was guided by the following research questions:

i. How does Human Resource Capacity influence adoption of e-Government in the County government of Kajiado?

ii. To what extent does ICT infrastructure influence adoption of e-Government in the County government of Kajiado?

iii. How does Organization culture influence adoption of e-Government in the County government of Kajiado?

iv. To what extent does financial capacity influence adoption of e-Government in the County government of Kajiado?

v. How does internal organizational factors influence adoption of e-Government in the County Government of Kajiado?

vi. How does Change management moderate the relationship between Organizational internal factors and adoption of e-Government?

1.6 Hypothesis of the study

The study was guided by the following research hypothesis:

i. H1 Human Resource Capacity has a significant relationship on the adoption of e-Government in the County government of Kajiado.

ii. H1 ICT infrastructure has a significant relationship on the adoption of e-Government in the County government of Kajiado.

iii. H1 Organization culture has a significant relationship on the adoption of e-Government in the County government of Kajiado.

iv. H1 Financial capacity has a significant relationship on the adoption of e-Government in the County government of Kajiado.

v. H1 Internal Organizational factors have a significant relationship on the adoption of e-Government in the County Government of Kajiado.
vi. H1 Change management has a moderating significant relationship on organizational internal factors and adoption of e-Government.

1.7 Significance of the study

This study highlights the importance of understanding the e-Government adoption as a fundamental issue in the transformation of the way government deliver their services. The study provides guidelines to the researcher, policy makers on issues that facilitate or hinder the implementation and adoption of e-Government at national and local level. It brings about a better understanding to the perspective of e-Government adoption necessary to respond to the technological and organizational issues that influence the realization of fully integrated e-Government services. It’s an important study the for government and policy makers to understand e-Government initiatives in order identify the challenges in adopting e-Government and be aware of any factors that might either facilitate or impede the adoption of an e-Government system. Existing models and theories were analyzed in order to understand adoption of e-Government from an employee’s perspective and the entire organization at large. From the empirical study, it helps the decision makers to avoid problems when implementing and adopting e-Government at national and local government levels. The study determined the key organizational internal factors as well as the moderating influence of change management in implementation and adoption of e-Government systems. From the findings, it’s important for the County Government to provide adequate ICT infrastructure to support e-Government implementation and adoption, Human resources should be armed with necessary skills and knowledge to use the systems. The County should promote a culture that promotes adoption of technology. Budgeting for ICT should be given priority to support adoption of ICT and provision of necessary resources such as computers, reliable network that support adoption of e-Government. This study adds value to existing body of knowledge and provides guideline to other researchers for further studies.

1.8 Assumptions of the study

The study assumed that implementation and adoption of e-Government is influenced by internal organizational factors such as Human Resource Capacity, Organizational ICT Infrastructure, Organizational Culture, Financial Capacity. It also assumed that change management moderates internal organizational factors. And that all County government are guided by the same e-Government policies. It further assumed that when conducting this research, the selected
respondents were honest and accurate in providing information upon which the study findings were based. The study also assumed that the findings of this study can be useful in highlighting critical factors that need to be addressed to improve e-Government adoption in the County Government of Kajiado and in other counties as well.

1.9 Limitations of the study

While undertaking the study, the researcher encountered various limitations. Respondents could not fill the questionnaire without the authorization of the various heads of department. To overcome this, the researcher had to seek permission from the Sub-County administrators as well as the heads of the Departments. The aim of the research was also explained to avoid any resistance from the respondents. The County government of Kajiado is divided into five sub-counties with employees of the ten ministries spanning in the all sub-counties. It took time travelling in all the sub-counties mapping the selected respondents in all the ministries under the study. Some sub-counties were inaccessible without a private car and sometime the researcher used motorbikes, with proper planning all the sub-Counties were covered. Most respondents were mobile and most of the time locked in meetings and workshop, therefore drop and pick later method was used in order to give respondents ample time to go through the questionnaire and fill it. The research also scheduled the interviews based on the availability of the heads of the departments. The study was also conducted in only one County out of 47 counties in Kenya, more counties would have been covered for comparison and bench marking, but time and financial resources hindered the exercise.

1.10 Delimitations of the study

The study was designed to establish the influence of selected variables such as Human Resource Capacity, ICT Infrastructure, Financial Capacity, Organization Culture and moderating influence of change management in adoption of e-Government. There are many other variables that influence adoption of technology in an organization that were not included in this study. There are many models and frameworks that provides relationship of variables to adoption of technology but only a few were selected in this study to provide a guide to the relationship of the selected variables. The study was restricted to Kajiado which is one of the 47 counties in Kenya due to time and financial constraints. The study involved only the employees who work under the
devolved ministries, other employees who work under the County government of Kajiado like the office of the governor and others were not included.

1.11 Operational Definitions of Terms

The following defined terms were used in the study.

**Adoption of e-Government service delivery** Decision made by County government to implement and to use ICT systems to serve employees, citizens and other government agencies.

**ICT Infrastructure** Technological resources available such as mobile phones, computers, internet connectivity, sources of energy, software and information storage facilities that’s enable implementation and adoption of e-Government.

**Organizational Culture** Underlying values, belief, and principles that serve as a foundation for an organization’s management system.

**Financial Capacity** Internal capacity to act in one’s best financial interest, though budget allocation for ICT infrastructure, training to enable implementation and adoption of e-Government.

**Human Resource Capacity** ICT skills and competences required to implement and adopt e-Government.

**Change Management** It’s a structured approach to transitioning individuals, teams, and organizations from the traditional way of delivering services to using e-Government services.

**Internal Organizational Factors** These are factors within the organizational environment that impact the approach and success of its operations.
1.12 Organization of study

The study is organized into five chapters: Introduction, Literature Review, Research Methodology, Data analysis, Conclusion and Recommendations. Chapter one covers background of the study, statement of the problem, purpose of study, research objectives, research questions, research hypothesis, significance of key terms, assumptions and delimitation of the study. Chapter two is a review of literature based on variables that influence adoption of e-Government. It also presents theoretical and conceptual framework of the study, summary of the literature review and the gaps established in the study. Chapter three covers research methodology, research paradigm, research design, target population, sample and sampling procedure, research instruments, reliability and validity of instruments, data collection procedure, data analysis and operationalization of the variables. Chapter four covers data analysis, presentation, interpretation and discussions, while chapter five contains summary of findings, conclusions and recommendations followed by References and Appendices.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter reviewed the available literature in relation to the adoption of e-Government for the service delivery as the dependent variable of the study influenced by independent variables such as County Human Resource Capacity, County ICT Infrastructure, County Financial Capacity and County Organization Culture. Change Management was reviewed as a moderating variable in this study. The review is drawn from various published articles such as empirical studies, desktop reviews in order to present different arguments and views of the variables under this study. It also presents the theoretical and conceptual framework guiding the study. Theories and models used in the study have been reviewed, followed by a pictorial representation of the variables used in the study and their relationship. The chapter also highlights a summary research gaps based on literature reviewed as well as a chapter summary.

2.2 Adoption of e-Government

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 Seang-Tae, 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 reduced 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 service delivery, the government must have a vision and the system must be accepted and adopted by the intended users (Graafland-Essers and Ettedgui, 2003). Kyobe (2011) found that capacity to “adopt and use ICT” and “exposure” are 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, and Prior, 2006).

E-Government adoption have no universal model applicable to all countries and regions. According to Moon (2002), Ronaghan (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 Al-Dosari and King (2004), Deloitte Research (2004), 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.

2.3 County Human Resource and Adoption of e-Government

Human Capacity Building refer to developing an organization individual’s core skills and capabilities that help them achieve their development goals (Wairiuko, 2014). The realization of the full potential of ICTs require training for relevant skills to build individual and institutional capacity for users and all beneficiaries (Kandiri, 2006). The level of training required for users to upgrade their skills and to learn how to adopt and use new technologies may be an obstacle for technology application (Borhani, 2016). Experienced employees are keen on adopting innovative solutions though the burden to acquire skills to successfully adopt these innovation solutions
causes barriers to adoption. Technology adoption indicate that the level of complexity impacts directly on its rate of implementation. Knowledge and skills for implementing and applying innovation increase the intention to use technological innovations and accelerates the adoption process as noted by (Sargent et al., 2012, Adriaanse et al., 2010). Therefore, training is important in facilitating the process of integrating new tools with current methods and procedures. Khanh (2014), noted that if people cannot use the new technologies, they cannot take responsibility for their own quality. Training is a costly investment in any organization. Zulu (1994) argues that education and training are crucial elements of ICT implementation and adoption while Qureshi (1998) argues that training must be provided in order to develop skills in the use of ICT systems. Zulu (1994) also noted the issue of the few qualified ICT engineers to implement, service and maintain ICT hardware and software while Qureshi (1998) observes that the sustainability of the ICT projects depends on local expertise for maintenance and support (Backus, 2001). There is a need to combine both ICT and IS skills with knowledge of the public sector, civil society and change management.

According to Keselica (1994), Smith (1996), Lloyd and Whitehead (1996) training, hands-on support and proactive stance is important in adjusting to work with technology. According to Norris (1999), in government organizations, employees are not adequately trained on information technologies, this results to resistance in change and use as well as underutilization of the technology innovation. Therefore, high level of personnel IT skills can have a positive impact in adoption of e-Government in public organizations. Existence of knowledgeable management can support using of IT to achieve organization objectives (chwelos et al., 2001). Ebrahim and Irani (2005), noted that IT experts are increasingly leaving their jobs in the government to work in the private sector, due to the better offers they are getting. The government should consider better offers to attract them. To maintain highly skilled IT experts, there is a need to train them to keep pace in the rapid ever changing and evolving technology.

Ong'ang'a (2012) noted that human Resource capacity in ICT affects e-Government adoption in Kisumu County. Specifically, the level of human resource understanding on ICT, E-readiness among ICT personnel and ICT literacy among the staff streamline and positively influence e-Governance adoption and implementation. However, employee's resistance to change hampers e-Government initiatives. Nonetheless, training personnel empowers them to maintain the ICT and
make the targets of ICT in the local authority achievable. In addition, Tomaszewicz (2015) indicate that digital literacy among the staff affects e-Government development and implementation in developing countries. Skills required include utilization of search engines, use of the internet, basic computers skills, technical-procedural skills, cognitive skills and critical reflection skills.

Ziemba, Papaj, Żelazny and Jadamus-Hacura (2015) noted that e-Government adoption requires competences and awareness related to the use of ICTs for both managers and employees. In addition, public and private outlays on ICTs education for government managers and employees were key in the implementation and adoption of e-Government. Incentive systems promoting permanent competence improvement of government employees (especially in ICT) are key in the implementation of e-Government adoption.

2.4 County ICT infrastructure and Adoption of e-Government

ICT infrastructure is considered to be pivotal in e-Government implementation and adoption. Appropriate infrastructure must be available before starting any e-Government projects, (Graafland-Essers, and Ettedgui, 2003). According to Altameem, Zairi, and Alshawi (2006, November), an e-Government infrastructure, in general, is comprised of an infrastructure application server environment and its security, data and content management tools; application development tools; hardware and operating systems; and a systems management platform. IT infrastructure is considered to be the heart of the e-Government concept. McKay and Brockway (1989) defined ICT infrastructure as a foundation that enable sharing of information technology capabilities upon which business depends. ICT infrastructure is the shared portion of ICT architecture. Earl (1989) defines ICT infrastructure as the technological foundation of computer, communications, data and basic systems. He views ICT infrastructure as the technology framework that guides the organization in satisfying business and management needs. Duncan (1995) refers to ICT infrastructure as the set of IT resources that make feasible both innovations and the continuous improvement of IT systems. ICT infrastructure is an important aspect in implementation and adoption of e-Government and has been emphasized across all literature. According to Zulu (1994), it’s the main challenge in any ICT project. Tapscott (1995) observed that failure of ICT projects is primarily caused by a lack of sufficient computers and networks. A
study done by Bwalya (2009) on Zambia Health Management Information System (ZHMIS), found that many remote hospitals could not benefit from the initiative due to lack of infrastructure.

According to Davison et al (2000), telecommunication infrastructure and internetworking to enable information sharing by opening new channels of communication inadequate. Nulens (2000) emphasizes the importance of electricity to ICT implementation and adoption of technology and observed that, low quality of electricity networks in Africa causes power fluctuation that affect ICT facilities. Availability and constant supply of electricity is crucial for technology adoption.

According to Laudon and Laudon (2001), Developments in ICT Technological Infrastructure have drastically influenced the competitive business environment as proved by the emergence and strengthening of the global economy, and the transformation of industrial economies to knowledge-and-information-based service economies. Inadequate ICT infrastructure has hampered provision of efficient and affordable ICT services in the country (GoK, 2005) thus there is a need to put more emphasis on provision of supportive infrastructure such as high-speed local networks and fast connections, software, ICT equipment and accessories as well and provision for incentives of ICT infrastructure. E-Government is dependent of highly available network to support online services.

Security is paramount for e-Government adoption. According to Altameem, Zairi and Alshawi (2006, November), securing information from authorized access is an important factor. Underestimating the importance of security can lead to authorized access to sensitive data, loss of trust which can lead to e-Government failure. On the other hand, high level of confidence and trust can be the foundation of a successful e-Government project and initiatives. IT standards are crucial for e-Government adoption. IT standards are specifications for hardware and software that are widely used and accepted or sanctioned by a standard organization (Freeman, 2001). Based on Wakid and Radack (1997), Information Technology Standards refers to the technical rules and the foundation for interconnected systems that work across organizations and geographic locations. Single integrated gateway (one-stop shop) model for adoption of e-Government is expected to provide access to its information and services, that requires the public sectors must share information, knowledge, participate positively, and collaborate to provide e-Government services. Standards for IT play important role in helping people to manage and use the technology.
Rapid change of technology, makes it difficult to develop timely and long-lived standards. IT Standards are known to influence cost reduction of organizations, facilitate enterprise-wide integration, and promote greater levels of IT responsiveness (Kayworth, Sambamurthy and Chatterjee, 1997). Basing on Wangler, Persson and Soderstrom (2001), a standard can influence in connecting organizational processes and systems, and it also allows a flexible approach in organizational cooperation.

Muraya (2015) in a study on the factors affecting successful adoption of e-Government in Kenya’s Public Sector found that ICT infrastructure was the main factor affecting the adoption of e-Government. The study found that network in the offices was not reliable and was not providing a substantial up-time. The study also found that the government was not providing adequate hardware components necessary of e-Government tasks. In addition, necessary software components necessary in the implementation of e-Government initiatives did not exist.

Dahiya and Mathew (2014) indicate that ICT infrastructure including physical IT assets consisting of the computer and communication technologies and the shareable technical platforms and databases had a significant influence on e-Government adoption and performance. The main elements of ICT infrastructure capability included inter-operability, reliability, and flexibility. In addition, effective e-Government readiness is characterized by efficient deployment of ICT infrastructure capability.

Ong'ang'a (2012) examined the relationship between ICT infrastructure and e-Government adoption among local authorities in Kisumu County. The results indicated that high speed broadband networks enhance communication initiatives, internet networking harmonizes operations in the local authority and effective ICT equipment enhances the implementation of the initiatives. However, lack of electronic facilities hinders e-Government adoption among local authorities in Kisumu County. In addition, unequal access to computer technology leads to ICT based conflicts in the local authority.

2.5 County Organization Culture and Adoption of e-Government

Culture refers to values and beliefs of individuals within a group. According to Ein-Dor, Segev, and Orgad (1993), it’s the totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thought characteristic of a community or
population. A number of definitions exist but most agree that culture is “holistic, historically determined, socially constructed, soft and difficult to change”. Culture creates a distinction between organizations, convey a sense of identity for its members, facilitates commitments towards organization’s goals, enhances the stability of social system, reduces ambiguity and serves as a common mechanism that guides and shapes attitude and behavior of the employees. Culture is based on a group which could be a nation, organization, profession, function area or a team and this can be referred as national culture, organization culture, professional culture and team culture. According to researcher’s culture is known to play a unique role in technologies like internet and global systems that provide information and services to the individuals and organization. An individual work behavior and commitment is likely to be influenced by organizational and professional norms. Organizational culture refers to common values and beliefs shared by individuals within an organization (Punnett and Ricks, 1990). It’s is important for an organization to evaluate the importance of the organization culture and its impact on information system implementation and adoption. Several researchers have investigated the role of organizational culture on absorptive capacity and information technology success (Harrington and Guimaraes, 2005), information technology adoption and diffusion (Dasgupta, Agarwal, Ioannidis, and Gopalakrishnan, 1999), information technology implementation (Fedrick, 2001; Harper and Utley, 2001), information technology infrastructure flexibility (Syler, 2003) and user computer efficacy (Sheng, Pearson, and Crosby, 2003). Other studies have looked at impact of organizational culture on specific technologies such as knowledge management (Gold, Malhotra, and Segars, 2001) and implementation of data warehouses (Doherty and Doig, 2003). A study done by Dasgupta and Gupta (2010), the role of culture in internet adoption, found that organizational culture has an impact on individual acceptance and use of Internet technology in a government agency, and therefore should carefully managed for the successful adoption and diffusion of Internet and other technologies.

According to Denison and Mishra (1995), organizational culture has four traits: involvement, consistency, adaptability, and mission. His framework has been used in various empirical study to examine cultural issues in different environments such as organization culture and adaptation on technology in Kenyan universities, organization culture and adoption on internet in India among others. Involvement is the subjective psychological state of users which is practiced in forms of participation through behavior and activities. This enables the members to gain a sense
of responsibility because they are involved in organization activities. Denison and Mishra (1995),
adds that highly involved people are more productive, more committed and responsible towards
organizational interests, and this leads to achievement of organization goals. Low involvement
affects the belief and attitude of the user hence difficulties in responding to environmental change.
Successful e-Government can be achieved through highly committed leaders and employees’
participation to achieve integration and collaboration of e-Government systems.

Adaptability focuses on the external situations by developing norms and beliefs that support its
capacity to respond to the need for change. These external situations could be pressure and
demand from global expectations, citizens and other stakeholders for transparent better services
and access to information, which forms the basis of e-Government to enable access to services
and information 24/7 basis.

Mission is a cultural factor that provide purpose and meaning to an organization, as well as giving
direction while identifying goals that guide an organization. A mission of an organization is
established based on the principals of the organization, which in turn influences the progressive
development of an organization. Clear Mission acquires meaning and purpose that guide in
employee’s role and enable them to Engauge in activities that relate to the level of the mission.
To achieve a mission, a clear vision and goals should be defined. The vision guides and
determines the success of future organizational achievement and its employees by motivating
stakeholders to accomplish their goal. According to Nurdin, Stockdale, and Scheepers (2010),
Organizations must have clear mission and goals to guide future directions in the implementation
and adoption of e-Government. Top leaders should clearly communicate the mission and vision
of the organization. It’s evident that UK local government had a clear vision for “modernized”
local government over five years with all services accessible online 24 hrs. a day. Singapore had
a clear vision from the initial stages and these lead to successful digital government
implementation and adoption. Success of digital government can also be achieved through
organization established shared values through setting clear goals and priorities when adopting e-
Government initiatives. Al-Kaabi (2010), noted that governments should have a clear vision and
strategy before they start e-Government projects and initiatives with target measurements for
success.
Bureaucratic culture refers to an organization’s culture that has clear lines of responsibility and authority based on control and power. Wallach (1983), argues that organizations are managed with strong explicit rules, are hierarchical, cautious, solid and procedural, and their people work in a systematic and an organized way in an environment where responsibility and authority are in clear lines. Most of the rules are formalized providing people with clarity in the regulations that enable them to perform their task according to the regulations. According to Olchi (1978), clear hierarchies are present in organizations in a bureaucratic culture that link people through vertical and horizontal line within the organization. In hierarchical organizations, people at higher levels set or ratify policies and objectives, and then communicate to lower level or subordinates who are charged with responsibility to take necessary action. Clear regulations and hierarchies help an organization and its members gain better coordination in accomplishing their tasks. Coordination integrates and links together different people at all levels and parts of the organizations to achieve a set of collective tasks. In e-Government adoption, the presence of bureaucratic culture will benefit the process of the adoption because clear and explicit regulations and hierarchies support supervision to reduce the chance of errors, disobedience, and negligent behavior among people.

According to Heeks (2002), e-Government research has been criticized for minimal research in the area of culture. Culture is viewed to be probably the most difficult factor to isolate, define and measure and yet has a powerful impact upon the diffusion of information systems (Heeks, 2002; Hasan and Dista 1999). E-Government takes radical changes in organization structure, values and culture in all levels of public sector. Employees in the sector are strongly influenced by the culture they live in and understanding how culture has an impact on the adoption process is a vital element for successful adoption of e-Government (Alsowoyegh, 2012). This will enable solve emerging political, organizational, technological, cultural and social levels in the organization for successful adoption of modern technology information technology systems.

2.6 County Financial capacity and Adoption of e-Government

The availability of adequate financial resources to build or enhance organization’s IT infrastructure has been seen as one of the strongest predictors of innovation (Mohr, 1969). Financial support is indispensable for Organizations adopting IT innovations. Investment in information and technology is required in procuring and developing adequate level of hardware and software for future innovations as well as training end users. Kamal (2006) noted that there
is a big variation between public sector and private sector in terms of budget allocation for adopting New IT. Financial resources are termed as critical for any successful implementation and adoption of e-Government projects. It is also seen as the greatest obstacle to moving County government services to the Online services by 70% of the respondents (NACO, 2000). According to Okiy (2005), the importance of financial resources for excellence service cannot be over emphasized, it’s the glue that holds all stakeholders together and enable them to attain organization goals.

According to Davies and Heeks (2002) and Gakunu (2004), technology costs money and money is always in short supply in every organization especially in the public sector where there are competing needs. E-Government systems require considerable financial resources: resources must be allocated to developing and managing systems, building up technical infrastructures, and coordinating systems and initiatives (UNDP, 2006). According to Lind (1991) many organization in developing countries lack sufficient financial resources to acquire new and up-to-date technologies. This hinders implementation of new technological innovation, any subsequent enhancement and ongoing expenses during usage. In the United States, Manoharan (2013) indicated that lack of financial resources was acting as a key barrier to the application of e-Government for over 57.1 per cent of the County governments and cities. In addition, the author found that funding as the most significant obstacle facing the movement of County government services to the online services.

The United Nations Department of Economic and Social Affairs report (2012) indicate that in the funding of e-Government initiatives, financial capacity considerably determine success. To the Italian government, e-Government is not costly compared to other projects like road construction that require substantial financial requirements. However, despite the many economic, social and political benefits of e-Government, some countries would not invest their available resources to the e-Government at the expense of other projects. In a study on e-Government adoption in Cape Verde, the World Bank (2017) indicates that implementation of the Information Society Strategic Program (ISSP) and the Electronic Government Action Plan (EGAP) was facing the change of financial resources availability. This was as a result of the high cost of telecommunications in the country, lack of financing capacity for ICT projects.
In Vietnam, Khanh (2014) indicates that the importance of funding in the implementation of e-Government cannot be emphasized. He argues that while other factors such as human resource and infrastructure are required in the adoption of e-Government, funding is more significant as it is required in ensuring the success of the implementation process. Therefore, lack of funds in e-Government projects is certainly a disincentive. In the consideration of the e-Government project’s funding, governments should consider financial savings and cost reduction that emanate from the utilization of electronic services both in the medium and long term. Even though the initial start-up cost of the e-Government is considered to be high in the short, but most of the costs incurred in e-Government adoption are not recurrent.

Al-Shboul, Rababah and Al-Saqqa (2014) financial cost and budgeting were some of the main factors affecting the implementation of e-Government services in Jordan. The authors indicated that while the benefits of e-Government included efficiency, in service delivery, improvement of service delivery quality, citizen’s empowerment as well as increment in transparency and accountability, the government had not allocated adequate financial resources to the implementation process. In Botswana, Nkwe (2012) indicate that lack of allocated budget for e-Government deployment was one of the main changes facing adoption of e-Government in Botswana. E-Government systems require the allocation of considerable financial resources. This is because resources must be allocated to the development and management of systems, building up of technical infrastructures, and coordination of systems and initiatives.

As Sarisar (2015) indicated, financial constraint was one of the main factors affecting the adoption of e-Government in the County government of Narok. The financial budget for the ICT development in Narok County was Ksh. 33 million, which was very low compared to other projects in the County. For instance, road projects budget was Ksh.1.2 billion. The required budget for e-Government in the County was Ksh. 230 billion, which is needed to roll-over basic infrastructure and facilitate the ICT take-off. Therefore, the allocated budget was only 0.138 per cent of the total budget estimates.

2.7 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 and 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 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 Sacheva (2009), e-Government is more than putting a website and buying computers. While it brings more efficient and less costly service delivery, service improvement and cost saving are not automatic, it’s a process that require proper planning, sustained dedication of necessary resources and political will to be successful. Conklin (2007, January) noted that competition is an element missing in the government operations. Competition has been proven as a powerful ally in the quest for improvement. Most private firms are able to embrace continual war for customers through change and innovation.

According to El Badawy and Attia (2014), 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 ADKAR Model (Hiatt (2006)) 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 ADKAR 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 El Badawy et al., (2014), 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.

Fountain (2001) and O’Looney (2002) argue that the transformation to e-Government requires organizational leaders’ commitment and willingness to change entrenched public structures and transaction processes. OECD (2003) declared that “Managers must be able to lead the organization’s IT department and outside partners, and must be able to integrate the organization’s
ICT strategy with its broader goals.” Managers and staff should have the necessary ICT skills and knowledge to plan and manage effectively the system’s developmental life cycle. Chen (2002) urges public sector senior managers to give continuous support to an IT project as well as maintain awareness of current e-Government practices and vendors. Jeyaraj, Rottman and Lacity (2006) found that top management support to be one of the best predictors of organization adoption of Information System innovations.

Nograšek (2011) noted that Change managements is a missing aspect in e-Government implementation and adoption. E-Government is predominantly seen as a technological mission other that organizational transformation issue, literature about change management in e-Government is still missing, no comprehensive framework that would guide in identifying changes needed in e-Government implementation and adoption. More research is needed on this area.

2.8 Theoretical framework

To understand the uptake and adoption of e-Government systems, many theories have been used which take one form of approach or the other: adoption, diffusion, domestication (Titah et al. 2006). For over 20 years, adoption has been a major concern in information system (Chuttur, 2009). This has led to development of many models which had been used in the study of e-Government adoption. For example, to understanding Adoption of e-Government for Services delivery in Kuwait, AlAwadhi and Morris (2008) employed UTAUT explore factors that determine the adoption of digital government services. To minimize failures in the process of e-Government adoption, Carter and Belanger (2008) and Colesca (2009) added risk and trust to the models. Shajari and Ismail (2010), used TAM, DOI and UTAUT to analyze adoption of e-Government in Iran. In the study of e-Government adoption in the public sector, Sang and Lee (2009) combined TAM, TAM2, DOI and DM-IS to develop conceptual models. A study done by Talukder (2012) adopted TAM to study factors affecting technological innovation acceptance by individual employees in Australia. While most models focus of individuals in relation to technology adoption, TOE framework has been used specifically for analyzing adoption of technology by organizations. This study adopted theories that bring about factors that can predict acceptance and use of technology for individuals and organizations as well.
2.8.1 Technology Acceptance Model (TAM)

Technology Acceptance Model was developed by Davis (1989), to explain the way users accept and use technology (Curtin et al., 2003). Many researchers have used TAM in reviewing the acceptance of a technology. Technology acceptance Model seeks to conceptually understand and explain individual’s intention to use or not use technology system using two perceptions namely; Perceived usefulness (PU) which is the degree to which a person believes that using a particular system would enhance his or her job performance and Perceived ease of use (PEoU), which is the degree to which a person believes that using a particular system would be free their physical and mental efforts. Perceived usefulness and perceived ease of use influences one’s attitude towards system usage, which influences one’s behavioral intention to use a system, which, in turn, determines actual system usage (Davis et al., 1989). The model is criticized for lack of external variables that affect PU and PEoU such as attitude. Various researchers have revised TAM, with notable changes in TAM2 (Venkatesh and Davis, 2000) and TAM3(Venkatesh and Bala, 2008). TAM2 included social influence and cognitive instrumental processes as the determinants of perceived usefulness. The social determinants are; subjective norm, the degree to which an individual perceives that most people who are important to him think he should or should not use the system and image, “the degree to which an individual perceives that use of an innovation will enhance his or her status in his or her social system”. The cognitive determinants include job relevance, which is the degree to which an individual believes that the target system is applicable to his or her job; output quality, which is the degree to which an individual believes that the system performs his or her job tasks well and result demonstrated as the degree to which an individual believes that the results of using a system are tangible, observable, and communicable. (Venkatesh and Davis, 2000; Venkatesh and Bala, 2008). Experience and voluntariness were included as moderating factors of subjective norm (Venkatesh and Davis, 2000).

According to Song, Rao and Braynov (2004), if the top management is committed to support and provide a positive environment that encourages user participation in e-Government systems, most users can use the system. Job task and the system should match. The management should take note of adopter’s social status, social recognition and a clear understanding of the e-Government system can lead to perceived usefulness of the system.
2.8.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

Unified Theory of Acceptance and Use of Technology was introduced through extending TAM by (Venkatesh, Thong and Xu, 2012; Gupta, Dasgupta, and Gupta, 2008; Stafford, Stafford, and Schkade, 2004; Taylor, 2004; Venkatesh, et al., 2003).

The theory was developed through a review and consolidation of the constructs of eight models that earlier research had employed to explain IS usage behavior (theory of reasoned action (TRA), technology acceptance model (TAM), motivational model (MM), theory of planned behavior (TPB), a combined theory of planned behavior/technology acceptance model, model of PC utilization, innovation diffusion theory (IDT), and social cognitive theory (SCT)). Subsequent validation of UTAUT in a longitudinal study found it to account for 70% of the variance in usage intention (Venkatesh et al., 2003). UTAUT has four determinants of user acceptance and usage behavior, namely; performance expectancy, effort expectancy, social influence and facilitating conditions. Performance expectancy defined as the degree to which an individual believes that using a particular technology will help him or her to attain gains in job performance. Venkatesh et al. (2003) proposed that performance expectancy captures the constructs of perceived usefulness, extrinsic motivation, job fit, relative advantage and outcome expectations. Perceived usefulness has been strongly related to usage intentions and it define as ‘a person’s expectation that using the technology will result in improved job performance. Effort expectancy is defined as the degree of ease associated with the use of the system. Effort expectancy has three constructs; degree of ease associated with the use of the system. Ease of use is defined as the degree to which an individual believes that using a particular system would be free of physical and mental effort.
Complexity relates to the degree to which a technology is perceived as relatively difficult to understand and use. The organizational and technical infrastructure are the facilitating conditions that individual believes they exist to support the use of the system. Usually measured by perceived behavioral control, facilitating conditions, perceived behavioral control and compatibility. Thompson, Higgins and Howell (1991) examined information technologies and found that training users and assisting them when they encounter difficulties is an example of a facilitating condition that can influence technology utilization. Social influence is the degree to which an individual perceives that important others believe he or she should use the new system. Despite the model being tested, Gallivan (2000) argued that generic application of this model may not applicable if its mandatory for users to adopt, if adoption is dependent on multiple factors and of adoption requires extensive training to upgrade user skills. A generic model can only be used in a voluntary adoption decision but not suitable in explaining complex adoption decision were other factors like senior management influence the decision to adopt.

Understanding UTAUT can help the managers in understanding the drivers of accept technology as well as intention to use in order to assess the likelihood success of new innovation in an organization. This can in turn help then predict and put in place measures than can increase individual satisfaction and use of innovation systems.

![Diagram](image)

**Figure 2: Unified theory of acceptance and use of technology** *(Venkatesh, Thong and Xu, 2012)*
2.8.3 Diffusion of innovation theory (DOI)

The diffusion of innovations (DOI) theory was developed by a sociologist Rogers to explain how an innovation diffuses through a society (Rogers, 2003). The theory has been used extensively to explain the adoption of IT innovations in an organization or society (Carter and Be`langer, 2005). Innovation is defined as an idea, a practice, or object that is perceived as new by an individual or another unit of adoption (Rogers, 2003), while diffusion is defined as the process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 2003). According to Rogers (2003), the rate of diffusion of innovation is affected by five attributes: relative advantage which is the “degree to which an innovation is perceived as better than the idea it supersedes”, Compatibility which is the “degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopter”, complexity which is the “degree to which an innovation is perceived as relatively difficult to understand and to use”, Triability which is the “degree to which an innovation may be experimented with on a limited basis” and observability which is “the degree to which the results of an innovation are visible to others”. Agarwal and Prasad (1997), noted that these characteristics influences adoption behavior of technology in both individuals and organizations.

To drive adoption and use of innovations, managers must promote the system, they need to understand the target population, they must understand the individual and internal characteristics, as important antecedents that drive organization innovativeness.
Structuration theory, was proposed by Anthony Giddens (1979, 1984), as a way to bringing together the duality of structure and agents. He argued that most theories relied on the structure, making human agents' passive actors while most of the social conditions, power and constrains that shaped human actions were ignored. The theory argues that structures existing in the society and the human actions are mutually constitutive and form a duality. According to the theory, structures are abstract rules, judgments, indicators and ways of doing or seeing or understandings that operate through explicit and implicit orders. Anthony Giddens (1979, 1984), identified three modalities linked to human actions such as facilities (resources that are used to exercise power), norms (rules that govern the actions), and interpretive schemes (knowledge that people use to make a meaning on every day occurrences).

In the institutional theory (Orlikowski 1992, Scott 1995) identifies three dimensions that influence individual cognitive and behaviors in an organization: signification, domination and legitimization. Structure of signification provide meaning to every human action and interaction with objects. Human agents look at information system in terms of how they understand them as well as their capabilities. Domination structure deals with power relations that are implicit
everyday human actions, thus hierarchy relationships within organizations indicate power structure rising from authority, rank experience and implied knowledge. Structure of legitimizations determines what is acceptable and appropriate for the organizations without use of power. For example, the organization can decide to use email as a mode of communication and interaction through acceptance. According to Orlikowski et al. (1995), individuals in an organization can make use of legitimization, domination and signification to make sense of technology and gather resources needed to adopt and use technology within the internal processes, business activities as well as strategies and actions needed to assimilate technology.

The structuration theory in adoption of technology focuses on human action and social structure interaction and suggests that e-Government adoption is a cumulative consequence of individual actions shaped by organizational meta-structures (Giddens 1984). When meta-structures are reinforced, they can produce established behaviors or emergence of new structure whose actions can generate innovative organizational behavior.

The scholars argued that organizational human resources or top management could manipulate the institutional structures of signification, legitimization, and domination, thereby influencing and motivating individual actions. This can be achieved by either reinforcing existing structures or by creating conditions that could make the organization more conducive to adopt new technology.

Figure 4: Human action and organizational properties interactions (Giddens, 1984)
2.8.5 Technology-Organization-Environment (TOE)

For conceptualizing individual end-user acceptance many researchers have used TAM and UTAUT while for adoption of technology by organization is limited, Oliveira and Martins, 2011). TOE framework has been extensively used to study e-business. It has three components impacting the process of organization’s adoption, implementation and use of innovations, namely; technological, organizational and external environmental factors. According to Tornatzky and Fleischer (1990a), technology, organization and the external environment are predictors of decision making for technology adoption in organizations (Baker, 2012; Zhu and Kraemer, 2005; Tornatzky and Fleischer, 1990b). According to TOE framework, organization advancement through availability of relevant new technologies (e.g. Internet, technological tools and development processes), organizational structures and resources (organization culture, human recourse capacity, financial capacity, top management support, organization size, compatibility and collaboration) and the social environment around the organization (such as regulations and economic structures) are fundamental in technological innovation decision-making (Baker, 2012; Tornatzky and Fleischer, 1990). TOE framework has been validated by Information system researchers in different settings as a technology acceptance model at the organizational level, (Oliveira and Martins, 2011, Baker, 2012). Managers should understand the technology, organization and Eternal characteristics of their organization in order to determine organization intent to adopt innovations, influence the process of assimilation and this will have an impact of organization performance.
2.9 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 study assumes that adoption of e-Government dependent of five key independent variables within the organization namely: County ICT infrastructure, County organizational culture, County financial capacity and County human resource capacity. This relationship between the independent and dependent variables is moderated by organization change management. The relationship between the study variables is shown in Figure 6.
2.9.1 Conceptual Framework and the relationships between the variables

**INDEPENDENT VARIABLES**

**County Human Resource Capacity**
- ICT, technical skills
- Project management skills
- Communication, presentation skills
- Support staff availability
- Technical experts
- Project managers

**County ICT infrastructure**
- Computer technologies
- Internet connection and access
- Websites
- Backups
- Reliable Power supply
- ICT policy
- Security policies

**County Organization culture**
- Shared Mission, vision and goals
- Adaptability
- Involvement
- Bureaucracy
- Monitoring and evaluation

**County Financial Capacity**
- Financial resource
- Budgets allocation
- External funding
- Funding for training

**MODERATING VARIABLE**

**Change Management**
- Training
- Participation
- Top management support
- Coordination
- Motivation

**DEPENDENT VARIABLE**

**Adoption of E-Government**
- Enhanced Sharing of information
- Reduced workload for employees through task automation
- Simplifying bureaucratic processes
- Easy storage and retrieval of information
- Faster service delivery
- Efficient and effective communication
- Enhanced transparency

Figure 6: Conceptual Framework showing relationship between variables
In the figure, Dependent variable was adoption of e-Government service delivery with Human resource, ICT infrastructure, Culture and Financial capacity as independent variable. Change management moderates the relationship between independent and dependent variables. Employees should be equipped with necessary skills and ICT knowledge to increase adoption of e-Government (Kandiri, 2006). Availability of ICT infrastructure such as reliable network, computers, software, reliable power is the heart of e-Government implementation and adoption. According to Dasgupta and Gupta (2010) organizational culture has an impact on individual acceptance and use of Technology, therefore organization should promote adaptive culture. Financial resources are known to be critical for any successful implementation and adoption of projects, according to NACO (2000), it’s the greatest obstacle faced by many organizations. Availability of financial resources can increase implementation and adoption of e-Government. Change management in seen as the missing element in many ICT projects, especially in public offices shifting from traditional method of offering services to automated systems. With shifting processes and orientation, change management can help the employees in adapting to changes brought by technology El Badawy and Attia (2014).

2.10 Summary of Knowledge gaps established in the literature

This section presents the summary of literature discussed in this chapter and the summary is based on other scholars, academician and researcher reviews. There are various studies that have been done both internationally and locally on e-Government. These studies include among many; Farelo and Morris (2006) noted that e-Government is used in most government departments to provide services to the public, disseminating information and knowledge to the general citizens. Application of e-Government in public services delivery provides an avenue where services are delivered in an easier, effective and more efficient way. Government agencies and departments that have applied e-Government in their services delivery have realized improved services delivery with ease and less costly. A study done by Pudjianto and Hangjung (2009) on factors affecting e-Government assimilation in Developing Countries revealed that environment aspects play a critical role in implementation of e-Government, while organization factors and technical aspects play little role in e-Government implementation. The study also revealed that TOE model can be used to in bring new understand on improving academic as well as developing policies and assisting practitioners.
In the study, factors affecting e-Government implementation and adoption in the state of Qatar
Al-Shafi, Weerakkody, and Janssen (2009) found that security and privacy, training and education
on e-Government to citizens, level of awareness among the staff, policies and regulations, support
by the government and commitment were noted as the main factors that affects e-Government
implementation and adoption. Al-Rashidi and London (2010), did a survey examining internal
challenges to e-Government implementation and adoption from system users’ perspective. The
study revealed that various factors hindered implementation of e-Government such as technical
problems, resistance to change and lack of knowledge on ICT among staff. This study though
captured some of the aspects that this study aims to investigate, the result of the study may defer
given that the study depicts true picture on how those factors influence e-Government
implementation which may not be the case in Kenya context.

A study done by Alateyah, Chang, Crowder and Wills (2014) examined factors affecting the
intention of citizens of Saudi Arabian in adopt e-Government services. They revealed that
technical infrastructure, lack of awareness and privacy issues were some of the factors that
motivated Saudi Arabian citizens to embrace e-Government in service delivery. Al-Shboul,
Rababah, Ghnemat and Al-Saqqa (2014) conducted a study on challenges and factors affecting
the implementation of e-Government in Jordan. They found that lack of expertise on ICT,
inadequate funding to support the program, social influence, lack of understanding and awareness
on how the programs operate, technical problems, poor policies laid down, managements
problem, lack of trust on the ICT and insecurity of the system were highlighted as among the most
significant factors that hinder adoption of e-Government in Jordan government ministries. This
leaves a gap that need to be investigated on whether the said factors affect implementation and
the adoption of e-Government in Kenyan context.

In a study on influence of e-Government strategy on service delivery in the government ministries
in Kenya, Mugambi (2013) found that all government ministries had not fully implemented e-
Government. However, for the ministries that had adopted e-Government had realized immense
benefit, where data were easily shared, cost of operation had lowered, time taken to serve the
citizens had also decreased, transaction were made easier. The ministries had also realized
improved management of records, ease working procedures and improved performance among
the staff. Despite the benefits realized, the study also noted that most of the citizens were trying
to access online services in various Ministries without success since most of the websites and other online platforms used by the government Ministries were experiencing breakdown and slow response on any command. Thus, there is need to analyses those factors that enhance e-Government in County government.

In their study Al-Shboul, Rababah and Al-Saqqa (2014) on challenges and factors affecting the implementation of e-Government in Jordan, the results indicated that financial, social and political factors were affecting e-Government implementation. Having been conducted in Jordan, the findings of this study cannot be generalized to Kenya. The current study was conducted in the County government of Kajiado, Kenya.

In a study Sarisar (2015) examined the factors affecting the adoption of e-Government in the County government of Narok. The study adopted a case study research design. The study found that top management, financial constraint, computer and information literacy and lack ICT infrastructure e-Government implementation and adoption. Different counties in Kenya are characterized by different socio-demographic characteristics and hence findings from one County cannot be generalized to others. The current study was conducted in the County government of Kajiado, Kenya.

In the study Nkwe (2012) examined the challenges and opportunities in e-Government in Botswana. The results indicated that Botswana is still lagging behind in e-Government adoption. However, the study was limited to Botswana and hence the findings cannot be generalized to Kenya. Khanh (2013) assessed the critical factors affecting e-Government adoption in Vietnam. The study adopted a descriptive research design. The study found that critical factors affecting e-Government include human resource, financial resources and public participation.

Manoharan (2012) studied the determinants of County e-Government in the United States. The study adopted a survey research design. The study established that contextual, institutional and socio-economic factors had an influence on e-Government adoption. United States, is a developed country while Kenya is a developing country and hence the findings of this study cannot be generalized to Kenya.

Muraya (2015) studied the factors affecting successful adoption of e-Government in Kenya’s Public Sector. The study used descriptive research design. The study found that the main factors
affecting adoption of e-Government include infrastructure, policy, social factors and security. The study did not show how human resource, financial resources and organizational culture affect adoption of e-Government. This study focused on the influence of Human Resource Capacity, ICT infrastructure, Organization culture and financial capacity on the adoption of e-Government.

In the survey done by Gathungu and Mungai (2011) on contextual factors affecting e-Government strategy implementation and its impact on public sector performance in Kenya. The study pointed that strategy, technological factors, policy and organization factors were noted to be the main factors that affecting e-Government strategy implementation in most public sectors. The study did not focus on other factors that this study investigated such as financial aspects, human resources and change management on how they affect implementation of e-Government.

A study done in Kajiado by Odago and Mwajuma (2013) on Factors affecting effective implementation of e-procurement in County governments, pointed that Top management, staff competence budgetary allocation influence effective implementation of e-procurement. The study also found that Kajiado County does not have enough infrastructure to support implementation of e-procurement. The study involved 40 Employees and did not look at Culture and change management as a moderating factor. This study involved covered the whole of Kajiado County.

To conclude the literature reviewed, a summary of research gaps.

**Table 2.1: Summary of the research gaps.**

<table>
<thead>
<tr>
<th>Author</th>
<th>Focus of the Study</th>
<th>Methodology used</th>
<th>Findings</th>
<th>Gap in Knowledge</th>
<th>Focus of current study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talukder, (2012)</td>
<td>Technological factors affecting adoption of innovation by individual employees in Australian</td>
<td>Survey questionnaires</td>
<td>Peer and social network Demographic factors influence adoption of technology</td>
<td>The study focused on individual user adoption</td>
<td>The study addressed individual adoption in an organization setting as influenced by organization factors.</td>
</tr>
<tr>
<td>Dasgupta, and Gupta, (2010)</td>
<td>Organizational Culture and Technology Use</td>
<td>Survey questionnaires</td>
<td>organizational culture has individual</td>
<td>Study focused on</td>
<td>The study addressed change</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Data Collection Method</td>
<td>Trust Factors</td>
<td>Study Limitations</td>
<td></td>
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<tr>
<td>Rehman, Esichaikul and Kamal (2012).</td>
<td>Factors influencing e-Government adoption in Pakistan</td>
<td>expert interviews</td>
<td>Trust on internet and trust in the government affects citizens use of e-Government</td>
<td>The study only focused on trust. The study was limited to one government agency in India.</td>
<td></td>
</tr>
<tr>
<td>Al-Azri, Al-Salti and Al-Karaghouli, (2010)</td>
<td>Investigated how e-Government was implemented successful and its transformational effect in Oman</td>
<td>Case study with semi-structured interviews</td>
<td>Vision, top management commitment and support, training, organization culture influence success of e-Government adoption</td>
<td>The study was limited to one government agency. The study did not include change management and infrastructure.</td>
<td></td>
</tr>
<tr>
<td>Kyobe (2011)</td>
<td>Investigating the key factors influencing ICT adoption in South Africa</td>
<td>Survey</td>
<td>The study found Exposure Capacity to adopt and use technologies Political factors and state policies influence adoption of e-Government.</td>
<td>The study looked at financial capacity, and culture and factors that were not covered in this research in the Kenyan context.</td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td>Title</td>
<td>Methodology</td>
<td>Findings</td>
<td>Notes</td>
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<td></td>
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<td></td>
<td>technological issues, lack of awareness, resistance of public employees,</td>
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<td></td>
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<td></td>
<td>data privacy and security, the legal framework, the needed technology,</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>administrative obstacles, and trust or believing in e-Government.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maweu and Karani (2013)</td>
<td>An e-Government - Integration Framework for County Governments in Kenya</td>
<td>Survey with structured questionnaires</td>
<td>Government officials</td>
<td>The study focused on how visionary leadership, clear objectives and a sound infrastructural execution mechanism influence implementation of integrated E-Government</td>
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<tr>
<td>Muhammed, Osama, Mohhamed &amp; Rawan (2014)</td>
<td>Challenges and factors affecting the implementation of e-Government in Jordan.</td>
<td>Survey research design</td>
<td>The results indicated that financial, social and political factors were affecting e-Government implementation.</td>
<td>Having been conducted in Jordan, the findings of this study cannot be generalized to Jordan.</td>
<td></td>
</tr>
<tr>
<td>Sarisar (2015)</td>
<td>Factors affecting the implementation of e-Government in Jordan.</td>
<td>The study adopted a</td>
<td>The study found that top</td>
<td>Different counties in</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The current study was conducted in the County government of Kajiado, Kenya</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Title</td>
<td>Research Design</td>
<td>Findings</td>
<td>Limitations</td>
<td>Location</td>
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</tr>
<tr>
<td>Nkwe (2012)</td>
<td>E-Government: Challenges and Opportunities in Botswana</td>
<td>Critical review literature</td>
<td>The results indicated that Botswana is still lagging behind in e-Government adoption.</td>
<td>The study was limited to Botswana and hence the findings cannot be generalized to Kenya</td>
<td>The current study was conducted in the County government of Kajiado, Kenya</td>
</tr>
<tr>
<td>Khanh (2014)</td>
<td>The critical factors affecting e-Government adoption in Vietnam</td>
<td>The study adopted a descriptive research design</td>
<td>The study found that critical factors affecting e-Government adoption include human resource, financial resources and public participation</td>
<td>The study was limited to Vietnam</td>
<td>This study was conducted in Kenya</td>
</tr>
<tr>
<td>Muraya (2012)</td>
<td>Factors affecting successful adoption of e-Government in Kenya’s Public Sector</td>
<td>The study used descriptive research design.</td>
<td>The study found that the main factors affecting adoption of e-Government include infrastructure, policy, social factors and security.</td>
<td>The study did not focus on how human resource, financial resources and organizational culture affect adoption of e-Government</td>
<td>The study focused on the effect of Human Resource Capacity, ICT infrastructure, Organization culture and financial capacity on the adoption</td>
</tr>
<tr>
<td>Odago and Mwajuma (2013)</td>
<td>Factors affecting effective implementation of e-procurement in County governments: a case study of Kajiado County, Kenya</td>
<td>Descriptive approach with semi structured questionnaires</td>
<td>The study looked at top management, staff competency and ICT infrastructure as factors affecting effective implementation of E-procurement</td>
<td>They study found that top management, Staff competences and ICT infrastructure are crucial in implementation of e-procurement.</td>
<td>The study did a broad coverage of more employees and looked at more factors that influence adoption of e-Government in which E-procurement is part of it in the same County;</td>
</tr>
</tbody>
</table>

### 2.11 Chapter Summary

This chapter reviewed literature regarding dependent variables (Adoption of e-Government) followed by the selected Organizational internal factors (County Human Resource Capacity, County ICT Infrastructure, County Organizational Culture, and County Financial Capacity) as well as Moderating variable (Change management). Other section includes theoretical and conceptual framework, research gaps and summary of literature review.
CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter describes research methodology used in the study with details of research design, target population of the study, sample size and sampling technique, research instruments, Reliability and validity of the instruments used in the research. It also explains data collection procedures, operational definition of variables and method of data analysis. It also presents an analysis of the approach and tools that were used to conduct the study as well as Ethical issues.

3.2 Research Paradigm

Paradigm is a culture of researchers with a set of beliefs, values and assumptions regarding the nature and conduct of research (Kuhn, 1977). According to Olsen, Lodwick, and Dunlop (1992), it “implies a pattern, structure and framework or system of scientific and academic ideas, values and assumptions”.

This study adopted a pragmatic approach. Pragmatism was derived from the work of Peirce, James, Mead, and Dewey (Cherryholmes, 1992). They claimed that knowledge rose out of “actions, situations, and consequences rather than antecedent conditions” (post positivism). Their concerns were in applications “what works” and the solutions to the problems (Patton, 1990). According to Rossman and Wilson (1985), the problem is more important that the method and the researchers should use all approaches to understand the problem. Pragmatism is the philosophical underpinning for all mixed method studies as noted by Tashakkori and Teddlie (1998) and it conveyed the importance of focusing on the research problem (Patton, 1990) and using pluralistic approaches to derive knowledge about the problem. According to Cherryholmes (1992), Murphy (1990), Creswell (2014), Pragmatism is not a one system of philosophy, its inquiries draw liberally from both quantitative and qualitative assumptions when engaged in research. The Researcher can choose techniques, methods and procedures that suits the needs and purpose of the research. By choosing both quantitative and qualitative data, the researcher can provide the best understanding of the problem as well as get opportunity for answering important research questions.

Pragmatism also believed that research occurs in historical, political and social other than context. Pragmatics are open to different world views, different assumptions as well as different data
collections and analysis. Their ideas were that science involved operationalizing the meaning of concepts in terms of the outcome of experimental inquiry, this enables conceptual distinctions that are meaningless and useless. Using one method, the research is likely to be biased and subject to weaknesses, Collection of both qualitative and quantitative data neutralizes the weaknesses of each form of data. According to Morgan (2014), fundamental principles of pragmatism are best suited to analyze any problem solving in any human activity and therefore this Design aided in gathering data for e-Government adoption in the County government.

3.3 Research Design

Research design connects the conceptual research problem to the actual empirical research. It articulates data and methods used in answering research questions. According to Kothari (2004), it’s an advance planning of the methods to be adopted for collecting the relevant data and the techniques to be used in their analysis, keeping in view the objective of the research and the availability of staff, time and money. The study adopted mixed method approach which used pragmatic system of philosophy. According to Johnson and 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.

When used in research, it enables the researcher to use multiple approaches to answer research questions, rather than restricting themselves to one method. Mixed method is inclusive, expansive and pluralistic and complementary, enabling the researcher to obtain the best and useful answers to the research Questions. This study applied Qualitative research methods to discover and understand the experiences, perspectives and thoughts of the respondents in their social environment. This enabled the researcher to get detailed exploration of e-Government adoption in the County government of Kajiado. According to Harwell (2014), using Quantitative methods enables the researcher attempts to maximize the objectivity, replicability, and generalizability of findings, and often interested in the prediction. Using Quantitative methods, the researcher can establish the relationship between the variables in the study, which can be converted to numbers. The study used descriptive and inferential statistics for data analysis. This enabled the study to use correlation and regression for better results.
3.4 Target population

The study targeted Employees working under the County Government of Kajiado. During the formation of County Governments in Kenya, 10 ministries were devolved from the National Government to County Governments. At the time of this study, the County Government of Kajiado had about 43 departments and a total number of 2660 of employees within the Ten Ministries as indicated in Table 3.1.

Table 3.1: List of the Ministries in the County Government

<table>
<thead>
<tr>
<th>Ministry of Government</th>
<th>No. of Department</th>
<th>No. of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Agriculture, Livestock, Fisheries and Cooperative</td>
<td>4</td>
<td>273</td>
</tr>
<tr>
<td>Ministry of Health services, Medical Services and Public Health</td>
<td>2</td>
<td>1045</td>
</tr>
<tr>
<td>Ministry ICT Gender and Social Services</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Ministry of Education, Youths, Sports and Social Services</td>
<td>4</td>
<td>733</td>
</tr>
<tr>
<td>Ministry of Public Works, Roads and Transport, Housing and Energy</td>
<td>5</td>
<td>76</td>
</tr>
<tr>
<td>Ministry of Environment, Water and Irrigation</td>
<td>2</td>
<td>77</td>
</tr>
<tr>
<td>Ministry of Trade, Tourism, Culture and Wildlife</td>
<td>4</td>
<td>48</td>
</tr>
<tr>
<td>Ministry of Public Services Administration and Citizen Participation and E-Government.</td>
<td>3</td>
<td>162</td>
</tr>
<tr>
<td>Ministry of County Treasury</td>
<td>5</td>
<td>196</td>
</tr>
<tr>
<td>Ministry of Land, Physical Planning and Natural Resources</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>2660</td>
</tr>
</tbody>
</table>

*Source: County Human Resource Department as at May 2018*

3.5 Sample Size and Sampling Procedure

This study adopted mixed method of sampling, that is, proportional sampling technique, simple random sampling technique, and purposive sampling technique.

3.5.1 Sample size

Sampling is selecting a given number of subjects from a defined population as representative of that population. Any statements made about the sample should also be true of the population. It is however agreed that the larger the sample the smaller the sampling error. Where external validity is important, one need to carry out purposive sampling from properly defined population.
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:

**Equation 1:** \( n = \frac{Z^2 \cdot p \cdot q}{e^2} \)

Where:

- \( n \) = refer to the desired sample size.
- \( Z \) = 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:

\[
\begin{align*}
    n &= \frac{Z^2 \cdot p \cdot q}{e^2} \\
    &= \frac{(1.96)^2 \cdot (0.5) \cdot (0.5)}{(0.05)^2} \\
    &= 384
\end{align*}
\]

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

**Equation 2:**

\[
n_{f} = \frac{n}{1 + \frac{(n-1)}{N}}
\]

Where:

- \( n_f \) = 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 using Equation 3 below:
Equation 3:

\[ \text{nf} = \frac{n}{1 + \left(\frac{n-1}{N}\right)} \]

n= \frac{384}{1 + \left(\frac{384}{2660}\right)}

n= 335

3.5.2 Sampling Procedure

The sampling Frame describes the list of all population units from which the sample was selected (Cooper and Schindler, 2008). For this study, a proportional sampling was used to sample the respondents in each department. From a sample of 335 respondents, one (1) respondent was purposively selected in each department 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 the 292 respondents that answered the questions captured through the questionnaire concerning how e-Government services are handled.
Table 3.2: Samples size

<table>
<thead>
<tr>
<th>Ministry of Government</th>
<th>No. of Department</th>
<th>No. of employees per department</th>
<th>Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Agriculture, Livestock, Fisheries and Cooperative</td>
<td>4</td>
<td>273</td>
<td>34</td>
</tr>
<tr>
<td>Ministry of Health services, Medical Services and Public Health</td>
<td>2</td>
<td>1045</td>
<td>132</td>
</tr>
<tr>
<td>Ministry ICT Gender and Social Services</td>
<td>5</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>Ministry of Education, Youths, Sports and Social Services</td>
<td>4</td>
<td>733</td>
<td>93</td>
</tr>
<tr>
<td>Ministry of Public Works, Roads and Transport, Housing and Energy</td>
<td>5</td>
<td>76</td>
<td>9</td>
</tr>
<tr>
<td>Ministry of Environment, Water and Irrigation</td>
<td>2</td>
<td>77</td>
<td>10</td>
</tr>
<tr>
<td>Ministry of Trade, Tourism, Culture and Wildlife</td>
<td>4</td>
<td>48</td>
<td>6</td>
</tr>
<tr>
<td>Ministry of Public Services Administration and Citizen Participation and E-Government.</td>
<td>3</td>
<td>162</td>
<td>20</td>
</tr>
<tr>
<td>Ministry of County Treasury</td>
<td>5</td>
<td>196</td>
<td>24</td>
</tr>
<tr>
<td>Ministry of Land, Physical Planning and Natural Resources</td>
<td>7</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
<td><strong>2660</strong></td>
<td><strong>335</strong></td>
</tr>
</tbody>
</table>

*Source: County Human Resource Department as at May 2018*

3.6 Data Collection instruments

This study used primary data, where data was collected using a structured questionnaire and an interview guide. The researcher administered questionnaires to the respondents. The questionnaire was used to collect data from the selected employees within the County departments. Questionnaires are appropriate for studies since they collect information that is not directly observable as they inquire about feelings, motivations, attitudes, accomplishments as well as experiences of individuals (Mellenbergh, 2008). The questionnaire comprised of both open and closed-ended questions. Saunders, Lewis and Thornhill (2009), stated that a questionnaire is useful in obtaining objective data because participants are not manipulated in any way by the study. According to Saunders, Lewis and Thornhill (2009) questionnaires have the added advantage of being less costly and using less time as instruments of data collection. The data instrument addressed the five research objectives while it was sub-divided into two sections. The
first section of the questionnaire enquired the general information about the respondents, while the second section answered the five research objectives. A five-point Likert question was used in this study, where 1 was strongly disagree, 2 was disagree, 3 was neutral, 4 was agree and 5 was strongly agree.

A structured interview is a systematic way of talking and listening to respondents and is another method of collecting data from respondents through conversation. Open questions are used in the interview to collect data as well as to gain knowledge. They offer an opportunity to probe and collect additional data to supplement what is collected using questionnaire. An Interview guide was administered among the head of departments under the ten ministries working under the County government to collect primary data. The respondents (head of departments) were targeted since they are in a good state of providing the most reliable information owing to the scope of responsibility accorded to them and being that they are involved in daily activity operation of their departments. The interview guide was structured into two categories that is; general information of the respondents and specific objectives of the study where it consisted of open-ended questions. The use of an open-interview strategy enabled better exposure of the interviewees’ personal perspectives, their deeper thoughts, emotions and ambitions (Patton, 1990). This less structured approach allowed the interviews to be much more like conversations than formal events with predetermined response categories, permitting the respondents’ views to unfold, rather than the predisposition of the researcher (Marshall and Rossman, 2014).

3.6.1 Pilot Testing

A pilot testing was conducted using the questionnaire to 35 employees of various Departments in six Counties in a nearby County-Kiambu to test the reliability and validity of the questionnaire. The pilot study was conducted through random sampling. According to Cooper and Schilder (2007), the pilot test should constitute 10% of the sample, therefore, the pilot test was within the recommendation.

3.6.2 Validity of the instruments

The study used both content and constructs validity to ascertain the validity of the instrument. Content validity draws an inference from test scores to a large domain of items similar to those on the test. Content validity is concerned with sample-population representativeness. Gillham
(2008) stated that the knowledge and skills covered by the test items should be representative to the larger domain of knowledge and skills.

To ensure content validity, the questionnaire was given to experts in the area of project planning and management to give their views and suggestions for improvement of the questionnaire. The questionnaire was also tested through a pilot study and necessary changes were made after data analysis. 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 also examined by the supervisors and other experts in research methodology.

3.6.3 Reliability of the instruments

Reliability of data and findings is one of the main requirements of any research process. According to Nunan (1999), reliability demands that the findings of the study should be consistent, dependable and replicable. According to Zohrabi (2013), obtaining similar results in quantitative research is straightforward due to their numerical nature, but achieving identical results in qualitative research is demanding and difficult due to subjectivity and narrative form of the data. Lincoln and Guba (1985) pointed out that it’s easier to think of how the data collected can be dependable and consistence. Merriam (1998) believed that the human instruments can become more reliable through training and practice and therefore with Lincoln and Guba (1985), they suggested three techniques of ensuring dependability of the results: investigators position, triangulation and audit trail.

Reliability analysis was also carried out using the Alpha coefficient (Cronbach 1951). Cronbach's alpha determines the internal consistency or average correlation of items in the instrument to gauge its reliability. The Alpha coefficient ranges from 0 to 1 and can be used to describe the reliability of factors extracted from dichotomous (questions with two possible answers) and/or multi-point formatted questionnaires or scales (rating scale: 1 = poor, 5 = excellent). Higher scores generate more reliable scale. According to Nunnally (1978), a score of 0.7 is an acceptable reliability coefficient.

From the results, as shown in Table 3.3, human resource had a Cronbach’s Alpha of 0.760, ICT infrastructure had a Cronbach’s Alpha of 0.823, organizational culture had a Cronbach’s Alpha
of 0.837, financial capacity had a Cronbach’s Alpha of 0.728, organizational change management had a Cronbach’s Alpha of 0.839 and adoption of e-Government for service delivery had a Cronbach’s Alpha of 0.834. The study concluded that the research instrument was reliable.

Table 3.3: Results of Reliability Test

<table>
<thead>
<tr>
<th></th>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resource</td>
<td>0.760</td>
<td>10</td>
</tr>
<tr>
<td>ICT Infrastructure</td>
<td>0.823</td>
<td>11</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>0.837</td>
<td>8</td>
</tr>
<tr>
<td>Financial capacity</td>
<td>0.728</td>
<td>9</td>
</tr>
<tr>
<td>Organizational change management</td>
<td>0.839</td>
<td>11</td>
</tr>
<tr>
<td>Adoption of e-Government for service delivery</td>
<td>0.834</td>
<td>11</td>
</tr>
</tbody>
</table>

3.6.4 Tests of Assumptions

The assumptions in linear regression include: multicollinearity, linear relationship, no autocorrelation, normality and homoscedasticity. Multicollinearity in the study was tested using Variance Inflation Factor (VIF) and tolerance. There was no multicollinearity, if VIF for the independent and dependent is less than 3 (VIF<3) while if more than 10 (VIF >10) it indicated a problem of multicollinearity (Cooper and Schindler, 2008). Shapiro-Wilk test was used to test the normality of data. Durbin–Watson statistic was used to test autocorrelation. Heteroscedasticity in this study was calculated by the use of Breuch-pagan test. Scatter plot was used in measuring linear relationship between the dependent variable and independent variables.

3.7 Data Analysis

Qualitative data was analyzed based on the content matter of the responses. Responses with common themes or patterns were grouped together into coherent categories. 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). Quantitative data was presented in tables and explanation in
prose. 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 Hypothesis 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.

3.7.1 Regression Model

An empirical model was used to test the statistical significance of the relationship involving the independent variable. To analyze moderating variable, multiple regression models were used to guide the study. Regression analysis was adopted to estimate regression coefficient and determine the prediction level of the models, regression models for testing hypothesis was estimated in form of:

To obtain the influence of the independent variables on the dependent variable, simple regression analysis was used. To get the influence of human resources capacity on adoption of e-Government (model 3.1) was used. The model was specified as follows:

\[ Y = \beta_0 + \beta_1 X_1 + \epsilon \]  

Where,

\[ Y = \text{Adoption of e-Government.} \]
\[ \beta_0 = \text{Constant} \]
\[ \beta_1 = \text{Regression Coefficients (slope)} \]
\[ X_1 = \text{Human Resources Capacity} \]
\[ \epsilon = \text{error term} \]

To obtain the influence of County ICT infrastructure on adoption of e-Government in County governments' model 3.2 was used. The model was specified as follows:

\[ Y = \beta_0 + \beta_1 X_2 + \epsilon \]  

Where,

\[ Y = \text{Adoption of e-Government.} \]
\[ \beta_0 = \text{Constant} \]
\[ \beta_1 = \text{Regression Coefficients (slope)} \]
\[ X_2 = \text{County ICT infrastructure} \]
\[ \epsilon = \text{error term} \]
Where,

\[ Y = \text{Adoption of e-Government}. \]

\[ \beta_0 = \text{Constant} \]

\[ \beta_i = \text{Regression Coefficients (slope)} \]

\[ X_2 = \text{ICT infrastructure} \]

\[ \epsilon = \text{error term} \]

To obtain influence of County Organization culture on adoption of e-Government in County government (model 3.3) was used. The model was specified as follows:

\[ Y = \beta_0 + \beta_1 X_3 + \epsilon \]  
\[ \text{.......................................................... (3.3)} \]

Where,

\[ Y = \text{Adoption of e-Government}. \]

\[ \beta_0 = \text{Constant} \]

\[ \beta_i = \text{Regression Coefficients (slope)} \]

\[ X_3 = \text{Organization culture} \]

\[ \epsilon = \text{error term} \]

To obtain influence of County financial capacity model 3.4 was estimated. The model was specified as follows:

\[ Y = \beta_0 + \beta_1 X_4 + \epsilon \]  
\[ \text{.......................................................... (3.4)} \]

Where,

\[ Y = \text{Adoption of e-Government}. \]

\[ \beta_0 = \text{Constant} \]

\[ \beta_i = \text{Regression Coefficients (slope)} \]
\( X_4 \) = Financial capacity

\( \varepsilon \) = error term

To obtain the joint influence of the independent variables on adoption of e-Government in County government (model 3.5) was estimated. The model was specified as follows:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \] \hspace{1cm} \text{(3.5)}

Where,

\( Y \) = Adoption of e-Government.

\( \beta_0 \) = Constant

\( X_1, X_2, X_3, X_4 \) = Independent variables

\( \beta_1 - \beta_4 \) = Regression Coefficients (slope)

\( \varepsilon \) = error term

To test the moderating influence of change management on the relationship between organizational internal factors and adoption of e-Government in County government multiple regressions analysis was conducted as put forward by Baron and Kenny (1986). The model was specified as follows:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_1 z X_1 Z + \beta_2 z X_2 Z + \beta_3 z X_3 Z + \beta_4 z X_4 Z + \varepsilon \] \hspace{1cm} \text{(3.6)}

Where;

\( Y \) = is a composite score for adoption of e-Government.

\( \beta_0 \) = Constant

\( X_1, X_2, X_3, X_4 \) = Independent variables

\( \beta_1 - \beta_4 \) = Beta Coefficients (slope)

\( Z \) is the hypothesized moderator (change management)

\( \beta_z \) is the coefficient of \( X_i * Z \) interaction term between change management and each of the dependent variables for \( i=1,2,3,4 \)

\( \varepsilon \) is the error term
The decision-making criteria was as shown in Table 3.4.

**Table 3.4: Moderation Decision Making Criteria**

<table>
<thead>
<tr>
<th>Scenario/Coefficient</th>
<th>( \beta_{15} )</th>
<th>( \beta_{19} )</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Significant</td>
<td>Insignificant</td>
<td>No moderation</td>
</tr>
<tr>
<td>2</td>
<td>Insignificant</td>
<td>Significant</td>
<td>Moderation</td>
</tr>
</tbody>
</table>

**Regression Steps:**

E-Government adoption was regressed against four variables of County human resource capacity, County ICT infrastructure, County organization culture and County financial Capacity. Specifically, the study used Pearson’s correlation analysis to establish this relationship between independent variables and dependent variable. To test significance of the model at 95% level of confidence, inferential statistics such analysis of variance (ANOVA) was used. According to Mugenda (2012), F-test is used in the analysis of variance using sums of squares residual. The mean of the four measures was used to evaluate e-Government adoption.

**3.7.2 Tests of Assumptions**

The assumptions in linear regression include: multicollinearity, linear relationship, no autocorrelation, normality and homoscedasticity. Multicollinearity in the study was tested using Variance Inflation Factor (VIF) and tolerance. There was no multicollinearity, if VIF for the independent and dependent is less than 10 (VIF<10) while if more than 10 (VIF >10) it indicated a problem of multicollinearity (Cooper and Schindler, 2008). Shapiro-Wilk test was used to test the normality of data. Durbin–Watson statistic was used to test autocorrelation. Heteroscedasticity in this study was calculated by the use of Breuch-pagan test. Scatter plot was used in measuring linear relationship between the dependent variable and independent variables.

**3.8 Ethical considerations**

According to Behi and Nolan (1995), Most ethical guidelines for research require anonymity and/or confidentiality to be guaranteed, consent to be informed, dignity to be maintained and on balance individual and society should receive more benefit than harm. Data collection commenced after obtaining a letter of approval from University of Nairobi. Research permit was
also obtained from National Commission for Science, Technology and Innovation (Permit No: NACOSTI/P/17/7849/19244). A formal request was sent to the County government of Kajiado to seek approval to conduct research. Permission was also sort from County commissioner, County director of Education, Human resource manager, sub-county administrator, heads of department and employees of the Ten devolved ministries in the County government. Two personals research assistants were trained and engaged in the research. The training helped them understand the ethics, objectives of the study and research instruments.

An informed consent was sought from all the respondents to enable them participate voluntarily. Clarifications was given to respondents where necessary. The respondents were requested not to write their names of the questionnaire for privacy and confidentiality. They were also informed that information collected will be kept confidential and will only be used for academic purpose only.

3.9 Operational definition of variables

Operationalization of variables means describing the research objectives into measurable terms, for the purposes of conducting the actual research. This brings clarity to the variables by showing the indicators that were measured. It also ensures that the instruments being used were more accurate as well as identifying the variables as per the research objectives with their corresponding indicators, measurement scales and type of analysis to be done.

The study objectives, variables, indicators for each variable, measurement scale and type of analysis done are shown in Table 3.5.
<table>
<thead>
<tr>
<th>Objectives</th>
<th>Independent Variables</th>
<th>Indicators</th>
<th>Measurement Scale</th>
<th>Type of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>To determine the extent at which ICT Infrastructure influence adoption of e-Government in the County Government of Kajiado.</td>
<td>ICT infrastructure</td>
<td>Computer technologies, Internet connection, Websites, Internet access, Reliability of electricity, Power supply</td>
<td>Nominal Ordinal</td>
<td>Descriptive statistics, Correlation analysis, Regression analysis</td>
</tr>
<tr>
<td>To assess how Organization Culture influence adoption of e-Government in the County Government of Kajiado.</td>
<td>Organization culture</td>
<td>Shared Mission, vision and goals, Adaptability, Involvement, Bureaucracy</td>
<td>Nominal Ordinal</td>
<td>Descriptive statistics, Correlation analysis, Regression analysis</td>
</tr>
<tr>
<td>Objectives</td>
<td>Independent Variables</td>
<td>Indicators</td>
<td>Measurement Scale</td>
<td>Type of analysis</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------------------------</td>
<td>---------------------------------</td>
<td>-------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>To establish the extent at which Financial Capacity influence adoption of e-Government in the County Government of Kajiado</td>
<td>Financial capacity</td>
<td>Funding for training</td>
<td>Nominal</td>
<td>Descriptive statistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial resources</td>
<td>Ordinal</td>
<td>Correlation analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Budgets allocation</td>
<td></td>
<td>Regression analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>External funding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objectives</td>
<td>Moderating Variable</td>
<td>Indicators</td>
<td>Measurement Scale</td>
<td>Type of analysis</td>
</tr>
<tr>
<td>To determine how Change management moderates the relationship between organizational internal factors and the adoption of e-Government in the County Government of Kajiado.</td>
<td>Change management</td>
<td>Training</td>
<td>Ordinal</td>
<td>Descriptive statistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Top management support</td>
<td></td>
<td>Correlation analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motivation</td>
<td></td>
<td>Regression analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coordination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objectives</td>
<td>Dependent Variable</td>
<td>Indicators</td>
<td>Measurement Scale</td>
<td>Type of analysis</td>
</tr>
<tr>
<td>Examine how joint Human Resource, ICT adoption</td>
<td>e-Government adoption</td>
<td>Electronic record keeping and management</td>
<td>Ordinal</td>
<td>Descriptive statistics</td>
</tr>
<tr>
<td>Infrastructure, Organization Culture and Financial Capacity influence adoption of e-Government in the County Government of Kajiado.</td>
<td>service delivery</td>
<td>Share information</td>
<td>Correlation analysis</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Efficient communication</td>
<td>Regression analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paperless office</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Processes reduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Timeless service delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Availability of information online</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1 Introduction

The chapter entails analysis of data, presentation and interpretation of the findings and discussion of the findings with regard to objective of this study. The purpose of the study was to establish the influence of organizational internal factors (human resource capacity, ICT infrastructure, organization culture and financial capacity) in adoption of e-Government and how change management moderates the relationship between organizational internal factors and adoption of e-Government. The first section in this chapter is the questionnaire’s response rate. This is followed by the presentation of the background information of the respondents and test for regression analysis assumptions. The fourth section presents results on the dependent variable. The fifth, sixth, seventh, eighth and ninth present results as per the six objectives of the study. For each of the objectives the study presents descriptive statistics, inferential statistics and discussion of the findings.

4.2 Questionnaires Return Rate

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.

4.3 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.

4.3.1 Distribution of Respondents by 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 were asked to indicate their age as per the given age brackets and were also required to indicate their gender. Data derived was presented in Table 4.1.
Table 4.1: Distribution of Respondents by Age and Gender

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 - 24</td>
<td>18</td>
<td>6.4</td>
</tr>
<tr>
<td>25 - 34</td>
<td>126</td>
<td>44.7</td>
</tr>
<tr>
<td>35 - 44</td>
<td>84</td>
<td>29.8</td>
</tr>
<tr>
<td>45 - 55</td>
<td>42</td>
<td>14.9</td>
</tr>
<tr>
<td>55+</td>
<td>12</td>
<td>4.3</td>
</tr>
<tr>
<td>Total</td>
<td><strong>282</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>174</td>
<td>61.7</td>
</tr>
<tr>
<td>Female</td>
<td>108</td>
<td>38.3</td>
</tr>
<tr>
<td>Total</td>
<td><strong>282</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 4.1 shows that majority of respondents were between 25 and 34 years of age (44.7%), followed by 84 (29.8%) who were between ages 35 and 44 while respondents between ages 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 4.1 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 favour 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 technology among men, effort expectancy influences behavioral intention in adoption of technology 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.

**4.3.2 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 4.2.

Table 4.2: Respondents’ Highest Level of Education and ICT Training

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highest level of education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post University</td>
<td>42</td>
<td>14.9</td>
</tr>
<tr>
<td>University</td>
<td>135</td>
<td>47.9</td>
</tr>
<tr>
<td>Higher National Diploma</td>
<td>27</td>
<td>9.6</td>
</tr>
<tr>
<td>Diploma</td>
<td>57</td>
<td>20.2</td>
</tr>
<tr>
<td>Certificate</td>
<td>21</td>
<td>7.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td><strong>level of ICT training</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td>33</td>
<td>11.7</td>
</tr>
<tr>
<td>Diploma in ICT</td>
<td>60</td>
<td>21.3</td>
</tr>
<tr>
<td>Certificate Proficiency packages</td>
<td>168</td>
<td>59.6</td>
</tr>
<tr>
<td>Others (specify)</td>
<td>21</td>
<td>7.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 4.2 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 4.2 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.

4.3.3 Respondents’ Department of Work and Duration of Working in their Department

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 4.3.

Table 4.3: Respondents Department of Work and Duration of Working in their Department in the County

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>84</td>
<td>29.8</td>
</tr>
<tr>
<td>Procurement</td>
<td>15</td>
<td>5.3</td>
</tr>
<tr>
<td>Information and Communications Technology</td>
<td>6</td>
<td>2.1</td>
</tr>
<tr>
<td>Finance</td>
<td>45</td>
<td>16.0</td>
</tr>
<tr>
<td>Human Resource</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>Others (Specify)</td>
<td>129</td>
<td>45.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Duration in the organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>12</td>
<td>4.3</td>
</tr>
<tr>
<td>1 year</td>
<td>12</td>
<td>4.3</td>
</tr>
<tr>
<td>2 years</td>
<td>63</td>
<td>22.3</td>
</tr>
<tr>
<td>3 years</td>
<td>42</td>
<td>14.9</td>
</tr>
<tr>
<td>more than 4 years</td>
<td>153</td>
<td>54.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 4.3 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 4.3 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.

4.4 Test for Regression Assumptions

The assumptions in linear regression include: multicollinearity, normality and homoscedasticity. In case of violation of the regression assumptions, the confidence intervals as well as other scientific insights derived from the regression model may be regarded as misleading, biased or inefficient.

4.4.1 Test for Normality

Linear regression tends to assume that there is normal distribution of variables’ data or the data are from a normal population. Data which are not distributed normally may disrupt association between independent and dependent variables (Bhattacherjee, 2012). Shapiro-Wilk test is used to test the normality of data. Null hypothesis in Shapiro–Wilk test indicate that variables data are obtained from a normally distributed population. Therefore, the p value should be greater than the significant level of 0.05. The results were as presented in Table 4.4.
Table 4.4: Shapiro-Wilk Test

<table>
<thead>
<tr>
<th></th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
</tr>
<tr>
<td>Adoption of e-Government service delivery</td>
<td>.973</td>
</tr>
<tr>
<td>Human Resource</td>
<td>.934</td>
</tr>
<tr>
<td>County ICT Infrastructure</td>
<td>.950</td>
</tr>
<tr>
<td>County Organizational culture</td>
<td>.927</td>
</tr>
<tr>
<td>County Financial Capacity</td>
<td>.962</td>
</tr>
<tr>
<td>County Organizational change management</td>
<td>.870</td>
</tr>
</tbody>
</table>

Table 4.4 shows that Adoption of e-Government service delivery (p-value=0.312), followed by financial capacity (p-value=0.287), human resource (p-value=0.198), ICT infrastructure (p-value=0.232), organizational culture (p-value=0.098) and organizational change management (p-value=0.076). These findings show that all the variables (adoption of e-Government service delivery, followed by financial capacity, human resource, ICT infrastructure and organizational culture) were normally distributed.

4.4.2 Multicollinearity Test

Multicollinearity is used to determine the probability that independent variables (which are equal or greater than 2) in a particular multivariate regression model are highly or significantly correlated (Cooper and Schindler, 2008). In case the correlations among the independent variables are quite strong, the standard error of the coefficients tends to increase thus leading to undesirable events. The study adopted the use of Valiance Inflation Factor so as to measure the level of correlation among the variables. The general principle is that VIF which is greater than ten (10) tend to warrant further investigation (Neter et al., 1996) and Chatterjee et al., 2000). The results were as presented in Table 4.5.
Table 4.5: Collinearity Statistics

<table>
<thead>
<tr>
<th></th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resource</td>
<td>.625</td>
<td>1.601</td>
</tr>
<tr>
<td>ICT Infrastructure</td>
<td>.439</td>
<td>2.276</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>.614</td>
<td>1.630</td>
</tr>
<tr>
<td>Financial Capacity</td>
<td>.456</td>
<td>2.193</td>
</tr>
</tbody>
</table>

Table 4.5 shows that human resource had a VIF of 1.601, ICT infrastructure had a VIF of 2.276, organizational culture had a VIF of 1.630 and financial capacity had a VIF of 2.193. The findings showed that there was no multicollinearity among the independent variables, since their values were less than 3. This implies that the independent variables are not highly correlated among themselves.

### 4.4.3 Heteroscedasticity and Homoscedasticity Test

Violation of homoscedasticity tends to inhibit critical evaluation of forecast errors of standard deviation, which often leads to confidence intervals which are extremely narrow or extremely wide. Heteroscedasticity in this study was calculated by the use of Breuch-pagan test. The null hypothesis for this test was that the error variances were equal versus the alternative that the error variances were a multiple function of one variable or more variables. Homoscedasticity normally occurs when the p-value is less than the significance level (0.05) (Bryman and Cramer, 2012). The results were as presented in Table 4.6.

Table 4.6: Breusch-Pagan test for Heteroscedasticity

<table>
<thead>
<tr>
<th>Ho: Constant variance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi2 (1)</td>
<td>0.31</td>
</tr>
<tr>
<td>Prob&gt;chi2</td>
<td>0.5798</td>
</tr>
</tbody>
</table>

Table 4.6 shows that the Chi-square was 0.31 and the p-value was 0.5798. The significance level (0.05) was less than the p-value (0.5798) hence there was homoscedasticity in the data. The findings show that there was homoscedasticity in the data and hence there was no Heteroscedasticity.
4.4.4 Analysis of Likert-Type Data

The questionnaire which was used in this study was categorized into seven sections. The first section comprised of the respondents’ demographic information, which used nominal scale. The other six sections comprised of the closed questions as well as items which were measured by using a 5-point Likert scale, where 1 represented strongly disagree, 2- represented disagree, 3 represented agree and 5 represented strongly agree. Affirmative approach was used writing of various statements in each section of the questionnaire. Lengthy questionnaires are normally characterized by low validity as well as low response rate (Sivo, Saunders, Chang and Jiang (2006). According to Vonglao (2017) interpretation of arithmetic mean in a 5 scale Likert questions, strongly agree is between 4.5 and 5.0, agree is between 3.5 and 4.5, moderately agree is between 2.5 and 3.5, disagree is between 1.5 and 2.5 while strongly disagree is between 1 and 2.5.

Likert scale comprises of categorical data (ordinal) and hence cannot be used in conducting inferential statistics such as correlation analysis and regression analysis that demand the use of continuous data. To obtain continuous data, averages of responses (in the Likert questions) in each of the variables were obtained. Using transformation option, the SPSS was configured to automatically give averages using the following formula.

\[
\text{Composite index} = \text{Mean} (\text{Statement 1, Statement 2, Statement 3, \ldots \ldots Statement K})
\]

4.5 Extent of Adoption of e-Government Service Delivery

The study sought to obtain the extent of implementation and adoption 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 4.7.
Table 4.7: Extent of Adoption of e-Government Service Delivery

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very little extent</td>
<td>57</td>
<td>20.2</td>
</tr>
<tr>
<td>little extent</td>
<td>18</td>
<td>6.4</td>
</tr>
<tr>
<td>Moderate</td>
<td>63</td>
<td>22.3</td>
</tr>
<tr>
<td>Great extent</td>
<td>96</td>
<td>34.0</td>
</tr>
<tr>
<td>Very great extent</td>
<td>48</td>
<td>17.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 4.7 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.

4.5.1 Adoption of e-Government Service Delivery

The study sought to determine influence of Adoption of e-Government Service Delivery in the County government of Kajiado. As such, the respondents were requested to indicate the influence of e-Government adoption service delivery in the County. Table 4.8 presents the results.
Table 4.8: Influence of Adoption of e-Government Service Delivery

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Government has reduced cost of delivering services</td>
<td>4.3</td>
<td>10.6</td>
<td>17.0</td>
<td>39.4</td>
<td>28.7</td>
<td>3.776</td>
<td>1.104</td>
</tr>
<tr>
<td>Major function we do in our ministry are done electronically</td>
<td>2.1</td>
<td>16.0</td>
<td>16.0</td>
<td>40.4</td>
<td>25.5</td>
<td>3.712</td>
<td>1.079</td>
</tr>
<tr>
<td>This ministry I work in has an electronic payroll system that’s pays salaries and keeps records for tax information</td>
<td>6.4</td>
<td>4.3</td>
<td>9.6</td>
<td>35.1</td>
<td>44.7</td>
<td>4.074</td>
<td>1.134</td>
</tr>
<tr>
<td>The county government has established an e-learning platform that enable staff access information in regards to training and learning opportunities</td>
<td>14.9</td>
<td>26.6</td>
<td>23.4</td>
<td>22.3</td>
<td>12.8</td>
<td>2.914</td>
<td>1.262</td>
</tr>
<tr>
<td>Management of records and sharing of information has improved immensely since implementation of e-Government systems</td>
<td>6.4</td>
<td>9.6</td>
<td>17.0</td>
<td>46.8</td>
<td>20.2</td>
<td>3.648</td>
<td>1.100</td>
</tr>
<tr>
<td>Time taken to process any transaction has been reduced as the government has implemented e-Government service delivery</td>
<td>6.4</td>
<td>11.7</td>
<td>18.1</td>
<td>44.7</td>
<td>19.1</td>
<td>3.585</td>
<td>1.116</td>
</tr>
<tr>
<td>Am able to store and retrieve records when delivering services</td>
<td>3.2</td>
<td>8.5</td>
<td>17.0</td>
<td>45.7</td>
<td>25.5</td>
<td>3.819</td>
<td>1.011</td>
</tr>
<tr>
<td>Through e-Government suppliers can bid for various government tenders electronically</td>
<td>5.3</td>
<td>10.6</td>
<td>17.0</td>
<td>38.3</td>
<td>28.7</td>
<td>3.744</td>
<td>1.140</td>
</tr>
<tr>
<td>There is a website developed that publishes information and gives the public access to different services</td>
<td>13.8</td>
<td>13.8</td>
<td>20.2</td>
<td>29.8</td>
<td>22.3</td>
<td>3.329</td>
<td>1.334</td>
</tr>
<tr>
<td>Since introduction of e-Government, the nature of my work has gradually moved from handling a lot of paper to being paperless</td>
<td>7.4</td>
<td>10.6</td>
<td>17.0</td>
<td>43.6</td>
<td>21.3</td>
<td>3.606</td>
<td>1.152</td>
</tr>
<tr>
<td>Electronic communication has improved service delivery</td>
<td>4.3</td>
<td>4.3</td>
<td>9.6</td>
<td>56.4</td>
<td>25.5</td>
<td>3.946</td>
<td>0.951</td>
</tr>
</tbody>
</table>

| Composite            | 3.650 | 1.125 |

Table 4.8 shows that the respondents 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 government led to a reduction in the utilization of paper. These findings are in line with Huang et al. (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 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 et al. (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.

4.6 Human Resource Capacity and Adoption of e-Government

The first objective of this study was to establish the influence of Human Resource Capacity on the adoption of e-Government in the County Government of Kajiado.

4.6.1 Extent of the Relationship between Human Resource Capacity and adoption of e-Government

The study sought to establish the extent to which human resource affects the adoption of e-Government. As such, the participants were asked to indicate the extent in which human resource influenced the adoption of e-Government. The data driven was as presented in Table 4.9.

Table 4.9: Extent of the Relationship between Human Resource Capacity and adoption of e-Government

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td>51</td>
</tr>
<tr>
<td>Low extent</td>
<td>60</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>90</td>
</tr>
<tr>
<td>Great extent</td>
<td>51</td>
</tr>
<tr>
<td>Very great extent</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
</tr>
</tbody>
</table>

Table 4.9 shows that majority of the respondents 90 (31.9%) indicated that human resource influenced adoption of e-Government to a great extent, followed by 60 (21.3%) with a low extent, 51 (18.1%) with a great extent, the same number 51 (18.1%) with no extent at all and 30 (10.6%)
with a very great extent. The findings indicated that human resource capacity influences the adoption of e-Government in the County Government of Kajiado to a moderate extent. These findings are contrary to Ong'ang’a (2012) findings that ICT human resource capacity affects e-Government to a great extent. This can be explained by the fact that human resource and personnel are the ones that deal with the e-Government system and hence if not well trained they cannot be in a position to deliver services efficiently using the system.

4.6.2 Adequate Human Resource for Implementation and Adoption of e-Government

The study sought to determine if Human Resource was adequate for the implementation of e-Government. As a result, the respondents were also asked to indicate whether the County has adequate human resources to implement and adopt necessary ICT technologies. The results were as presented in Table 4.10.

**Table 4.10: Adequate Human Resource, Implementation and Adoption of ICT**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>147</td>
<td>52.1</td>
</tr>
<tr>
<td>No</td>
<td>135</td>
<td>47.9</td>
</tr>
<tr>
<td>Total</td>
<td>282</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.10 shows that majority of the respondents 147 (52.1%) indicated that the County has adequate human resources to implement and adopt necessary Information Communication Technology while 135 (47.9%) indicated that the county has inadequate human resources to implement and adopt necessary ICT technology. The findings show that Kajiado County Government has adequate human resources to implement and adopt Information Communication Technology. Ong’ang’a (2012) indicates that staff adequacy influences the duration of time taken to implement technological projects. The fewer the staff the longer it takes to implement a project and the higher the number of staffs the less time it takes to implement a project.

4.6.3 Relationship between Human Resource and Adoption of e-Government

The study sought to establish the influence of human resource on the adoption of e-Government service delivery in the County government of Kajiado. As a result, the respondents were also asked to rate the extent to which the various statements on human resource aspects influenced the adoption of e-Government. The results were as presented in Table 4.11.
Table 4.11: Relationship between Human Resource and Adoption of e-Government

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level of personnel IT skills can have a positive impact on</td>
<td>8.5</td>
<td>3.2</td>
<td>6.4</td>
<td>34.0</td>
<td>47.9</td>
<td>4.095</td>
<td>1.196</td>
</tr>
<tr>
<td>IT innovation adoption in county government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The level of training required for users to upgrade their skills</td>
<td>7.4</td>
<td>10.6</td>
<td>14.9</td>
<td>39.4</td>
<td>27.7</td>
<td>3.691</td>
<td>1.196</td>
</tr>
<tr>
<td>and learn how to adopt and use new technologies may be an</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>obstacle for technology application</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced employees are keen on adopting innovative solutions</td>
<td>4.3</td>
<td>9.6</td>
<td>14.9</td>
<td>46.8</td>
<td>24.5</td>
<td>3.776</td>
<td>1.055</td>
</tr>
<tr>
<td>in support of E-Government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The burden to acquire skills to successfully adopt the</td>
<td>8.5</td>
<td>19.1</td>
<td>12.8</td>
<td>41.5</td>
<td>18.1</td>
<td>3.414</td>
<td>1.226</td>
</tr>
<tr>
<td>innovation solutions causes barriers to adoption of E-Government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training of human resource on ICT skills is essential in</td>
<td>3.2</td>
<td>3.2</td>
<td>6.4</td>
<td>25.5</td>
<td>61.7</td>
<td>4.393</td>
<td>.971</td>
</tr>
<tr>
<td>facilitating E-Government adoption</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge and skills for implementing and applying innovations</td>
<td>4.3</td>
<td>3.2</td>
<td>6.4</td>
<td>44.7</td>
<td>41.5</td>
<td>4.159</td>
<td>.983</td>
</tr>
<tr>
<td>increase the intention to use a technology and accelerates the</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>adoption process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training of human resource is important in facilitating the</td>
<td>2.1</td>
<td>2.1</td>
<td>5.3</td>
<td>37.2</td>
<td>53.2</td>
<td>4.372</td>
<td>.851</td>
</tr>
<tr>
<td>process of integrating E-Government with current methods and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>procedures in the county government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existence of knowledgeable Management who support the use of</td>
<td>7.4</td>
<td>5.3</td>
<td>2.1</td>
<td>37.2</td>
<td>47.9</td>
<td>4.127</td>
<td>1.171</td>
</tr>
<tr>
<td>IT is essential in achieving organization objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of training of employees on Information Technologies;</td>
<td>5.3</td>
<td>6.4</td>
<td>10.6</td>
<td>29.8</td>
<td>47.9</td>
<td>4.085</td>
<td>1.147</td>
</tr>
<tr>
<td>results in resistance to change, resistance in use and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>underutilization of the technology implemented</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most of the IT experts are increasingly leaving their jobs in</td>
<td>7.4</td>
<td>16.0</td>
<td>14.9</td>
<td>33.0</td>
<td>28.7</td>
<td>3.595</td>
<td>1.259</td>
</tr>
<tr>
<td>the government to work in the private sector, due to the better</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>offers they are getting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Composite</strong></td>
<td>3.970</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.105</td>
<td></td>
</tr>
</tbody>
</table>

A shown in Table 4.11, the respondents agreed on most of the Likert items on human resource and adoption of e-Government with a mean of 3.970 and a standard deviation of 1.105. This implies that human resource capacity affects the adoption of e-Government in the County government of Kajiado. In addition, the respondents agreed with a mean of 4.393 and a standard
deviation of 0.971 that training of human resource on ICT skills was essential in facilitating e-Government adoption. These findings agree with Kandiri (2006) findings that the realization of the full potential of ICTs require training for relevant skills to build individual and institutional capacity for users and all beneficiaries. In addition, with a mean of 4.372 and a standard deviation of 0.851 they agreed that training of human resource was important in facilitating the process of integrating e-Government with current methods and procedures in the County government. These findings are in line with Khanh (2014) argument that training is important in facilitating the process of integrating new tools with current methods and procedures.

The respondents also agreed that knowledge and skills for implementing and applying innovations increased the intention to use technology and accelerated the adoption process as shown by a mean of 4.372 and a standard deviation of 0.851. These findings concur with Sargent et al. (2012) findings that knowledge and skills for implementing and applying innovation increase the intention to use technological innovations and accelerates the adoption process. Moreover, with a mean of 4.127 and a standard deviation of 1.171, the employees agreed that there was existence of knowledgeable management which supported the use of IT and it was essential in achievement of organization objectives.

The respondents agreed that lack of training of employees on information technologies; resulted in resistance to change as shown by a mean of 4.085 and a standard deviation of 1.147. Further, with a mean of 3.776 and a standard deviation of 1.055 the respondents agreed that experienced employees were keen on adopting innovative solutions in support of e-Government. As shown by a mean of 3.595 and a standard deviation of 1.259 they agreed that most of the IT experts are increasingly leaving their jobs in the government to work in the private sector, due to the better offers they were getting. These findings agree with Ebrahim and Irani (2005) argument that IT experts are increasingly leaving their jobs in the government to work in the private sector, due to the better offers they are getting. The government should consider better offers to attract them. However, they moderately agreed that the burden to acquire skills to successfully adopt the innovation solutions was a barrier to adoption of e-Government systems as shown by a mean of 3.414 and a standard deviation of 1.226. These findings concur with Borhani (2016) that the level of training required for users to upgrade their skills and to learn how to adopt and use new technologies may be an obstacle for technology application.
The key informants also highlighted that they were understaffed which is affecting services delivery but system was really helping making more easily. In addition, some key informants felt that there was a mixture of information technology literate and illiterate people in the County government.

*There is a good mix of computer literate and those who are illiterate, not all are ICT expert but have basic knowledge. They have uniformity in report analysis but still they have challenges. Junior staffs are better placed and willing to learn.*

4.6.4 Testing of Hypothesis

The study sought to establish the influence of human resource capacity on adoption of e-Government in the County government of Kajiado. The Hypothesis was as follows;

\[ H_{10} \text{ Human Resource Capacity has no significant relationship on the adoption of e-Government in the County government of Kajiado.} \]

The hypothesis was tested by use of correlation analysis and regression analysis. Using 95 per cent confidence interval, the significance level was 0.05. Therefore, the alternative Hypothesis was accepted when the p-value was less than the significance level (0.05).

4.6.4.1 Correlation Analysis for Human Resource Capacity and adoption of e-Government

The study sought to establish the relationship between human resource capacity and adoption of e-Government in the County government of Kajiado. A correlation analysis was used. The results were as presented in Table 4.12.

**Table 4.12: Correlation Coefficients for Human Resource Capacity and adoption of e-Government**

<table>
<thead>
<tr>
<th></th>
<th>Adoption of e-Government service delivery</th>
<th>Human Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption of e-Government service delivery</td>
<td>Pearson Correlation 1</td>
<td>.595**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) N 282</td>
<td>.000</td>
</tr>
<tr>
<td>Human Resource</td>
<td>Pearson Correlation .595**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) N 282</td>
<td>.000</td>
</tr>
</tbody>
</table>

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

Table 4.12 the results show that there is a strong positive association between human resource
capacity and adoption of e-Government in the County government of Kajiado (r=0.595). The relationship was significant because the p-value (0.000) was less than the alpha value (0.05, at 95% confidence interval). Therefore, the alternative hypothesis is accepted indicating that “human resource capacity has a significant influence on the adoption of e-Government in the County government of Kajiado.” These findings are in line with Chwelos, Benbasat, Dexter (2001) argument that high level of personnel IT skills can have a positive impact in adoption of e-Government in public organizations.

This is supported by the key informants, who indicated that people have been trained but not all-round kind of training, which affected adoption of e-Government. They also indicated that literacy and the old age affect adoption of e-Government in the County. However, the also argued that at least the recruitment process considers an ICT trained graduates.

*Illiteracy level among the staff is high and this affects the general operation on using the information technology. Also, most of the staff have trained on their own, but at least the government is showing some improvement in the training K01*

**4.6.4.2 Regression Analysis for Human Resource and Adoption of e-Government**

The R-Squared was used to indicate variation in adoption of e-Government that can be explained human resource. The results were as presented in Table 4.13.

**Table 4.13: Model Summary for Human Resource and Adoption of e-Government**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Squared</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.595</td>
<td>.355</td>
<td>.352</td>
<td>.568</td>
</tr>
</tbody>
</table>

The R-squared for the relationship between human resource capacity and adoption of e-Government was 0.355, implying that the human resource capacity explains 35.5% of the adoption of e-Government in the County Government of Kajiado. This implies that human resource capacity plays a significant role in the adoption of e-Government in the County Government of Kajiado. These findings agree with Ziemba, Papaj, Zelazny, Jadamus-Hacura (2015) findings that the competence of the employees influences the implementation and adoption of e-Government.
Analysis of variance was used to determine whether the model was a good fit for the data in determining the influence of human resource on the adoption of e-Government. The results were as presented in Table 4.14.

Table 4.14: ANOVA for Human Resource and Adoption of e-Government

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>49.762</td>
<td>1</td>
<td>49.762</td>
<td>153.825</td>
<td>.000</td>
</tr>
<tr>
<td>1 Residual</td>
<td>90.579</td>
<td>280</td>
<td>.323</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140.341</td>
<td>281</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.14 shows that the significance level (0.05) was greater than the p-value (0.000) and the F-calculated (153.825) was more than the F-critical (3.8415). This implies that the regression model could be used in predicting the influence of human resource capacity on the adoption of e-Government in Kajiado County Government.

Table 4.15 shows the regression coefficients for the influence of human resource on the adoption of e-Government in the County government of Kajiado.

Table 4.15: Coefficients for Human Resource and Adoption of e-Government

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>1.067</td>
<td>.213</td>
<td>5.012</td>
<td>.000</td>
</tr>
<tr>
<td>Human Resource</td>
<td>.677</td>
<td>.055</td>
<td>.595</td>
<td>12.403</td>
</tr>
</tbody>
</table>

The results in Table 4.15 indicated that human resource capacity has a positive influence on adoption of e-Government in the County government of Kajiado as shown by regression coefficient (0.677) and a p-value (0.000). The findings indicate that an improvement in human resource capacity leads to an improvement in the adoption of e-Government in the County government of Kajiado.

4.7 ICT Infrastructure and Adoption of e-Government

The second objective of this study was to determine the influence of ICT Infrastructure on the adoption of e-Government in the County Government of Kajiado.
4.7.1 Adequacy of ICT infrastructure Resources to Facilitate Adoption of e-Government

The study sought to determine the adequacy of ICT Infrastructure resources to facilitate adoption of e-Government. As a result, the respondents were asked to indicate whether the County provided enough ICT Infrastructure resources to facilitate adoption of e-Government. The data driven was as presented in Table 4.16.

**Table 4.16: Adequacy of ICT infrastructure Resources to Facilitate Adoption of e-Government**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>111</td>
<td>39.4</td>
</tr>
<tr>
<td>No</td>
<td>171</td>
<td>60.6</td>
</tr>
<tr>
<td>Total</td>
<td>282</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.16 shows that majority of the respondents 171 (60.6%) indicated that the County did not provide enough infrastructure resources to facilitate adoption of e-Government while 111 (39.6%) indicated that the County provided adequate infrastructural resources. This implies Kajiado County Government provided inadequate ICT infrastructural resources to facilitate adoption of e-Government. These findings are contrary to Graafland-Essers and Ettegdgui (2003) findings that ICT infrastructure is considered to be pivotal in e-Government implementation and adoption.

4.7.2 Influence of Aspects of ICT Infrastructure on Adoption of e-Government

The study sought to determine the influence of ICT infrastructure on the Adoption of e-Government in the County government of Kajiado. As such, the study participants were requested to indicate their level of agreement of various statements related to aspects of ICT infrastructure on performance of e-Governance. The results were as presented in Table 4.17.
Table 4.17: Influence of Aspects of ICT Infrastructure on Adoption of e-Government

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT infrastructure is considered to be the crucial in e-Government implementation and adoption</td>
<td>4.3</td>
<td>5.3</td>
<td>7.4</td>
<td>41.5</td>
<td>41.5</td>
<td>4.106</td>
<td>1.038</td>
</tr>
<tr>
<td>ICT infrastructure is a modern infrastructure that enable sharing of information technology capabilities upon which county government depends</td>
<td>5.3</td>
<td>3.2</td>
<td>9.6</td>
<td>51.1</td>
<td>30.9</td>
<td>3.989</td>
<td>1.007</td>
</tr>
<tr>
<td>ICT Technological Infrastructure have drastically influenced the competitiveness of the County governments</td>
<td>5.3</td>
<td>11.7</td>
<td>20.2</td>
<td>38.3</td>
<td>24.5</td>
<td>3.648</td>
<td>1.129</td>
</tr>
<tr>
<td>Inadequate ICT infrastructure has hampered provision of efficient and affordable ICT services in the county government.</td>
<td>7.4</td>
<td>4.3</td>
<td>10.6</td>
<td>40.4</td>
<td>37.2</td>
<td>3.957</td>
<td>1.149</td>
</tr>
<tr>
<td>There is adequate infrastructure to support e-Government initiatives in my area of work e.g. computer, software, network, internet, power to enable service delivery</td>
<td>18.1</td>
<td>16.0</td>
<td>18.1</td>
<td>30.9</td>
<td>17.0</td>
<td>3.127</td>
<td>1.364</td>
</tr>
<tr>
<td>Underestimating the importance of information security in the county can lead to unauthorized access to sensitive data, loss of trust which can lead to e-Government utilization failure</td>
<td>4.3</td>
<td>8.5</td>
<td>9.6</td>
<td>34.0</td>
<td>43.6</td>
<td>4.042</td>
<td>1.121</td>
</tr>
<tr>
<td>ICT infrastructure is an important aspect in implementation and adoption of e-Government and guides the organization in satisfying operations and management needs</td>
<td>4.3</td>
<td>5.3</td>
<td>9.6</td>
<td>50.0</td>
<td>30.9</td>
<td>3.978</td>
<td>1.001</td>
</tr>
<tr>
<td>There exists a contingency plan for data backup and recovery in case of any loss</td>
<td>10.6</td>
<td>18.1</td>
<td>23.4</td>
<td>31.9</td>
<td>16.0</td>
<td>3.244</td>
<td>1.228</td>
</tr>
<tr>
<td>IT standards are crucial for e-Government adoption. IT standards are specifications for hardware and software that are widely used and accepted or sanctioned by a standard organization</td>
<td>5.3</td>
<td>10.6</td>
<td>12.8</td>
<td>44.7</td>
<td>26.6</td>
<td>3.766</td>
<td>1.116</td>
</tr>
<tr>
<td>In my ministry, the software that exist is regularly updated to cater for the e-Government emerging requirements</td>
<td>11.7</td>
<td>19.1</td>
<td>22.3</td>
<td>34.0</td>
<td>12.8</td>
<td>3.170</td>
<td>1.219</td>
</tr>
<tr>
<td>Telecommunication infrastructure and internetworking required to enable sharing of information and open up new channels for communication and delivery of new services is inadequate</td>
<td>5.3</td>
<td>6.4</td>
<td>16.0</td>
<td>36.2</td>
<td>36.2</td>
<td>3.914</td>
<td>1.119</td>
</tr>
<tr>
<td><strong>Composite</strong></td>
<td><strong>3.721</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>1.135</strong></td>
</tr>
</tbody>
</table>
Table 4.17 shows that the respondents agreed on most of the Likert items on ICT infrastructure and adoption of e-Government with a mean of 3.721 and a standard deviation of 1.135. This implies that ICT infrastructure influences adoption of e-Government in the County Government of Kajiado. These findings agree with Dahiya and Mathew (2014) argument that ICT infrastructure capability affects effective e-Government readiness. In addition, the respondents agreed with a mean of 4.106 and a standard deviation of 1.038 that ICT infrastructure was considered to be the crucial in e-Government implementation and adoption. They also agreed that underestimating the importance of information security in the County could lead to unauthorized access to sensitive data, loss of trust which could eventual result to e-Government utilization failure as shown by a mean of 4.042 and a standard deviation of 1.121. With a mean and a standard deviation of 3.989 and 1.007 they agreed that ICT infrastructure was a modern infrastructure that enabled sharing of information technology capabilities upon which County government depended on. These findings are in line with McKay and Brockway (1989) argument that ICT infrastructure as a foundation that enable sharing of information technology capabilities upon which business depends.

Moreover, the respondents agreed that ICT infrastructure was an important aspect in implementation and adoption of e-Government and guided the organization in satisfying operations and management needs as shown by a mean of 3.978 and a standard deviation of 1.001. These findings are in line with Earl (1989) argument that ICT infrastructure is the technology framework that guides the organization in satisfying business and management needs. Further, with a mean of 3.957 and a standard deviation of 1.149 they agreed that inadequate ICT infrastructure hampered provision of efficient and affordable ICT services in the County government. The findings concur with GoK (2005) indication that there is a need to put more emphasis on provision of supportive infrastructure such as high-speed local networks and fast connections, software, ICT equipment and accessories as well and provision for incentives of ICT infrastructure. The also agreed that telecommunication infrastructure and internetworking was required to enable sharing of information and open up new channels for communication and delivery of new services as shown by a mean of 3.914 and a standard deviation of 1.119. The findings agree with Davison et al. (2000) observation that telecommunication infrastructure and internetworking to enable information sharing by opening new channels of communication inadequate.
Further, with a mean of 3.766 and a standard deviation of 1.116 they agreed that IT standards were crucial for e-Government adoption. These findings are in line with Freeman (2001) argument that IT standards are crucial for e-Government adoption. The participants also agreed that ICT Technological Infrastructure drastically influenced the competitiveness of the County governments as shown by a mean of 3.648 and a standard deviation of 1.129. The findings agree with Laudon and Laudon (2001) argument that developments in ICT technological infrastructure have drastically influenced the competitive business environment.

However, they moderately agreed that there was contingency plan for backing up data and recovery in case of any loss as shown by mean of 3.244 and a standard deviation of 1.228. According to Altameem, Zairi and Alshawi (2006), underestimating the importance of security can lead to authorized access to sensitive data, loss of trust which can lead to e-Government failure. Further, with a mean of 3.170 and a standard deviation of 1.219 they moderately agreed that in their ministries, the available software were regularly updated to cater for the e-Government emerging requirements. Finally, with a mean of 3.127 and a standard deviation of 1.364 they moderately agreed that there was adequate infrastructure to support e-Government initiatives in their areas of work (computer, software, network, internet and power) to enable service delivery.

The key informants were asked to indicate how the ICT infrastructure holds up the performance, data transformation, and storage process that are necessary in the e-Government services. From the findings, they indicated that the internet is not reliable and it was extremely slow.

*Internet connection in the offices is not reliable but the County has ensured that is sorted by providing modems and airtime. However, power failure affects the operation; they are times we go without power for 3 days. K06*

Other ICT infrastructure related challenges highlighted included power fluctuations/power blackouts, frequent break down of systems and slow connections. These findings agree with Nulens (2000) emphasis on the importance of electricity to ICT implementation and adoption of technology and observed that, low quality of electricity networks in Africa causes power fluctuation that affect ICT facilities. Availability and constant supply of electricity is crucial for technology adoption. In addition, the County was using old machines that do not serve the purpose
well. Where computers were available, they were not enough and hence staff were using personal phones to receive and send emails. These findings agree with Tapscott (1995) observation that failure of ICT projects is primarily caused by a lack of sufficient computers and networks.

In regard to ICT policy available, the key informants indicated that the government policies states that all the County government should adopt e-Government. In addition, the County has its ICT policy in line with what the government. A policy in place from National treasury regulates the usage of ICT. IFMIS system is in place but a lot of challenges. The use of the system causes a lot of delays, that is, in terms of payments and e-procurement system, but employees are still learning the process.

4.7.3 Testing Hypothesis

The study sought to establish the influence of ICT infrastructure on adoption of e-Government in the County government of Kajiado. The Hypothesis was as follows;

H10 ICT infrastructure has no significant relationship on the adoption of e-Government in the County government of Kajiado.

The hypothesis was tested by use of correlation analysis and regression analysis. Using 95 percent confidence interval, the significance level was 0.05. Therefore, the alternative Hypothesis was accepted when the p-value was less than the significance level (0.05).

4.7.3.1 Correlation Analysis for ICT Infrastructure and adoption of e-Government

The study sought to determine the existence of an association between ICT Infrastructure and adoption of e-Government in the County government of Kajiado. A Pearson correlation analysis was used. The results were as presented in Table 4.18.
Table 4.18: Correlation Coefficients for ICT Infrastructure and Adoption of e-Government

<table>
<thead>
<tr>
<th></th>
<th>Adoption of e-Government service delivery</th>
<th>County ICT Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption of e-Government service delivery</td>
<td>Pearson Correlation Sig. (2-tailed)</td>
<td>1</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>282</td>
</tr>
<tr>
<td>County ICT Infrastructure</td>
<td>Pearson Correlation Sig. (2-tailed)</td>
<td>.821**</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>282</td>
</tr>
</tbody>
</table>

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

Table 4.18 shows that there was a strong positive association between ICT Infrastructure and adoption of e-Government in the County government of Kajiado (r=0.821). The relationship was significant because the p-value (0.000) was less than the alpha value (0.05, at 95% confidence interval). Therefore, the alternative hypothesis is accepted indicating that “ICT infrastructure has a significant influence on the adoption of e-Government in the County government of Kajiado”. These findings agree with Graafland-Essers and Etchedgui (2003) findings that ICT infrastructure is considered to be pivotal in e-Government implementation and adoption.

4.7.3.2 Regression Analysis for ICT Infrastructure and Adoption of e-Government

The study sought to establish the variation in the adoption of e-Government that can be explained by ICT Infrastructure. The results were as presented in Table 4.19.

Table 4.19: Model Summary for ICT Infrastructure and Adoption of e-Government

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.821a</td>
<td>.675</td>
<td>.674</td>
<td>.403</td>
</tr>
</tbody>
</table>

Table 4.19 shows that the r-squared for the relationship between ICT infrastructure and adoption of e-Government was 0.675, implying that the ICT infrastructure can explain 67.5% of the adoption of e-Government in the County Government of Kajiado. This implies that ICT infrastructure considerably affects adoption of e-Government in the County Government of Kajiado. These findings concur with Ong’ang’a (2012) argument that ICT infrastructure affects adoption of e-Government among local authorities in Kisumu County.
Analysis of variance was used to determine whether the model was a good fit for the data in determining the influence of ICT Infrastructure on the adoption of e-Government. The results were as presented in Table 4.20.

Table 4.20: Analysis of Variance for ICT Infrastructure and Adoption of e-Government

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>94.693</td>
<td>1</td>
<td>94.693</td>
<td>580.825</td>
<td>.000b</td>
</tr>
<tr>
<td>1 Residual</td>
<td>45.649</td>
<td>280</td>
<td>.163</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140.341</td>
<td>281</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.20 shows that the p-value (0.000) was less than the significance level (0.05) and the F-calculated (580.825) was greater than the F-critical (3.8415). This implies that the regression model can be used for predicting the influence of ICT infrastructure on the adoption of e-Government service delivery in Kajiado County Government.

Table 4.21 shows the regression coefficients for the influence of ICT Infrastructure on the adoption of e-Government in the County government of Kajiado.

Table 4.21: Coefficients for ICT Infrastructure and Adoption of e-Government

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.069</td>
<td>.151</td>
<td>.454</td>
<td>.650</td>
</tr>
<tr>
<td>County ICT Infrastructure</td>
<td>.987</td>
<td>.041</td>
<td>.821</td>
<td>24.100</td>
</tr>
</tbody>
</table>

Table 4.21 indicated that County ICT infrastructure has a significant influence on the adoption of e-Government service delivery as shown by regression coefficient (0.987) and a p-value (0.000). The findings indicate that an improvement in ICT infrastructure leads to an improvement in the adoption of e-Government in the county government of Kajiado.

4.8 Organization Culture and Adoption of e-Government

The third objective of this study was to assess the influence of organization culture on the adoption of e-Government in the County Government of Kajiado.
4.8.1 Extent of Organization Culture Relationship with e-Government Adoption

The study sought to establish the influence of organization culture on e-Government adoption in the County government of Kajiado. As a result, the respondents were asked to indicate the extent in which on organization culture influenced e-Government adoption in the County government. The results were as shown in Table 4.22.

**Table 4.22: Extent of organization culture Relationship with e-Government Adoption**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low</td>
<td>12</td>
</tr>
<tr>
<td>Low</td>
<td>51</td>
</tr>
<tr>
<td>No extent</td>
<td>6</td>
</tr>
<tr>
<td>Great</td>
<td>150</td>
</tr>
<tr>
<td>Very Great</td>
<td>63</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
</tr>
</tbody>
</table>

Table 4.22 shows that majority of the respondents 150 (53.2%) indicated that organization culture influenced the e-Government adoption in the County Government to a great extent, 63 (22.3%) indicated to a very great extent, 51 (18.1%) indicated to a low extent, 12 (4.3%) indicated to a very low extent. A small number of the respondents 6 (2.1%) indicated that organizational culture had no influence on the e-Government adoption in the County government. The findings show that organizational culture influences adoption of e-Government in County Government of Kajiado to a great extent. These findings concur with Heeks (2002) findings that culture influences adoption of e-Government.

4.8.2 Culture in Supporting Adoption and implementation of e-Government

The study sought to determine whether the culture in the County government was supporting adoption and implementation of e-Government. As such, the respondents were asked to indicate whether cultural supported implementation and adoption of e-Government. The results were as presented in Table 4.23.

**Table 4.23: Culture in Supporting Adoption of e-Government**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>216</td>
</tr>
<tr>
<td>No</td>
<td>66</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
</tr>
</tbody>
</table>

Table 4.23 shows that majority of the respondents 216 (76.6%) indicated that culture in their
organization supported the implementation and adoption of e-Government while 66 (23.4%) indicated that culture did not support the adoption of e-Government. The findings showed that culture supported the implementation of e-governance in the County Government of Kajiado. These findings are in line with Punnett and Ricks (1990) arguments that culture is known to play a unique role in technologies like internet and global systems that provide information and services to the individuals and organization.

4.8.3 Relationship between Aspects of Organization Culture and Adoption of e-Government

The study sought to determine the influence of organizational culture on adoption of e-Government. As such, the respondents were asked to indicate their level of agreement on various statements on the aspects of organization culture on adoption of e-Government. The results were as shown in Table 4.24.
Table 4.24: Relationship between Aspects of Organization Culture and Adoption of e-Government

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful e-Government can be achieved through highly committed leaders and</td>
<td>1.1</td>
<td>4.3</td>
<td>6.4</td>
<td>39.4</td>
<td>48.9</td>
<td>4.308</td>
<td>.852</td>
</tr>
<tr>
<td>employees’ participation to achieve integration and collaboration of e-Government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization culture is known to play a unique role in technologies like internet</td>
<td>6.4</td>
<td>2.1</td>
<td>8.5</td>
<td>57.4</td>
<td>25.5</td>
<td>3.936</td>
<td>.999</td>
</tr>
<tr>
<td>and global systems that provide information and services to the individuals and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational culture has an impact on</td>
<td>1.1</td>
<td>8.5</td>
<td>8.5</td>
<td>52.1</td>
<td>29.8</td>
<td>4.010</td>
<td>.906</td>
</tr>
<tr>
<td>individual acceptance and use of Internet technology in a government agency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizations are managed with strong explicit rules, are hierarchical, cautious,</td>
<td>5.3</td>
<td>3.2</td>
<td>11.7</td>
<td>47.9</td>
<td>31.9</td>
<td>3.978</td>
<td>1.022</td>
</tr>
<tr>
<td>solid and procedural, and their people work in a systematic and an organized way</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in an environment where responsibility and authority are in clear lines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees in the county government are strongly influenced by the culture and</td>
<td>6.4</td>
<td>8.5</td>
<td>12.8</td>
<td>47.9</td>
<td>24.5</td>
<td>3.755</td>
<td>1.109</td>
</tr>
<tr>
<td>understanding how culture has an impact on the adoption process is a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vital element for successful implementation and adoption of e-Government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear regulations and hierarchies help an organization and its members gain better</td>
<td>4.3</td>
<td>2.1</td>
<td>7.4</td>
<td>48.9</td>
<td>37.2</td>
<td>4.127</td>
<td>.949</td>
</tr>
<tr>
<td>coordination in accomplishing their tasks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In e-Government adoption, the presence of</td>
<td>4.3</td>
<td>4.3</td>
<td>19.1</td>
<td>47.9</td>
<td>24.5</td>
<td>3.840</td>
<td>.983</td>
</tr>
<tr>
<td>bureaucratic culture would benefit the process of the adoption because clear and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>explicit regulations and hierarchies support supervision to reduce the chance of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>errors, disobedience, and negligent behavior among</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational culture has an impact on</td>
<td>5.3</td>
<td>5.3</td>
<td>6.4</td>
<td>60.6</td>
<td>22.3</td>
<td>3.893</td>
<td>.985</td>
</tr>
<tr>
<td>individual acceptance and use of Internet technology in county government for</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>successful adoption and delivery of services.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Composite</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.981</td>
<td>0.976</td>
</tr>
</tbody>
</table>

Table 4.24 shows that the respondents agreed on most of the Likert items on organizational culture and adoption of e-Government with a mean of 3.981 and a standard deviation of 0.976. This implies that organizational culture affects the adoption of e-Government. These findings concur with Alsowoyegh (2012) findings that organizational culture affects successful adoption of
modern technology information technology systems. In addition, the respondents agreed with a mean of 4.308 and a standard deviation of 0.852 that successful e-Government could be achieved through highly committed leaders and employees’ participation to achieve integration and collaboration of e-Government systems. These findings are in line with Denison and Mishra (1995) argument that successful e-Government can be achieved through highly committed leaders and employees’ participation to achieve integration and collaboration of e-Government systems. They also agreed that clear regulations and hierarchies helped an organization and its members to gain better coordination in accomplishing their tasks as shown by a mean of 4.127 and a standard deviation of 0.949. These findings are in line with Heeks (2002) argument that clear regulations and hierarchies help an organization and its members gain better coordination in accomplishing their tasks. In addition, they agreed that organizational culture has an impact on individual acceptance and use of Internet technology in a government agency as shown by a mean of 4.010 and a standard deviation of 0.906. They also agreed that organizations are managed with strong explicit rules, are hierarchical, cautious, solid and procedural, and their people work in a systematic and an organized way in an environment where responsibility and authority are in clear lines as shown by a mean of 3.978 and a standard deviation of 1.022. These findings are in line with Olchi (1978) findings that strong explicit rules, are hierarchical, cautious, solid and procedural, and their people work in a systematic and an organized way in an environment where responsibility and authority are in clear lines.

Moreover, with a mean of 3.936 and a standard deviation of 0.999 they agreed that organization culture was known to play a unique role in technologies like internet and global systems that provided information and services to the individuals and organizations. Further, they agreed that organizational culture has an impact on individual acceptance as well as on the use of internet technology in County government, for successful adoption and delivery of services as shown by a mean of 3.893 and a standard deviation of 0.985.

With a mean of 3.840 and a standard deviation of 0.983 they agreed that in e-Government adoption, the presence of bureaucratic culture would benefit the process of the adoption because of clear and explicit regulations and hierarchies support supervision so as to reduce the chance of errors, disobedience, and negligent behavior among them. These findings agree with Wallach (1983) argument that organizations are managed with strong explicit rules, are hierarchical,
cautious, solid and procedural, and their people work in a systematic and an organized way in an environment where responsibility and authority are in clear lines. Moreover, they agreed that employees in the County government were strongly influenced by the culture and understanding how culture has an impact on the adoption process was a vital element for successful implementation and adoption of e-Government as shown by a mean of 3.755 and a standard deviation of 1.109. According to Al-Kaabi (2010) governments should have a clear vision and strategy before they start e-Government projects and initiatives with target measurements for success.

The key informants were asked to indicate how organization culture affects e-Government adoption implementation in the County. The study found that there was ICT adoption resistance due to people being used to manual process. Some key informants felt that the employees are always willing to adopt the new system, though some people feel they don’t want to be monitored. Other organizational culture related challenges include lack of forums to improve adoption, lack of motivation and poor reward system, lack of management support and lack of technical support.

4.8.4 Testing Hypothesis

The study sought to establish the influence of organization culture on adoption of e-Government in the county government of Kajiado. The Hypothesis was as follows;

\[ H_{10} \text{ Organization culture has no significant relationship on the adoption of e-Government in the County government of Kajiado.} \]

The hypothesis was tested by use of correlation analysis and regression analysis. Using 95 per cent confidence interval, the significance level was 0.05. Therefore, the alternative Hypothesis was accepted when the p-value was less than the significance level (0.05).

4.8.4.1 Correlation Analysis for Organizational Culture and adoption of e-Government

The study sought to examine the association between organizational culture and adoption of e-Government in the County government of Kajiado. Pearson correlation coefficient was used. The results were as presented in Table 4.25.
Table 4.25: Correlation Coefficients for Organizational Culture and adoption of e-Government

<table>
<thead>
<tr>
<th></th>
<th>Adoption of e-Government service delivery</th>
<th>Organizational culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption of e-Government service delivery</td>
<td>Pearson Correlation 1</td>
<td>.562**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>282</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>Pearson Correlation .562**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>282</td>
</tr>
</tbody>
</table>

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

Table 4.25 the results show that there is a strong positive association between organizational culture and adoption of e-Government in the County government of Kajiado (r=0.562). The relationship was significant because the p-value (0.000) was less than the alpha value (0.05, at 95% confidence interval). Therefore, the alternative hypothesis is accepted indicating that “organizational culture has a significant influence on the adoption of e-Government in the County government of Kajiado.”

4.8.4.2 Regression Analysis for Organizational Culture and Adoption of e-Government

The R-Squared was used to indicate variation in adoption of e-Government that can be explained organizational culture. The results were as presented in Table 4.26.

Table 4.26: Model Summary for Organizational Culture and Adoption of e-Government

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.562a</td>
<td>.316</td>
<td>.313</td>
<td>.58557</td>
</tr>
</tbody>
</table>

Table 4.26 shows that the r-squared for the relationship organizational culture and adoption of e-Government was 0.313, implying that the County organizational culture explains 31.3% of the adoption of e-Government in the County Government of Kajiado. This shows that County organizational culture considerably affects adoption of e-Government. These findings agree with Nuradin, Stockdale and Scheepers (2010) findings that the culture of an organization affects implementation and adoption of e-Government.

Analysis of variance was used to determine whether the model the model was a good fit for the data in determining the influence of organizational culture on the adoption of e-Government. The
results were as presented in Table 4.27.

**Table 4.27: ANOVA for Organizational Culture and Adoption of e-Government**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>44.332</td>
<td>1</td>
<td>44.332</td>
<td>129.289</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>96.009</td>
<td>280</td>
<td>.343</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140.341</td>
<td>281</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.27 shows that the significance level (0.05) was greater than the p-value (0.000) and the F-calculated (129.289) was greater than the F-critical (3.8415). This implies that the regression model can be used for predicting the influence organizational culture on the adoption of e-Government in Kajiado County Government.

Table 4.28 shows the regression coefficients for the influence of organizational culture on the adoption of e-Government in the County government of Kajiado.

**Table 4.28: Coefficients for Organizational Culture and Adoption of e-Government**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients B</th>
<th>Std. Error</th>
<th>Standardized Coefficients Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.530</td>
<td>.192</td>
<td></td>
<td>7.982</td>
<td>.000</td>
</tr>
<tr>
<td>1 County Organizational culture</td>
<td>.568</td>
<td>.050</td>
<td>.562</td>
<td>11.371</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 4.28 shows that County organizational culture has a significant influence on the adoption of e-Government of Kajiado as shown by regression coefficient (0.568) and a p-value (0.000). The findings indicate that an improvement in organizational culture leads to an improvement in the adoption of e-Government in the County government of Kajiado.

**4.9 Financial Capacity and Adoption of e-Government**

The fourth objective of this study was to assess the influence of Organization Culture on the adoption of e-Government in the County Government of Kajiado.

**4.9.1 Adequacy Financial Resources to Implement e-Government**

The study sought to determine the adequacy of financial resources in the implementation of e-Government. As such, the participants were asked to indicate whether the County government
has adequate financial resources to implement e-Government. The results were as shown in Table 4.29.

Table 4.29: Adequacy Financial Resources for Implementation and adoption e-Government

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>153</td>
<td>54.3</td>
</tr>
<tr>
<td>No</td>
<td>129</td>
<td>45.7</td>
</tr>
<tr>
<td>Total</td>
<td>282</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.29 shows that majority of the respondents 153 (54.3%) indicated that County government has adequate financial resources to implement and adopt e-Government centrally while 129 (45.7%) indicated that it has inadequate financial resources to implement and adopt of e-Government. The findings show that the County has adequate financial resources to centrally implement and adopt the e-Government. These findings agree with Kamal (2006) findings that financial support is indispensable for Organizations adopting IT innovations.

4.9.2 Relationship between Aspects of Financial Capacity and the Adoption of e-Government

The study sought to determine influence of financial capacity and adoption of e-Government in the County government of Kajiado. As such, the study participants were asked to indicate the extent at which financial capacity aspects influenced the adoption of e-Government. The results were as presented in Table 4.30.
**Table 4.30: Relationship between Aspects of Financial Capacity and the Adoption of e-Government**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial resources are termed as critical for any successful implementation and adoption of e-Government</td>
<td>5.3</td>
<td>1.1</td>
<td>1.1</td>
<td>35.1</td>
<td>57.4</td>
<td>4.383</td>
<td>.981</td>
</tr>
<tr>
<td>Availability of financial resources to enhance or build organizational IT infrastructure is seen as one of the strongest predictors of innovation</td>
<td>4.3</td>
<td>3.2</td>
<td>6.4</td>
<td>45.7</td>
<td>40.4</td>
<td>4.148</td>
<td>.979</td>
</tr>
<tr>
<td>E-Government systems adoption require considerable financial resources in terms of implementation and maintenance</td>
<td>4.3</td>
<td>4.3</td>
<td>2.1</td>
<td>46.8</td>
<td>42.6</td>
<td>4.191</td>
<td>.983</td>
</tr>
<tr>
<td>Investment in information and technology is required in procuring and developing adequate level of hardware and software for future innovations as well as training end users</td>
<td>5.3</td>
<td>2.1</td>
<td>3.2</td>
<td>45.7</td>
<td>43.6</td>
<td>4.202</td>
<td>.997</td>
</tr>
<tr>
<td>County government lacks sufficient financial resources to acquire new and up-to-date technologies that hinders implementation of new technological innovation like e-Government systems</td>
<td>9.6</td>
<td>11.7</td>
<td>13.8</td>
<td>31.9</td>
<td>33.0</td>
<td>3.670</td>
<td>1.301</td>
</tr>
<tr>
<td>Lack of funding in a project is certainly an impediment especially when adopting an innovation means that individuals must go through a learning curve and take on new responsibilities as a result of developing expertise</td>
<td>5.3</td>
<td>4.3</td>
<td>17.0</td>
<td>41.5</td>
<td>31.9</td>
<td>3.904</td>
<td>1.064</td>
</tr>
<tr>
<td>E-Government systems require considerable financial resources which is used in building up technical infrastructures and coordinating systems and initiatives</td>
<td>2.1</td>
<td>4.3</td>
<td>9.6</td>
<td>51.1</td>
<td>33.0</td>
<td>4.085</td>
<td>.884</td>
</tr>
<tr>
<td>The funding of the ICT projects is the factor which promotes the success of e-Government</td>
<td>5.3</td>
<td>2.1</td>
<td>10.6</td>
<td>42.6</td>
<td>39.4</td>
<td>4.085</td>
<td>1.029</td>
</tr>
<tr>
<td>Lack of financial resources as a barrier to implementing and adopting e-Government and therefore County government should solicit for funds from external sources to assist in e-Government adoption</td>
<td>5.3</td>
<td>9.6</td>
<td>10.6</td>
<td>37.2</td>
<td>37.2</td>
<td>3.914</td>
<td>1.156</td>
</tr>
<tr>
<td><strong>Composite</strong></td>
<td>4.064</td>
<td>1.041</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.30 shows that the respondents agreed on most of the Likert items on financial capacity and adoption of e-Government with a mean of 4.064 and a standard deviation of 1.041. This implies that financial capacity affects the adoption of e-Government in the County government.
of Kajiado. These findings concur with Khanh (2014) argument that while other factors such as human resource and infrastructure are required in the adoption of e-Government, funding is more significant as it is required in ensuring the successful implementation and adoption process in e-Government.

In addition, the respondents agreed with a mean of 4.383 and a standard deviation of 0.981 that financial resources were termed as critical for any successful implementation and adoption of e-Government. They also agreed that investment in information and technology was required in procuring and developing adequate level of hardware and software for future innovations as well as training end users as shown by a mean of 4.202 and a standard deviation of 0.997. In addition, they agreed that adoption of e-Government systems required considerable financial resources in terms of implementation and maintenance as shown by a mean of 4.191 and a standard deviation of 0.983.

Moreover, they agreed that availability of financial resources to enhance or build organizational IT infrastructure was seen as one of the strongest predictors of innovation as shown by a mean of 4.148 and a standard deviation of 0.979. These findings agree with Mohr (1969) argument that the availability of adequate financial resources to build or enhance organization’s IT infrastructure has been seen as one of the strongest predictors of innovation. The participants also indicated that e-Government systems required considerable financial resources which were used in building up technical infrastructures and coordinating systems and initiatives. Further, they agreed that funding of the ICT projects were the factors which promoted the success of e-Government as shown by a mean of 4.085 and a standard deviation of 1.029. This is in agreement with Gakunu (2004) observation that technology costs money and money is always in short supply in every organization especially in the public sector where there are competing needs. With a mean of 3.914 and a standard deviation of 1.156 they agreed that lack of financial resources were barriers to implementation and adoption of e-Government and therefore County government should solicit for funds from external sources to assist in e-Government adoption.

They also agreed that lack of funding in a project was certainly an impediment especially when adopting an innovation meant that individuals must go through a learning curve and take on new responsibilities as a result of developing expertise as shown by a mean of 3.904 and a standard
deviation of 1.064. Moreover, they agreed that County government lacked sufficient financial resources to acquire new and up-to-date technologies that hindered implementation of new technological innovation like e-Government systems as shown by a mean of 3.670 and a standard deviation of 1.301. Finally, with a mean of 3.670 and a standard deviation of 1.301 they agreed that County government lacked sufficient financial resources to acquire new and up-to-date technologies that hindered implementation of new technological innovation like e-Government systems. According to Lind (1991) many organization in developing countries lack sufficient financial resources to acquire new and up-to-date technologies. This hinders implementation of new technological innovation, any subsequent enhancement and ongoing expenses during usage.

The key informants were requested to indicate whether the County allocated adequate financial resources to the e-Government programs. From the findings, they indicated that the current government is providing the required ICT resources. However, some key informants felt that the County government does not provide enough ICT financial resources.

\textit{We do not have funds though the budgets are in place so we keep on moving the budget forward K10}

The key formants were also requested to indicate whether the County provides enough resources to the innovation process in the adoption of e-Government. From the findings they indicated that the resources required included HR/ICT infrastructure, finance, internet, network, computers, technical support and they were not enough.

4.9.3 Testing Hypothesis

The study sought to establish the influence of financial capacity on adoption of e-Government in the County government of Kajiado. The Hypothesis was as follows;

H10 Financial capacity has no significant relationship on the adoption of e-Government in the County government of Kajiado.

The hypothesis was tested by use of correlation analysis and regression analysis. Using 95 per cent confidence interval, the significance level was 0.05. Therefore, the alternative Hypothesis was accepted when the p-value was less than the significance level (0.05).
4.9.3.1 Correlation Analysis for Financial Capacity and adoption of e-Government

The study sought to examine the association between financial capacity and adoption of e-Government in the County government of Kajiado. Pearson correlation coefficient was used. The results were as presented in Table 4.31.

**Table 4.31: Correlation Coefficients for Financial Capacity and adoption of e-Government**

<table>
<thead>
<tr>
<th>Adoption of e-Government service delivery</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>Financial Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption of e-Government service delivery</td>
<td>1</td>
<td>.750**</td>
<td>.000</td>
</tr>
<tr>
<td>Financial Capacity</td>
<td>Pearson Correlation</td>
<td>.750**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>282</td>
<td>282</td>
</tr>
</tbody>
</table>

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

Table 4.31 shows that there is a strong positive association between financial capacity and adoption of e-Government in the County government of Kajiado (r=0.750). The relationship was significant because the p-value (0.000) was less than the alpha value (0.05, at 95% confidence interval). Thus, the alternative Hypothesis is accepted indicating that “financial capacity has a significant influence on the adoption of e-Government in the County government of Kajiado.”

4.9.3.2 Regression Analysis for Financial Capacity and Adoption of e-Government

The R-Squared was used to indicate variation in adoption of e-Government that can be explained financial capacity. The results were as presented in Table 4.32.

**Table 4.32: Model Summary for Financial Capacity and Adoption of e-Government**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.750</td>
<td>.562</td>
<td>.561</td>
<td>.468</td>
</tr>
</tbody>
</table>

Table 4.35 shows that the r-squared for the relationship between financial capacity and adoption of e-Government was 0.562, implying that the County financial capacity could explain 56.2% of the adoption of e-Government in the County Government of Kajiado. This implies that County financial capacity was considerably affecting adoption of e-Government in the County Government of Kajiado. These findings are in line with Al-Shboul, Rababah and Al-Saqqa (2014) findings that financial cost and budgeting were some of the main factors affecting the
implementation of e-Government services in Jordan.

Analysis of variance was used to determine whether the model was a good fit for the data in determining the influence of financial capacity on the adoption of e-Government. The results were as presented in Table 4.33.

**Table 4.33: Analysis of Variance for Financial Capacity and Adoption of e-Government**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>78.900</td>
<td>1</td>
<td>78.900</td>
<td>359.558</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>61.442</td>
<td>280</td>
<td>.219</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140.341</td>
<td>281</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.33 shows that the p-value (0.000) was less than the significance level (0.05) and the F-calculated (359.558) was more than the F-critical (3.8415). This implied that the regression model could be used for predicting the influence financial capacity on the adoption of e-Government in Kajiado County Government.

Table 4.34 shows the regression coefficients for the influence of financial capacity on the adoption of e-Government in the County government of Kajiado.

**Table 4.34: Coefficients for Financial Capacity and Adoption of e-Government**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.823</td>
<td>.153</td>
<td></td>
</tr>
<tr>
<td>County Financial Capacity</td>
<td>.763</td>
<td>.040</td>
<td>.750</td>
</tr>
</tbody>
</table>

Table 4.34 showed that County financial capacity has a significant influence on the adoption of e-Government as shown by regression coefficient (0.763) and a p-value (0.000). The findings indicate that an improvement in financial capacity leads to an improvement in the adoption of e-Government in the County government of Kajiado.
4.10 Internal Organizational Factors and the Adoption of e-Government

The fifth objective of the study was to examine how internal organizational factors influence adoption of e-Government in the County Government of Kajiado. The Hypothesis was as follows:

H10 Internal Organizational factors have no significant relationship on the adoption of e-Government in the County Government of Kajiado.

The R-Squared was used to indicate variation in adoption of e-Government that can be explained organizational factors (human resource, ICT infrastructure, organization culture and financial capacity). The results were as presented in Table 4.35.

Table 4.35: Model Summary for Joint influence of Internal Organizational Factors on the Adoption of e-Government

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.884</td>
<td>.782</td>
<td>.778</td>
<td>.332</td>
</tr>
</tbody>
</table>

Table 4.35 shows that the r-squared was used to indicate variation in the dependent variable (adoption of e-Government) which could be explained by the independent variables (human resources capacity, ICT infrastructure, organization culture, financial capacity and change management). The R-square in this study was 0.782, implying that the independent variables could explain 78.2% of the adoption of e-Government in the County Government of Kajiado. It also implied that 21.8% of the adoption of e-Government could be described by other factors which were excluded in this study.

Table 4.36: ANOVA for Joint influence of Internal Organizational Factors on the Adoption of e-Government

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>109.680</td>
<td>4</td>
<td>27.420</td>
<td>247.718</td>
<td>.000b</td>
</tr>
<tr>
<td>1</td>
<td>Residual</td>
<td>277</td>
<td>.111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140.341</td>
<td>281</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As shown in Table 4.36, the p-value (0.000) was less than the significance level (0.05) and the F-calculated (247.718) was more than the F-critical (1.944). This implied that the regression model
could be used for predicting the influence of independent variables (human resource, ICT infrastructure, organizational culture and financial capacity) on adoption of e-Government in Kajiado County Government.

Table 4.37 shows the regression coefficients for the influence of organizational factors (human resource, ICT infrastructure, organizational culture and financial capacity) on the adoption of e-Government in the County government of Kajiado.

Table 4.37: Coefficients for Joint influence of Internal Organizational Factors on the Adoption of e-Government

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.698</td>
<td>.148</td>
<td>-4.707</td>
<td>.000</td>
</tr>
<tr>
<td>Human Resource</td>
<td>.174</td>
<td>.040</td>
<td>.153</td>
<td>4.310</td>
</tr>
<tr>
<td>County ICT Infrastructure</td>
<td>.573</td>
<td>.051</td>
<td>.477</td>
<td>11.266</td>
</tr>
<tr>
<td>County Organizational culture</td>
<td>.100</td>
<td>.036</td>
<td>.098</td>
<td>2.746</td>
</tr>
<tr>
<td>County Financial Capacity</td>
<td>.330</td>
<td>.042</td>
<td>.324</td>
<td>7.790</td>
</tr>
</tbody>
</table>

The regression equation was as follow:

\[ Y = -0.698 + 0.174 X_1 + 0.573 X_2 + 0.100 X_3 + 0.330X_4 \]

Table 4.37 shows that the results indicate that human resource capacity has a significant relationship with adoption of e-Government as shown by regression coefficient of 0.174 (p-value=0.000). In addition, the results indicate that ICT infrastructure has a significant relationship with adoption of e-Government as shown by regression coefficient 0.573 (p-value=0.000). Further, the results show that organizational culture has a significant relationship with adoption of e-Government as shown by regression coefficient of 0.100 (p-value=0.006). Also, the results show that financial capacity has a significant relationship with adoption of e-Government as shown by regression coefficient of 0.330 (p-value=0.000).

4.11 Organizational Change Management, Internal Organizational Factors and Adoption of e-Government

The sixth 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.

4.11.1 Extent of Change Management Influence on Adoption of e-Government

The study sought to establish the influence of change management on the adoption of e-Government in the County. As such, the respondents were asked to indicate the extent in which change management influenced adoption of e-Government in the County. The results were as presented in Table 4.38.

**Table 4.38: Extent of Change Management Influence on Adoption of e-Government**

<table>
<thead>
<tr>
<th>Extent</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low</td>
<td>6</td>
<td>2.1</td>
</tr>
<tr>
<td>Low</td>
<td>33</td>
<td>11.7</td>
</tr>
<tr>
<td>Great</td>
<td>159</td>
<td>56.4</td>
</tr>
<tr>
<td>Very Great</td>
<td>84</td>
<td>29.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 4.38 shows that majority of the respondents 159 (56.4%) indicated that change management influenced adoption of e-Government in the County to a great extent, 84 (29.8%) indicated to very great extent, 33 (11.7%) indicated to a moderate extent while 6 (2.1%) of the staffs indicated to very low extent. The findings showed that change management influences the adoption of e-Government in the County Government of Kajiado to a great extent. 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.

4.11.2 Relationship between Change Management and Adoption of e-Government

The study sought to establish the influence of change management on adoption of e-Government. As a result, 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 were as presented in Table 4.39.
Table 4.39: Relationship between Change Management and Adoption of e-Government

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change management is a critical factor for implementation and adoption of e-Government in the county government</td>
<td>4.3</td>
<td>5.3</td>
<td>10.6</td>
<td>53.2</td>
<td>26.6</td>
<td>3.925</td>
<td>.982</td>
</tr>
<tr>
<td>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</td>
<td>0.0</td>
<td>7.4</td>
<td>10.6</td>
<td>63.8</td>
<td>18.1</td>
<td>3.851</td>
<td>.968</td>
</tr>
<tr>
<td>Role of leadership in e-Government is critical success factor of change management in e-Government implementation</td>
<td>6.4</td>
<td>4.3</td>
<td>9.6</td>
<td>53.2</td>
<td>26.6</td>
<td>3.893</td>
<td>1.048</td>
</tr>
<tr>
<td>Poor change management strategy is one of the causes why success rate of e-Government projects is dismal</td>
<td>2.1</td>
<td>7.4</td>
<td>4.3</td>
<td>53.2</td>
<td>33.0</td>
<td>4.074</td>
<td>.926</td>
</tr>
<tr>
<td>There is a strong need to adequately address the change of management issues when managing adoption of e-Government</td>
<td>2.1</td>
<td>4.3</td>
<td>13.8</td>
<td>47.9</td>
<td>31.9</td>
<td>4.031</td>
<td>.906</td>
</tr>
<tr>
<td>Changes brought by new technologies and their potentials into e-Government processes have to be into the core of change management strategy</td>
<td>3.2</td>
<td>2.1</td>
<td>4.3</td>
<td>50.0</td>
<td>40.4</td>
<td>4.223</td>
<td>.878</td>
</tr>
<tr>
<td>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</td>
<td>3.2</td>
<td>4.3</td>
<td>5.3</td>
<td>51.1</td>
<td>36.2</td>
<td>4.127</td>
<td>.926</td>
</tr>
<tr>
<td>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</td>
<td>2.1</td>
<td>2.1</td>
<td>10.6</td>
<td>39.4</td>
<td>45.7</td>
<td>4.244</td>
<td>.885</td>
</tr>
<tr>
<td>E-Government adoption requires organizational leaders’ commitment and willingness to change entrenched public structures and transaction processes</td>
<td>3.2</td>
<td>4.3</td>
<td>3.2</td>
<td>43.6</td>
<td>45.7</td>
<td>4.244</td>
<td>.943</td>
</tr>
<tr>
<td>Change managements is a missing aspect in E-Government implementation and adoption</td>
<td>7.4</td>
<td>7.4</td>
<td>14.9</td>
<td>47.9</td>
<td>22.3</td>
<td>3.702</td>
<td>1.120</td>
</tr>
<tr>
<td>Employees are involved in decision making, and there’s a clearly defined reward system for innovations in support of e-Government</td>
<td>10.6</td>
<td>16.0</td>
<td>19.1</td>
<td>28.7</td>
<td>25.5</td>
<td>3.425</td>
<td>1.310</td>
</tr>
<tr>
<td><strong>Composite</strong></td>
<td><strong>3.976</strong></td>
<td><strong>0.990</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.39 shows that the respondents agreed on most of the Likert items on change management
and the adoption of e-Government with a mean of 3.976 and a standard deviation of 0.990. These findings agree with El Badawy and Attia (2014) findings that change management practices affect the adoption of e-Government. In addition, 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, unmeasurable 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. These findings agree with O’Looney (2002) argument that the transformation to e-Government requires organizational leaders’ commitment and willingness to change entrenched public structures and transaction processes. 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. These findings concur with Conklin (2007) findings that change management have become a critical factor for implementation and adoption of e-Government.

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.

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.

4.11.3 Testing of Hypothesis

The study sought to establish how change management moderates the relationship between organizational internal factors and adoption of e-Government. The Hypothesis was as follows;

H10 Change management has a moderating significant relationship on organizational internal factors and adoption of e-Government

The hypothesis was tested by use of correlation analysis and regression analysis. Using 95 per cent confidence interval, the significance level was 0.05. Therefore, the alternative Hypothesis was accepted when the p-value was less than the significance level (0.05).
4.11.3.1 Correlation Analysis for Change Management and Adoption of e-Government

The study sought to examine the association between organizational change management and adoption of E-Government in the County government of Kajiado. Pearson correlation coefficient was used. The results were as presented in Table 4.40.

Table 4.40: Correlation Coefficients for Change Management and Adoption of e-Government

<table>
<thead>
<tr>
<th></th>
<th>Adoption of e-Government for service delivery</th>
<th>County Organizational change management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption of E-Government for service delivery</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>282</td>
</tr>
<tr>
<td>County Organizational change management</td>
<td>Pearson Correlation</td>
<td>.344**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>282</td>
</tr>
</tbody>
</table>

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

Table 4.40 shows that there is a moderate positive association between organizational change management and adoption of e-Government in the County government of Kajiado (r=0.344). The relationship was significant because the p-value (0.000) was less than the alpha value (0.05, at 95% confidence interval). In addition, the association between organizational change management and adoption of e-Government in the County government of Kajiado was positive. The findings show that there is a moderate positive and significant association between organizational change management and adoption of e-Government in the County government of Kajiado.

4.11.3.2 Moderating influence Regression Analysis

The study sought to establish the moderating influence of organizational change management on the relationship between internal organizational factors and adoption of e-Government in the County government of Kajiado. The variation in the dependent variable that can be explained by the independent variables and the moderating variable were presented in two models. The results were as presented in Table 4.41.
As shown in Table 4.41, 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.

Analysis of variance was used to determine whether the model the model was a good fit for the data in determining the influence of the internal organization factors and change management on the adoption of e-Government. The results were as presented in Table 4.42.

### Table 4.42: ANOVA for Moderating influence of Organizational Change Management

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>109.944</td>
<td>5</td>
<td>21.989</td>
<td>199.648</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>30.398</td>
<td>276</td>
<td>.110</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>140.341</td>
<td>281</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Regression</td>
<td>114.044</td>
<td>9</td>
<td>12.672</td>
<td>131.063</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>26.298</td>
<td>272</td>
<td>.097</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>140.341</td>
<td>281</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.42 shows that 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 influence 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 4.43 shows the regression coefficients for the influence of internal organization factors and organizational culture on the adoption of e-Government in the County government of Kajiado.
Table 4.43: Coefficients for Moderating influence of Organizational Change Management

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.570</td>
<td>.170</td>
<td></td>
<td>-3.356</td>
</tr>
<tr>
<td>Human Resource</td>
<td>.176</td>
<td>.040</td>
<td>.155</td>
<td>4.367</td>
</tr>
<tr>
<td>County ICT Infrastructure</td>
<td>.564</td>
<td>.051</td>
<td>.469</td>
<td>11.029</td>
</tr>
<tr>
<td>County Organizational culture</td>
<td>.147</td>
<td>.047</td>
<td>.145</td>
<td>3.101</td>
</tr>
<tr>
<td>County Financial Capacity</td>
<td>.334</td>
<td>.042</td>
<td>.328</td>
<td>7.888</td>
</tr>
<tr>
<td>County Organizational change management</td>
<td>-.075</td>
<td>.049</td>
<td>-.064</td>
<td>-1.547</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.557</td>
<td>.697</td>
<td></td>
<td>3.668</td>
</tr>
<tr>
<td>Human Resource</td>
<td>.758</td>
<td>.240</td>
<td>.666</td>
<td>3.154</td>
</tr>
<tr>
<td>County ICT Infrastructure</td>
<td>-.589</td>
<td>.345</td>
<td>-.490</td>
<td>-1.705</td>
</tr>
<tr>
<td>County Organizational culture</td>
<td>-.748</td>
<td>.170</td>
<td>-.740</td>
<td>-4.411</td>
</tr>
<tr>
<td>County Financial Capacity</td>
<td>.673</td>
<td>.236</td>
<td>.661</td>
<td>2.853</td>
</tr>
<tr>
<td>County Organizational change management</td>
<td>-.821</td>
<td>.182</td>
<td>-.692</td>
<td>-4.504</td>
</tr>
<tr>
<td>Human resource capacity * Organizational change management</td>
<td>-.141</td>
<td>.059</td>
<td>-.723</td>
<td>-2.367</td>
</tr>
<tr>
<td>ICT Infrastructures * Organizational change management</td>
<td>.291</td>
<td>.085</td>
<td>1.442</td>
<td>3.405</td>
</tr>
<tr>
<td>Organizational culture * Organizational change management</td>
<td>.226</td>
<td>.043</td>
<td>1.362</td>
<td>5.281</td>
</tr>
<tr>
<td>Financial capacity * Organizational change management</td>
<td>-.107</td>
<td>.062</td>
<td>-.617</td>
<td>-1.729</td>
</tr>
</tbody>
</table>

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

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:

\[ Y = -2.557 + 0.758X_1 - 0.589X_2 - 0.748X_3 + 0.673X_4 - 0.821Z - 0.141X_1 \times Z + 0.291X_2 \times Z + 0.226X_3 \times Z - 0.107X_4 \times Z \]

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.
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter covers the summary of the key findings, conclusions and recommendations as per the objectives of the study. Under the summary of the findings section, the results for the six studied Hypothesis were presented. The study conclusions were guided by the research objectives and were informed by the findings and discussions. Based on the study findings and conclusions, the study made recommendations for policy, practices and suggestions for further studies.

5.2 Summary of the Findings

The study sought to establish the influence of Human Resource Capacity on the adoption of e-Government in the County Government of Kajiado. All the 10 Likert type items on human resource yielded a composite mean of 3.970 and a standard deviation of 1.105. There was a significant positive linear correlation (r =0.595) between human resource and adoption of e-Government in service delivery. It was established that human resource capacity explained 35.5% of the adoption of e-Government in the County Government of Kajiado. The p-value was found to be 0.000 which was less than the significance level of 0.05.

The study sought to determine the influence of ICT Infrastructure on the adoption of e-Government in the County Government of Kajiado. All the 10 Likert type items on ICT Infrastructure yielded a composite mean of 3.721 and a standard deviation of 1.135. There was a significant positive linear correlation between ICT infrastructure and adoption of e-Government in the County government of Kajiado (r=0.821). The study established that ICT infrastructure explained 67.5% of the adoption of e-Government in the County Government of Kajiado. The p-value was found to be 0.000 which was less than the significance level of 0.05.

The study sought to assess the influence of organization culture on the adoption of e-Government in the County Government of Kajiado. All the 10 Likert type items on organizational culture yielded a composite mean of 3.981 and a standard deviation of 0.976. There was a significant positive linear correlation between organizational culture and adoption of e-Government in the county government of Kajiado (r=0.562). The study found that organizational culture explained
31.3% of the adoption of e-Government in the County Government of Kajiado. The p-value was found to be 0.000 which was less than the significance level of 0.05.

The study sought to establish the influence of financial capacity on the adoption of e-Government in the County Government of Kajiado. All the 10 Likert type items on financial capacity yielded a composite mean of 3.981 and a standard deviation of 0.976. There was a significant positive linear correlation between financial capacity and adoption of e-Government in the County government of Kajiado (r=0.750). The study found that financial capacity explained 56.2% of the adoption of e-Government in the County Government of Kajiado. The p-value was found to be 0.000 which was less than the significance level of 0.05.

The study sought to examine the influence of internal organizational factors on the adoption of e-Government in the County Government of Kajiado. The study found that internal organizational factors (human resource, ICT Infrastructure, organization culture and financial capacity) explained 78.2% of the adoption of e-Government in the County Government of Kajiado. The p-value was found to be 0.000 which was less than the significance level of 0.05.

The study sought 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. All the 10 Likert type items on change management yielded a composite mean of 3.981 and a standard deviation of 0.976. The study found that human resource, ICT infrastructure, organizational culture, financial capacity and change management explained 78.3% of the adoption of e-Government in service delivery. An introduction of the interaction term in the model led to an increase in the r-squared by 3%. Therefore, organizational change management has a significant influence on the influence of organizational factors (human resource, ICT infrastructure, organizational culture, financial capacity) on adoption of e-Government in service delivery in the County government of Kajiado.

Table 5.1: Summary of the Research Findings

<table>
<thead>
<tr>
<th>Research Objective</th>
<th>Hypothesis</th>
<th>Results</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>To establish how Human Resource Capacity influence adoption of e-Government in the County Government of Kajiado.</td>
<td>H1: Human Resource Capacity has no significant relationship on the adoption of e-Government in the</td>
<td>r=0.595 (p-value=0.000) β = 0.677 (p-value=0.000)</td>
<td>Accepted</td>
</tr>
</tbody>
</table>
| To determine the extent at which ICT Infrastructure influence adoption of e-Government in the County Government of Kajiado. | H1: ICT infrastructure has no significant relationship on the adoption of e-Government in the County government of Kajiado. | $r=0.821$ (p-value=0.000)  
$\beta = 0.987$ (p-value=0.000) | Accepted |
|---|---|---|---|
| To assess how Organization Culture influence adoption of e-Government in the County Government of Kajiado. | H1: Organization culture has no significant relationship on the adoption of e-Government in the County government of Kajiado. | $r=0.562$ (p-value=0.000)  
$\beta = 0.568$ (p-value=0.000) | Accepted |
| To establish the extent at which Financial Capacity influence adoption of e-Government in the County Government of Kajiado. | H1: Financial capacity has no significant relationship on the adoption of e-Government in the County government of Kajiado. | $r=0.750$ (p-value=0.000)  
$\beta = 0.763$ (p-value=0.000) | Accepted |
| Examine how internal Organizational factors influence adoption of e-Government in the County Government of Kajiado. | H1: Internal Organizational factors have no significant relationship on the adoption of e-Government in the County government of Kajiado. | $\beta_1 = 0.172$ (p-value=0.000)  
$\beta_2 = 0.573$ (p-value=0.000)  
$\beta_3 = 0.100$ (p-value=0.006)  
$\beta_4 = 0.330$ (p-value=0.000) | Accepted |
| To determine how Change management moderates the relationship between organization internal factors and the adoption of e-Government in the County Government of Kajiado. | H1: The strength of the relationship between organization internal factors and adoption of e-Government is moderated by change management. | Model 1  
$\beta_1 = 0.176$ (p-value=0.001)  
$\beta_2 = 0.564$ (p-value=0.000)  
$\beta_3 = 0.147$ (p-value=0.000)  
$\beta_4 = 0.334$ (p-value=0.002)  
$Z = -0.075$ (p-value=0.123)  
Model 2  
$\beta_1 = 0.758$ (p-value=0.002)  
$\beta_2 = -0.589$ (p-value=0.089)  
$\beta_3 = -0.748$ (p-value=0.000)  
$\beta_4 = -0.673$ (p-value=0.005)  
$Z = -0.821$ (p-value=0.000) | Accepted |
5.3 Conclusions

The first objective of the study was to establish the influence of human resource capacity on the adoption of e-Government in the County Government of Kajiado. The inferential statistics showed that human resource capacity has a significant influence on the adoption of e-Government in the County Government of Kajiado. Therefore, the study concluded human resource capacity has a significant influence on the adoption of e-Government in the County Government of Kajiado.

The second objective of the study was to determine the influence of ICT infrastructure on the adoption of e-Government in the County Government of Kajiado. The inferential statistics showed that ICT Infrastructure has a significant influence on the adoption of e-Government in the County Government of Kajiado. Thus, the study concluded that ICT infrastructure has a significant influence on the adoption of e-Government in the County Government of Kajiado.

The third objective of the study was to assess the influence of organization culture on the adoption of e-Government in the County Government of Kajiado. The inferential statistics showed that organization culture has a significant influence on the adoption of e-Government in the County Government of Kajiado. Therefore, this study concluded that organization culture has a significant influence on the adoption of e-Government in the County Government of Kajiado.

The fourth objective of the study was to establish the influence of financial capacity on the adoption of e-Government in the County Government of Kajiado. The inferential statistics showed that financial capacity has a significant influence on the adoption of e-Government in the County Government of Kajiado. Thus, the study concluded that financial capacity has a significant influence on the adoption of e-Government in the County Government of Kajiado.

The fifth objective of the study was to examine how internal organizational factors influence adoption of e-Government in the County Government of Kajiado. The study concludes that human resource, ICT infrastructure, organization culture and financial capacity have a joint significant influence on the adoption of e-Government in the County Government of Kajiado.

The sixth 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.

5.4 Contribution of the Study to Knowledge for Management.

The study was anchored on Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), Diffusion of innovation theory (DOI), Structuration theory and Technology-Organization-Environment (TOE). The findings of this study support Technology acceptance Model indication that perceived usefulness and perceived ease of use influences one’s attitude towards system usage. In this study, the adoption of e-Government was found to influence service delivery in the County government of Kajiado. In addition, the UTAUT theory indicates that performance expectancy, effort expectancy, social influence and facilitating conditions influence behavioral intentions to adopt technology. The findings of this study support this argument through the findings indicating that literacy level, ICT skills, and ICT infrastructure influence adoption of e-Government. The findings of this study support the TOE framework argument that organizational structures and resources (organization culture, human recourse capacity, financial capacity, top management support, organization size, compatibility and collaboration) are fundamental in technological innovation decision-making. This is because the results of the study found that organization culture, human recourse capacity and financial capacity influence adoption of e-Government in County government of Kajiado.

5.5 Recommendations

This section presents the recommendations made from the study in the context of the findings.

5.5.1 Recommendations for Policy

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 also found that although IFMIS system had been adopted in County governments, it was facing numerous challenges. The study recommends that the National government should develop a policy aimed at addressing IFMIS relate challenges so as to ensure efficiency and effectiveness in the supply of products and services in the County governments.

### 5.5.2 Recommendations for Practice

The study found that the County government website and published information were not giving the public all the services they required. The study therefore recommends that the County government of Kajiado, should improve its website to provide more services to the community. These services should include payment of licenses and business permits, payment of parking fees among others.

The study found that there was high ICT illiteracy level in the County and lack of training of employees on information technologies; resulted in resistance to change. Thus, the study recommends that the County government of Kajiado should develop frequent training programmes for all the employees in the County. The training programmes should be preceded by training needs analysis for identify the training needs of the employees in regard to the use of ICT.

The study also found that IT experts are increasingly leaving their jobs in the government to work in the private sector, due to the better offers they were getting. This study therefore recommends that the County government of Kajiado should make use of financial and non-financial rewards to motivate the employees. In regard to financial rewards, the County government should offer more competitive salaries to the employees.

The study found that inadequate ICT infrastructure hampered provision of efficient and affordable ICT services in the County government. This study therefore recommends that the County government of Kajiado should make sure that there are enough computers for use in different ministries. In addition, the County should start using a more reliable network and internet services. Network and internet service providers should be selected on the basis of their infrastructure and ability to provide reliable services.
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.

The study established that financial resources were a key challenge in the adoption of e-Government. This is because finances are required in the buying of equipment such as computers. In addition, availability of financial resources helps to enhance or build organizational IT infrastructure, which is one of the strongest predictors of innovation. Therefore, the study recommends that the County government of Kajiado should increase its budget allocation for the implementation and adoption of e-Government.

5.5.3 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 variation in resources, community cultures, and literacy levels among other factors. Therefore, similar studies should be conducted in other County 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. More counties can be included in a study for benchmarking and comparison.

The study was limited to four organizational factors (human resource capacity, ICT infrastructure, organization culture and financial capacity). These factors could explain 78.2% of the adoption of e-Government. Therefore, further studies should be conducted on other factors influencing adoption of e-Government in County governments of Kenya. 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 on the influence of government policies on the adoption of adoption of e-Government in County Governments of Kenya.
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APPENDICES

Appendix I: University Introductory Letter

UNIVERSITY OF NAIROBI
OPEN, DISTANCE AND E-LEARNING CAMPUS
SCHOOL OF OPEN AND DISTANCE LEARNING
DEPARTMENT OF OPEN LEARNING
NAIROBI LEARNING CENTRE

Your Ref: ____________________________
Our Ref: _____________________________
Telephone: 318262 Ext. 120

Main Campus
Gandhi Wing, Ground Floor
P.O. Box 36197
NAIROBI

8th March 2018

REF: UON/ODc/L/LC/28/351

TO WHOM IT MAY CONCERN

RE: JENNIFER WANGARI WAIRIUKO - REG NO - 183/96148/2015

This is to confirm that the above named is a student at the University of Nairobi, Open
Distance and e-Learning Campus, School of Open and Distance, Department of Open
Learning pursuing Doctor of Philosophy in Project Planning and Management and
specializing in Management Information Systems.

She has successfully completed her coursework and now working on Research Thesis
titled, “Organization Internal factors, Change Management and Adoption of E-
Government for Service Delivery in Kajiado County.” Being supervised by Dr
Raphael Nyongi and Dr Elisha Opito and now ready to collect data.

Please note that the piloting of this study will be conducted in the County
Government of Kajabu

Any assistance accorded to him will be highly appreciated.

CAREN AWILLY
CENTRE ORGANIZER
NAIROBI LEARNING CENTRE
Appendix II: Letter of Introduction to the county

Jennifer Wangari Wairiuko  
P.O Box 70128-00100  
Nairobi  
May 2017

Dear Sir/madam,

RE: REQUEST TO CARRY OUT RESEARCH

I am a PhD candidate in the University of Nairobi, for the award of PhD in Project Planning and Management. I am conducting a research in organizational internal factors, change management and adoption of E-Government in service delivery in Kajiado county. Your county as a key stakeholder in the subject is part of this study. Therefore, humbly requesting your permission to collect data from your employees in the various ministries as well as conduct an interview to the county heads of the departments.

The information sort will only be used for research purposes and will be treated with lots of confidentiality. Respondents will not be required to provide any identification on the questionnaire.

Thank you in Advance

Yours faithfully,

Jennifer Wangari Wairiuko  
L83/98148/2015  
Email: jaynifa@yahoo.com
Appendix III: Research Clearance Permit: NACOSTI

THIS IS TO CERTIFY THAT:
MISS. JENNIFER WANGARI WAIRIUKO
of THE UNIVERSITY OF NAIROBI,
17028-100 Nairobi, has been permitted
to conduct research in Kajiado County
on the topic: ORGANIZATIONAL
INTERNAL FACTORS, CHANGE
MANAGEMENT AND ADOPTION OF
E-GOVERNMENT FOR SERVICE DELIVERY
IN KAJIADO COUNTY, KENYA.

for the period ending:
21st September, 2018

Applicant's Signature

Permit No.: NACOSTI/P/17/7849/19244
Date Of Issue: 25th September, 2017
Fee Received: Ksh 2000

Director General
National Commission for Science,
Technology & Innovation
OFFICE OF THE PRESIDENT

Ministry of Interior and Coordination of National Government

COUNTY COMMISSIONER
KAJIADO COUNTY
P.O. BOX 1-01100
KAJIADO

When replying please quote

Ref. KID/CC/ADM/45/(66) 21st FEBRUARY 2018

Jennifer Wangari Wairiuko
University of Nairobi
P.o. Box 30197-00100
NAIROBI

RE: RESEARCH AUTHORIZATION: JENIFFER WANGARI WAIRIUKO

Following the request made on your behalf by National Commission for Science, Technology and Innovation you are authorized to undertake your research on "Organizational internal factors, change management and adoption of E-Government for service delivery in Kajiado County, Kenya", for a period ending 21st September 2018.

You are advised to carry your research in line with laid down research ethics.

JACK MBISO
FOR: COUNTY COMMISSIONER
KAJIADO COUNTY

Cc: Deputy County Commissioner:
Loitokitok Sub-County
Mashuuru Sub-County
Isinya Sub-County
Kajiado North Sub-County
Kajiado West Sub County
Kajiado Central Sub County

County Director of Education
Ministry of Education
State Department of Basic Education

Email: kajiadoceo@gmail.com
When replying please quote

Ref. KJD/C/R.3/VOL.I/15

County Director of Education
Kajiado County
P.O. Box 33-01100
Kajiado

21st February, 2018

Jennifer Wangari Wairimu
University of Nairobi
P.O. Box 30197-00200

NAIROBI

Re: Research Authorization


This is to confirm to you that, you have been authorized to conduct your research on "organizational internal factors, change management and adoption of e-Government for service delivery" in Kajiado County for a period ending 21st September, 2018.

On completion of the research, you are expected to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

Sammy N. Ng'Ang'a
For: County Director of Education
Kajiado County
Appendix VI: Questionnaire for the Government of Kajiado County employees

County Government: Kajiado
Subcounty:

INTRODUCTION

My name is Jennifer Wangari W, PhD student in the University of Nairobi. I am currently carrying out a research on “Organizational internal factors, Change management and adoption of E-Government service delivery in the County of Kajiado”. The objective of this questionnaire is to establish the influence of selected organizational internal factors in adoption of E-Government and how change management moderates the relationship between organizational internal factors and adoption of E-Government. Data collected will only be used for academic research for my doctoral studies in Project Planning and Management (Management Information System) in the University of Nairobi. The questionnaire is divided into seven sections. Instructions are available in every section.

INSTRUCTIONS

Please don’t write your name on the questionnaire. Kindly provide your honest opinion on all the items in the questionnaire. All the information provided will only be used for study purposes and will be kept confidential.

Use a tick (√) to show your response where applicable, response can also be written.

Thank you in advance.

SECTION 1A: BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>Age</th>
<th>Gender</th>
<th>Highest Level of Education</th>
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<tbody>
<tr>
<td>18 - 24</td>
<td>01 Male</td>
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<td>25 - 34</td>
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<td>35 - 44</td>
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<td>Higher National Diploma</td>
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</table>
SECTION 1B: PRELIMINARY INFORMATION

I. What is your level of ICT training?

☐ Degree  ☐ Certificate Proficiency packages
☐ Diploma in ICT  ☐ Others (specify)-----------------------------

☐ Certificate Proficiency packages  ☐ Others (specify)-----------------------------

II. Which department are you working in?

☐ Administration  ☐ HR
☐ Procurement  ☐ Others (Specify) -----------------------------

☐ ICT

☐ ICT

☐ Finance

III. How long have you worked in the organization?

☐ Less than 1 year  ☐ 1 year  ☐ 2 years  ☐ 3 years  ☐ more than 4 years

IV. Name of your Ministry \{Please tick appropriately (✓)\} in the space provided on the right.

<table>
<thead>
<tr>
<th>Ministries in the county Government</th>
<th>Please tick (✓)</th>
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</thead>
<tbody>
<tr>
<td>1. Ministry of Agriculture, Livestock and fisheries</td>
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<td>2. Ministry of Health services</td>
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<td>3. Ministry of ICT Gender and Social Services</td>
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<td>5. Ministry of Public Works, roads and transport</td>
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<td>8. Ministry of Public services administration and citizen participation</td>
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<td>9. Ministry of Finance and economic planning</td>
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<tr>
<td>10. Ministry of Land, Physical planning, Wildlife, Environment, Housing and Natural resources</td>
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</tbody>
</table>
SECTION 2: COUNTY HUMAN RESOURCE CAPACITY

1. To what extent does human resource influence adoption of E-Government?
   
   ☐ Very great extent  ☐ Great extent  ☐ Moderate extent

   ☐ Low extent  ☐ No extent

2. Do you think the county has adequate human resources to implement and adopt necessary ICT technologies? ☐ Yes  ☐ No

3. Rate the extent to which the following **Human Resource** aspects influence the adoption of E-Government. (1- **Strongly disagree**, 2- **Disagree**, 3- **Neutral**, 4- **Agree** and 5- **Strongly agree**). Please rank your level of agreement with each statement by (✓) the appropriate box.

<table>
<thead>
<tr>
<th>Statements</th>
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<tbody>
<tr>
<td>High level of personnel IT skills can have a positive impact on IT innovation adoption in county government.</td>
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<td>The level of training required for users to upgrade their skills and learn how to adopt and use new technologies may be an obstacle for technology application</td>
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<td>Experienced employees are keen on adopting innovative solutions in support of E-Government.</td>
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<td>The burden to acquire skills to successfully adopt the innovation solutions causes barriers to adoption of E-Government systems.</td>
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<td>Training of human resource on ICT skills is essential in facilitating E-Government adoption</td>
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<td>Knowledge and skills for implementing and applying innovations increase the intention to use a technology and accelerates the adoption process</td>
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</table>
Training of human resource is important in facilitating the process of integrating E-Government with current methods and procedures in the county government.

Existence of knowledgeable Management who support the use of IT is essential in achieving organization objectives.

Lack of training of employees on Information Technologies; results in resistance to change, resistance in use and underutilization of the technology implemented.

Most of the IT experts are increasingly leaving their jobs in the government to work in the private sector, due to the better offers they are getting.

SECTION 3: COUNTY ICT INFRASTRUCTURE

1. Does the county provide enough infrastructure resources to facilitate adoption of E-Government? ☐ Yes ☐ No

2. State the extent to which the following ICT Infrastructure aspects influence the adoption of E-Government. (1- Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree and 5- Strongly agree). Please rank your level of agreement with each statement by (✓) the appropriate box.

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<tr>
<td>ICT infrastructure is considered to be the crucial in E-Government implementation and adoption.</td>
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<td>ICT infrastructure is a modern infrastructure that enable sharing of information technology capabilities upon which county government depends.</td>
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</table>
ICT Technological Infrastructure have drastically influenced the competitiveness of the County governments.

Inadequate ICT infrastructure has hampered provision of efficient and affordable ICT services in the county government.

There is adequate infrastructure to support E-Government initiatives in my area of work e.g. computer, software, network, internet, power to enable service delivery.

Underestimating the importance of information security in the county can lead to unauthorized access to sensitive data, loss of trust which can lead to E-Government utilization failure.

ICT infrastructure is an important aspect in implementation and adoption of E-Government and guides the organization in satisfying operations and management needs.

There exists a contingency plan for data backup and recovery in case of any loss.

IT standards are crucial for E-Government adoption. IT standards are specifications for hardware and software that are widely used and accepted or sanctioned by a standard organization.

In my ministry, the software that exist is regularly updated to cater for the E-Government emerging requirements.

Telecommunication infrastructure and internetworking required to enable sharing of information and open up new channels for communication and delivery of new services is inadequate.
SECTION 4: COUNTY ORGANIZATION CULTURE

1. To what extent, does organization culture influence E-Government adoption in the county government?

☐ Very Great  ☐ Great  ☐ Low  ☐ Very Low  ☐ No Extent

2. Does the culture in your organization support implementation and adoption of E-Government? ☐ Yes  ☐ No.

State the extent to which the following Organization Culture aspects influence the adoption of E-Government. (1- Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree and 5-Strongly agree). Please rank your level of agreement with each statement by (√) the appropriate box.

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<tr>
<td>Successful E-Government can be achieved through highly committed leaders and employees’ participation to achieve integration and collaboration of E-Government systems.</td>
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<td>Organization culture is known to play a unique role in technologies like internet and global systems that provide information and services to the individuals and organization</td>
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<td>Organizational culture has an impact on individual acceptance and use of Internet technology in a government agency.</td>
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<tr>
<td>Organizations are managed with strong explicit rules, are hierarchical, cautious, solid and procedural, and their people work in a systematic and an organized way in an environment where responsibility and authority are in clear lines</td>
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<td>Employees in the county government are strongly influenced by the culture and understanding how culture has an impact on the adoption process is a vital element for successful implementation and adoption of E-Government</td>
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</table>
Clear regulations and hierarchies help an organization and its members gain better coordination in accomplishing their tasks.

In E-Government adoption, the presence of bureaucratic culture will benefit the process of the adoption because clear and explicit regulations and hierarchies support supervision to reduce the chance of errors, disobedience, and negligent behavior among people.

Organizational culture has an impact on individual acceptance and use of Internet technology in county government for successful adoption and delivery of services.

SECTION 5: COUNTY FINANCIAL CAPACITY

1. Do you think the county government has adequate financial resources to implement E-Government? ☐ Yes ☐ No

2. State the extent to which the following Financial Capacity aspects influence the adoption of E-Government. (1- Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree and 5- Strongly agree). Please rank your level of agreement with each statement by (✓) the appropriate box.

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<tr>
<td>Financial resources are termed as critical for any successful implementation and adoption of E-Government.</td>
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<tr>
<td>Availability of financial resources to enhance or build organizational IT infrastructure is seen as one of the strongest predictors of innovation.</td>
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</table>
E-Government systems adoption require considerable financial resources in terms of implementation and maintenance.

Investment in information and technology is required in procuring and developing adequate level of hardware and software for future innovations as well as training end users.

County government lacks sufficient financial resources to acquire new and up-to-date technologies that hinders implementation of new technological innovation like E-Government systems.

Lack of funding in a project is certainly an impediment especially when adopting an innovation means that individuals must go through a learning curve and take on new responsibilities as a result of developing expertise.

E-Government systems require considerable financial resources which is used in building up technical infrastructures and coordinating systems and initiatives.

The funding of the ICT projects is the factor which promotes the success of E-Government.

Lack of financial resources as a barrier to implementing and adopting E-Government and therefore County government should solicit for funds from external sources to assist in E-Government adoption.

SECTION 6: COUNTY ORGANIZATIONAL CHANGE MANAGEMENT

1. To what extent does change management influence adoption of E-Government in the county government?

☐ Very Great  ☐ Great  ☐ Low  ☐ Very Low  ☐ No Extent

162
2. State the extent to which the following **Change Management** aspects influence the adoption of E-Government. *(1- Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree and 5-Strongly agree).* Please rank your level of agreement with each statement by (√) the appropriate box.

<table>
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<th>Statements</th>
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<tbody>
<tr>
<td>Change management is a critical factor for implementation and adoption of E-Government in the county government</td>
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<tr>
<td>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</td>
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<td>Role of leadership in E-Government is critical success factor of change management in E-Government implementation.</td>
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<td>Poor change management strategy is one of the causes why success rate of E-Government projects is dismal.</td>
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<td>There is a strong need to adequately address the change of management issues when managing adoption of E-Government</td>
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<td>Changes brought by new technologies and their potentials into E-Government processes have to be into the core of change management strategy.</td>
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<td>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.</td>
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<tr>
<td>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,</td>
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</table>
cultural gap, comfort with status quo, work overload are some of the causes people resist changes in E-Government implementation

E-Government adoption requires organizational leaders’ commitment and willingness to change entrenched public structures and transaction processes

Change managements is a missing aspect in E-Government implementation and adoption

Employees are involved in decision making, and there’s a clearly defined reward system for innovations in support of E-Government.

SECTION 7: ADOPTION OF E-GOVERNMENT FOR SERVICE DELIVERY

1. To what extent has the implementation of E-Government affected provision of services in your ministry? □To a very great extent □To a very little extent
   □To a great extent □To a moderate extent

2. Below are statements on the influence of E-Government adoption for service delivery in the county. (1- Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree and 5-Strongly agree). Please rank your level of agreement with each statement by (√) the appropriate box.

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<tr>
<td>E-Government has reduced cost of delivering services</td>
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<tr>
<td>Major function we do in our ministry are done electronically</td>
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<tr>
<td>This ministry I work in has an electronic payroll system that’s pays salaries and keeps records for tax information.</td>
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<tr>
<td>The county government has established an e-learning platform that enable staff access information in regards to training and learning opportunities</td>
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</table>
Management of records and sharing of information has improved immensely since implementation of E-Government systems

Time taken to process any transaction has been reduced as the government has implemented E-Government in service delivery.

Am able to store and retrieve records when delivering services

Through E-Government suppliers can bid for various government tenders electronically

There is a website developed that publishes information and gives the public access to different services

Since introduction of E-Government, the nature of my work has gradually moved from handling a lot of paper to being paperless

Electronic communication has improved service delivery.

3. Kindly indicate the challenges that you face in your ministry in an attempt to make E-Government adoption to be effective?

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THANK YOU FOR YOUR PARTICIPATION

THE END
Appendix VII: Interview schedule for the government of Kajiado County Department heads

1. Does the level of computer and information literacy among the senior management in the county affect their level of adopting the E-Government in the county?

2. Has the management been given adequate resources and knowledge to implement necessary ICT technologies in the county? -Power, internet, network, software/hardware: reliable?

3. How does the ICT infrastructure hold up the performance, data transformation, and storage process that are necessary in the E-Government services?

4. Does existence of public policies that must be adhered to affect the adoption of E-Government in the county?

5. How does the organization culture affect E-Government adoption implementation in the County?

6. Has the county earmarked adequate financial resources to the E-Government programs? Budget? Funding, external sources, procedure of acquiring finding, other sources of funding.

7. Does the county provide enough resources to the innovation process in the adoption of E-Government? HR/ICT infrastructure, finance, internet, network, computers, technical support?

8. To what extent does change management influence adoption of E-Government in the county government?

9. Which are E-Government practices employed by Kajiado County? system

10. How do the organizations citizens conduct process, e.g. requests for licenses, permits, and bids take place? Automated, or partially manual

11. Has the performance of the E-Government system been a hindrance to its adoption by the users? How system works, like ifmis, e-procurement? Does the way they work make users not to use them?

12. In the licensing phase, does Kajiado County process involve human intervention or it is only the system that does all the transaction? How is the present system performance? Automated or manual

13. Describe the recommendations can be made on change management that will facilitate faster adoption of the E-Government for service delivery in the county government.

14. What are some of the challenges the county government of Kajiado has experienced when
implementing and adopting E-Government systems for service delivery.

THANK YOU FOR YOUR PARTICIPATION
Appendix VIII: List of Devolved Ministries under the county government of Kajiado

<table>
<thead>
<tr>
<th>Ministry in the Government of Kajiado County</th>
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<tbody>
<tr>
<td>1. Ministry of Agriculture, Livestock and fisheries</td>
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<tr>
<td>10. Ministry of Land, Physical planning, Wildlife, Environment, Housing and Natural resources</td>
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Appendix IX: Map of Kajiado
### TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION

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<tr>
<td>90</td>
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<tr>
<td>95</td>
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<td>650</td>
<td>256</td>
<td>2600</td>
<td>335</td>
<td>100000</td>
<td>364</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- "N" is population size
- "S" is sample size.