

**IMPACT OF INTEGRATED MANDATORY E – GOVERNMENT ON  
PUBLIC SERVICE KENYA; CASE OF SIAYA COUNTY GOVERNMENT**

**BY  
GLORIA AMONDI MIGANDA  
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**DECLARATION**

This research proposal is my original work and has not been presented to any other University.

Signature...**G.A.M.**..... Date: .....**19<sup>TH</sup> JUNE 2024**.....

**GLORIA AMONDI MIGANDA**

**C153/OL/KSU/28202/2019**

This research proposal has been submitted for consideration with my approval as the University



Signature..... Date: .....19.06.2024 .....

**DR. JOHN KANDIRI**

**SENIOR LECTURER**

**DEPARTMENT OF COMPUTING & INFORMATION TECHNOLOGY**

**KENYATTA UNIVERSITY**

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

- DCI** – Directorate of Criminal Investigation
- EACC**-Ethics and Anti-Corruption Commission
- ERP** - Enterprise Resource Planning
- ERS** -Economic Recovery Strategy
- GHRIS**-Government Human Resource Information System
- GoK**-Government of Kenya
- HR**-Human Resource
- ICT**-Information and Communication Technology
- IFMIS**-Integrated Financial Management Information System
- IPPD**-Integrated Payroll and Personnel Database
- IPRMS**-Integration Population Registration Management System
- PFM**-Public Funds Management
- PMIS**-Pension Management Information System
- PSRPs**-Public Service Reform Programs
- SAGAs**-State Corporations, and Semi-Autonomous Government Agencies
- SPSS**-Statistical Package for Social Sciences
- TAM**-Technology Acceptance Model
- UoN**-University of Nairobi
- UTAUT**-Unified Theory of Acceptance and Use of Technology

## **OPERATIONAL DEFINITION OF TERMS**

**Accountability** – A condition of being responsible for something. It is an act of being able to give an account of an event, office, use of resources, etc.

**Budgeting** – The process of creating a plan relating to the expenditure of money

**Accounts Payable** – Money owed by an institution to suppliers, contractors, or employees. The unpaid expenses are due, customarily recognized as a liability in the balance sheet.

**Accounts Receivable** – Money owed by external parties to an institution. For example, taxes and rates owed by property owners to the county government.

**Constitution** – The framework for recognizing and adhering to the rule of law to give dignity to individuals and communities and promote social justice.

**Digitization** – A process of adopting information and communication technology in facility distribution.

**E-government** – Utilization of digital tools by a government system.

**Efficiency** – Ability to maximize value and avoid waste of resources.

**Impact** – To create an impact, to sway towards a positive change, to influence on something, somewhere or, someone

**Internet** – A global interconnected computer network using standardized communication protocols that enables information sharing through a cloud.

**GHRIS** – Government Human Resource Information System is a human resource information system established for the government of Kenya to facilitate an all-inclusive information system relating to government employees from entry into service to post-exit.

**Governance** – A system of control and administration of a group of people in an institution, locality, or country.

**IFMIS** – Integrated Financial Management Information System is an Oracle-based Enterprise Resource Planning utilized by National and County governments in enhancing accountability and transparency in managing financial resources.

**IPPD** – Integrated Payroll and Personnel Database implemented in ministries, agencies, and local governments to perform human resource and payroll functions.

**Mixed Questionnaires** - A questionnaire designed with elements of open-ended and closed-ended questions to aid in comprehensive data collection.

**SPSS** – Statistical Package for Social Sciences is data analysis software for complex quantitative investigation.

**PSRP** - Public Sector Reform Programme

**Dependent variables** - Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC)

Independent variable – **Adoption of e-government**

## **ABSTRACT**

Kenyan citizens have always needed and demanded better service in terms of service provision from their government. Through its ministries and agencies, the government has listened and adopted an integrated e-government system to aid technocrats in providing efficient and effective services. The Government of Kenya adopted and implemented IFMIS (Integrated Financial Management Information System), GHRIS (Government Human Resource Information System), plus IPPD (Integrated Payroll and Personnel Database), which are, Integrated e-government systems that have been in use in government agencies, parastatals, and ministries. These information systems amalgamated different government activities into single units, making the work of public servants easier. Adopting the e-government mentioned above is intended to cure the problems of maladministration, corruption, inefficiency, and ineffective service delivery to the people. The issues discussed above persist to date, necessitating this study. This research sought to examine the Impact of Integrated mandatory e-government in public service; Case of the Siaya County Government. It intended to establish the impact of IFMIS, GHRIS, and IPPD and outline the benefits and challenges of the software systems and how to mitigate them. This study adopted a descriptive survey design, in addition to a sample size of 108 drawn from the population. Seventy-one (71) individuals answered the questions in the questionnaire, representing a reaction frequency of sixty-six (66) percent. Data collection was done using a structured questionnaire, and SPSS software aided in data analysis. Outcomes of the research indicated that the dependent variables of this research had a substantial positive influence on adoption of e-government services in Kenya's devolved system of governance. However, statistical modelling using the regression analysis while controlling for confounding variable presented that the dependent variables had a positive influence on the adoption of the e-Government. Given the outcomes of this research, it is recommended that County Government of Siaya need to enhance the dependant variables areas in the workplace in order to improve the adoption of e-Government by its staff.

# **CHAPTER 1; BACKGROUND OF MANDATORY E-GOVERNMENT IN KENYA**

## **1.0. Introduction**

Utilization of digital platforms revolutionized how government systems operate, in addition, the private organizations establish and perform their responsibilities in the middle of increasing complexity plus uncertainties while using e - government. For example, the latest eruption of global covid-19 plague that accelerated acceptance of digital systems in government institutions and private sector (Gatero, 2011). While using software systems in public service in Kenya is not a new technology, the role of these systems in improving administrative efficiency and policy integration is relatively underexplored (Accenture, 2015). This has the potential effect of limiting recommendations that could increase the benefits of the digital systems in both county and national governments as progressive upgrades to the current adopted software are slowed down.

Information and Communication Technology (ICT) has an integral role in implementing electronic administration, which seeks to ensure effective management of government entities, increase efficiency in operations and guarantee good services to the citizens (Sharifi, 2004). It has enabled organizations to focus on strategic management and improve their performance. Electronic-based administration integrates info and communication technology so as to advance government departments' administrative developments and internal working. ICT enhances efficiency in 'front office' and 'back office' relations and operations in public entities, where the latter focuses on maximizing the benefits of the respective department to the public members (Abrahams, 2015).

While the former encompasses streamlining of internal management processes such as human resource, accounting, and finance functions.

Integrating e-government in the public system involves an array of technology-aided implications, including digital public service, digital skills, connectivity, ICT infrastructure, and the internet. According to Gartner (2018), digitization in public service is more focused on attaining higher outputs and involves growing in the direction of a digital system that emphasises the usage of ICT in generating advanced solutions and

value-producing chances with less cost implication (Akinyi & Moturi, 2015). Moreover, e-government is founded on increased availability of massive and bulky quantities of cloud, data mining for predicting department operation trends, and machine learning for faster and more accurate data recording, processing, storage, and retrieval when needed (Khan, 2016). These are critical to government systems since they handle many data relating to employees, public departments, budgets, and financial accounts, among other integral functions (Gray & Rumpe, 2015). Therefore, it is vital to assess extent of digital development of public service, namely, the organisational competences of the government departments to master, utilize and promote utilization of software systems such that, it is a strategic management instrument for policy application to enhance front office and back-office service deliveries (Bobylye *et al.*, 2018).

The proposed study discovers impacts of integrated mandatory e-government in the case of Siaya County public services in Kenya. Since ICT has a broad scope, three variables of software systems used in government departments have been chosen for this research; Government Human Resource Information System (GHRIS), Integrated Financial Management Systems (IFMIS), and Integrated Payroll and Finance Database (IPPD) (Gartner., 2018).

Adopting Information and Communication Technology (ICT) has transformed business, governance, and communication on the global continent (Monga, 2008). ICT innovation has revolutionized the private and public sectors; and the efficiency through which government institutions extend services to the citizens (Gakiria, 2009). This is part of the reasons the developed continents like Europe and America have made progress in efficiency in production and service delivery since they adopted e-administration in the late 20<sup>th</sup> century; and have continued to innovate digital governance throughout (Monga, 2008). This is a different situation seen in the third world Countries or developing Countries like Kenya, where ICT adoption is a work-in-progress occurring slowly. Most government systems are characterized by paperwork, long queues, cramped spaces, and bureaucracies that lead to inefficiency in service delivery, high costs, and frustrations for the citizens (Kariuki, 2015).

In the 21<sup>st</sup> century, the high rate of the technological revolution in the world and the emerging need among citizens for efficient service delivery have pressured the government of Kenya to reengineer its process by adopting software systems (Jain Gupta & Suri, 2017). In this regard, ICT has proved to help tackle the demand for efficient government systems by integrating online platforms to improve speed, quality of results, and cost efficiency. This is true even though the capability of the e-governance software systems is underutilized. Simenda (2009) posits that enhancing e-governance can improve service delivery channels, timeliness, and robustness of government and citizens' communication. He furthers his argument by asserting that e-administration infrastructure lays a foundation for self-service and home-based services among the citizens. For example, one would not need to go to an institution's office to fill out a form for a job application (Talukder, 2011). The advertisements for open positions would be declared in a respective job portal, and minimum requirements and procedures for the application are specified to enable the potential applicant to apply online. This technology would be helpful in Government Human Resource Information System (GHRIS) when the applicant can track their application progress through the system so that a two-way communication is empowered (Canedo et al., 2020). Kenya has yet to develop such reforms at all levels of governance even though it has sufficient capacity and resources for fully implementing software systems (Simenda, 2009).

Globally, many countries have experienced a change from the traditional way of offering government services, exiting from physical operations in which the public must go to a government office to get service, to e-governance that enables citizens to access public services through ICT networks (Were, 2010). Government organizations have realized the benefits of software systems in enhancing responsiveness, efficiency, and effectiveness in governance (Maranga, 2012). ICT has solved the accountability and inefficiency challenges that characterized the paperwork, which dominated the traditional functions of government institutions. Then, retrieval of records about employees, financial data, and payrolls could take a significantly long time (Mehrtens et al., 2001). Barua (2012) studied e-governance in India and found that the citizens and the public sector profits massively whenever they access government facilities through online

platforms. Barua (2012) further assessed the features that steered the acceptance of e-governance in the Republic of India through the study. One of his findings, which is of great interest to this study, was in what manner automation of companies' registration plus application for business licenses increased efficiency in the corporate sector concerning government services in a similar research steered by Mentzas and Papadomicheleki (2012) to inspect whether introduction of e-government services by Singapore government enhanced quality and efficiency in service delivery. The study established a close correlation between service quality, effectiveness and efficiency in work, and e-government service adoption. Matavire et al. (2010) led a research about limitations of e-government project operationalization; the case of South Africa asserted that funding, monitoring, and regular upgrades are critical to establishing an e-government system that reflects the expected functions it is intended to serve. This study narrowed down to examine how ICT infrastructures are essential foundations on which e-government is anchored. However, the study had no relationship with adopting e-governance in the public sector.

Many types of research have been done on e-governance systems in Kenya. For example, Kandiri and Onyango (2007) deliberated on the ingredients for the positive execution of free secondary education program; where a centralized electronic monitoring system was a critical success factor; Gakiri (2009) researched on the ICT platforms and software for e-governance and asserted a causal correlation amongst adoption of e-governance and intensive investment in ICT. Similarly, Muraya (2015) conducted a study focusing on factors affecting the fruitful embracing of electronic-based governance in the government sector. Nevertheless, his study underscored the implementation of e-governance from a centralized government perspective with no focus on county governments.

The 2010 constitution of the Kenyan government officially promulgated a developed government system composed of 47 semi-autonomous counties (Sihanya, 2011). This led to the devolution of most government services to the county level, including health, environment, water, natural resource, climate change, roads, energy and public works, tertiary and technical education, economics, finance planning and Information

Technology, Commerce plus mechanization, tourism, limited taxation and county revenue collection (Kenya ICT Authority, 2014).

Siaya County, the focus of this study, is one of the counties and operates a complete government with control over the revenues allocated from the national government, those generated internally from taxation and fees per the constitution's requirements (Mwenda, 2015). The county has a population of nine hundred and ninety-three thousand, one hundred and eighty-three (993,183), as per the Kenya Bureau of Statistics (2019). In the next census is expected to be more accurate based on past trends (Gakiria, 2009). The county had a populace mass of 393 individuals per square kilometer who demand government services from the relatively few employees mandated to discharge the designated services to the citizens. Siaya County is among the counties in Kenya that are lagging behind in terms of economic development, which raises a question on the extent to which software systems have been utilized to implement and monitor county government services and projects.

Furthermore, the 2013 auditors' report detected several malpractices, unauthorized payments, and non-verifiable workers. The report identified financial frauds that relate to poor public finance management, such as unbanked revenues collected by the county, inappropriate debtors' records where the sum indicated was not supported by a list of individual debtors, poor updates of the creditors' ledger, and many more from all over its seven sub-counties. Therefore, the county government has partially implemented the e-government system. There should be a clear e-governance structure to enhance the appropriation of county resources, documentation, and service delivery to the citizens (Barua, 2012; Papadomichelaki, 2012). Improvement in functionality and scope of e-governance would guarantee easy access to county services such as e-payment and automated respective electronic ledger entries, e-procurement, and e-administration of all government services.

Siaya County Government has developed an electronic-based governance sector with a limited scope, unlike other counties like Nairobi, where the majority of county government services are availed to the citizens through an interactive website and service portals. Therefore, the county is limited in many ways, such as the inability to

disseminate public information and online public debates and underdeveloped county communication capacity and infrastructure, among other critical government functions. Overdependence on paperwork contributes significantly to the reported frauds, slow rate of economic development, and bureaucracies (Gatero, 2011; Mwaniki et al., 2017). However, few academic research has been carried out to examine the extent of the implementation of e-governance in Siaya County and its respective impacts.

The proposed research topic was necessitated by the fact that since the inception and enactment the software structures in the government service sector (GHRIS, IFMIS, and IPPD), few readings have been carried out to examine or assess the effect of the software Systems in the Kenyan Public Service, which is in the public domain.

The Kenyan government has made significant progress since adopting e-governance in the government facility sector in 2012. Integration of the three software systems in the county at national and county government levels has increased accountability and efficiency. E-governance has made it easy to monitor the use of public resources and put them to the best service possible. Moreover, government agencies such as the Ethics and Anticorruption Commission (EACC) and Directorate of Criminal Investigation (DCI) have managed to control public resources' embezzlement. Therefore, Kenya has made progress in control of corruption. The quality, transparency, and effectiveness in the administration of public institutions have also scaled up as most services are offered remotely. The Government Human Resource Information System (GHRIS) is an electronic system built by the Kenyan government to improve human resource data management in the state departments for public services (Abrahams, 2015). The State Department for Public Service in Kenya spearheaded development of GHRIS in 2012 to automate human resource utilities plus related facilities from staffing to departure, as well as the retrieval of payrolls of all personnel in national and local level government departments (Karanja, 2017; Naomi & Karanja, 2017). GHRIS has not only consolidated the public service human resource database, but also interfaced the human resource data related government systems including Tax, Pension Management Information System (PMIS), Teachers Service Commission Human Resource Management Information System (HRMIS), Integrated Financial Management Information System (IFMIS), and

Integration Population Registration Management System (IPRMS), among other critical government databases (Sharma, 2007). Therefore, the software has provided One-Stop-Shop Human Resource Information System for administration of every Human Resource (HR) facets in Administration Ministries and State departments, Uniformed Services, State Corporations, and Semi-Autonomous Government Agencies (SAGAs), Counties (both executive and members of county assemblies), Constitutional Commissions and Independent Offices (Njenga et al., 2019; Tayeb & Lago, 2018). On the other hand, Integrated Payroll and Personnel Database (IPPD) is an electronic software structure for payroll processing.

IPPD is used in both levels of government (national and county) and large private organizations to enhance accountability in payroll management to eliminate deliberate and accidental errors (Paul & Grace, 2020). IFMIS is a financial management tool that provides a framework for tracking money-related occasions and summarizes budget data. IFMIS is little more than an accounting framework in its basic shape and functional design. (<http://www.ifmis.go.ke/>). The core components of IFMIS include General Ledger, Budgeting Accounting, Accounts Payable, and Accounts Receivables. In contrast, the non-core components include Asset Modules, Project Ledger and Budget Development, Procurement Module, and Payroll Module. The scope of functionality of IFMIS varies from a simple General Ledger framework to a comprehensive one based on the organization's size and financial control objectives.

### **1.1. Development of E-Government in Kenya**

The East African Protectorate was rechristened Kenya Colony Protectorate in 1920 when taxes (especially the hut tax and poll tax) were unfairly imposed on Kenyans by the European colonies. The colonials practiced a system of governance that largely borrowed from the 'indirect rule' system adopted from the British administration and granted chiefs an enormous latitude of powers to exercise their authority in maintaining law and order. Chiefs and headmen commanded tribunal (later the administration police) using power bestowed on them by the British Empire-based constitution. Besides, they were mandated to collect taxes and remit to the colonies or appropriate as directed. The British colonies also created Local Governance (Local Councils), Kenya Police, and African Tribunal

Courts. This led to the inception of civil servants and public service; the shared services operations were conducted manually during this era.

Following independence in 1963, President Jomo Kenyatta prioritized Kenya's 'Africanisation program' to indigenize the Kenyan civil service sector that the colonial rulers formerly dominated. Kenyans ascended to top management levels in the critical government departments, with a few exceptions in technical and professional positions. This process continued for the first two years of Kenyatta's administration (1963-1965). The exception rule applied to certain public institutions, such as the University of Nairobi (currently UoN), where whites and expatriates dominated (primarily in educational slots) throughout the 1970s. Consequence of the Kenyatta reign led to the establishment of an 'Administrative States' where public service control was dominated by bureaucrats rather than political will. This was primarily attributed to the greater confidence that the presidents had in professional civil servants compared to politicians.

The deputy president, Daniel Moi, rose to power following the death of President Jomo Kenyatta in 1978 and ruled through to 2002. His administration faced economic hurdles due to the fall of goods rates in the world market, bloated bureaucratic system, bribery, and mismanagement. Therefore, the government could not sustain efficient citizens' benefits; public service reforms became inevitable. The poor economic performance gave rise to Public Sector Reform Programs (PSRPs) (Yong & Koon, 2014), whose central objective was to restore the dwindling public sector service. Moi achieved twofold; national and political stability and growth of the education segment at all stages. The fourth president had the first assignment to revive the economy.

President Mwai Kibaki took over from Moi in 2003, where his administration advanced the Economic Recovery Strategy (ERS) for Wealth and Employment Creation 2003-2007 to be the principal vehicle to create new job opportunities for Kenyans to improve health services, stimulate infrastructural development and implement free primary education. The results of ERS included an increase in Gross Domestic Product, a significant increase in foreign exchange reserves, and increased revenue collection. Government sectors recorded significant improvement during this era, for example, building and construction, manufacturing, tourism, and ICT. The government established an e-government strategy

during this time (Sarpoulaki et al., 2008). This clearly outlined the strategy implementation framework, administrative strategy, training requirements, and standardization basis for operationalisation of digital platform in government amenity provision sector (Settles, 2005), which meant to attain the subsequent goals;

- i. Enhance transparency in government system, promote good governance and increase accountability.
- ii. Brand the administration result-oriented, well-organized, and resident service oriented through strategic governance.
- iii. Empower populations plus corporate entities accessibility to Government Services and Info with less effort besides increased efficiency and effectiveness through an internet platform.

Yet after implementing the three software systems (GHRIS, IFMIS, AND IPPD), handful of researchers have gone back to evaluate and document the status of their operation and the challenges the street-level bureaucrats face in utilizing them.

The Kenyan government has spent so many resources on the operationalization of the software systems (GHRIS, IFMIS, AND IPPD), and the government still experiences inefficiency, maladministration, and ineffective service provision to its citizens; which is a double expense to the citizens who fund the government to implement digital government strategy to save them future costs through efficient service delivery.

This raises the question of what happened before the implementation of the three software systems named above, what is happening currently and what is the impact of utilization of the software systems, what components of the three software systems are unutilized and why, and what are the challenges and how do we mitigate the challenges?

The proposed study takes Siaya County Government to be a case study to examine the status of acceptance and implementation of the three software systems and suggest recommendations for solving hitches that were identified.

## **1.2. Statement of the Problem**

Historically operations and administration duties of the government and its agencies were mainly carried out manually. The public service could not withstand provision distribution standards to the gratification of the residents hence public service reforms

became unavoidable, this led to the Public Sector Reform Programmes (PSRPs). The essence of PSRPS was to enable improvement in delivery of public service. This led to digitization of operations' in public sector including E-government Strategy and implementation of the three (3) software systems (GHRIS, IFMIS and IPPD). Integrated Financial Management Information Systems (IFMIS) was established to be cost efficient (Huang et al.,2009; Kang et al., 2008; Loh et al., 2006), assisting and facilitating budgeting methods (Gattiker & Goodhue, 2005), in addition to providing improved data and information management (Federici, 2009) and expansion of the Integrated Payroll and Personnel Database (IPPD) system ; envisioned to upsurge competence in the organisation of Government human resource (e –government Strategy,2004) while GHRIS aim is to address most government human resource needs. The system was designed in-house by government ICT officers in collaboration with human resource personnel.

The mandatory e-government is approximately a decade old since it was introduced into Kenya's public service system for administration of the central and the local government. The framers of the system intended to use it for escalation of competence, usefulness, and convenience in administration facility distribution and to reduce mismanagement of public funds. However, ten years down the line, these same problems of inefficiency, ineffective service delivery to Kenyans, maladministration including corruption still exist. (Simsonet al. 2011) illustrated that in unindustrialized nations, under-spending is regular just as the issue of overspending. This has hence necessitated tracking of the impact that the new system of government has in counties and identify areas that require adjustments. Therefore, this study uses Siaya County as reference to investigate the impact of mandatory e-government in county governments.

### **1.3. General objectives of the study**

The research objective was to examine impact of the integrated mandatory e-government strategy in the public service of Kenya, the case of the Siaya County Government. This study assessed the extent to which three software systems (GHRIS, IFMIS, and IPPD) are implemented and utilized to increase efficiency in the public sector service.

### **1.3.1. Specific Objectives**

They included:

- 1) To determine how performance expectancy effects the adoption and use of e-governance.
- 2) To establish impact of effort expectancy on adopting and using e-governance.
- 3) To establish the extent to which social influence affects the adoption and effectiveness of e-governance.
- 4) To investigate the impact of facilitating factors on the adoption and success of e-governance.

### **1.4. Research Questions**

The following research questions guided the proposed study;

- i. What is the impact of performance expectancy on the adoption, use, and success of e-governance?
- ii. To what extent does effort expectancy influence the adoption and success of e-governance?
- iii. How does social influence affect the rate of adoption and success of e-governance?
- iv. To what extent do facilitating conditions effect the adoption and use of e-governance?

The Assumption is that digitization of any organization's operations makes work more accessible, efficient, and effective, including government sector operations. Still, the question is, what is the impact of utilization of the 3 software systems in Kenya, and are their challenges still being experienced?

### **1.5. Justification and Significance of the research**

This investigation work was intended to detail impact of integrated mandatory e-government in public service mirroring three software systems (GHRIS, IFMIS, and IPPD) currently in use in Kenya.

Kenyans have necessitated the study and still face many problems in receiving services from the county and national government (Falck et al., 2021). The persistent problems

are; lack of accountability and openness, inefficiency, maladministration, and ineffective service provision to its citizens.

The study was zoned in Siaya County due to the Auditor General's Report on Financial Statements of Siaya County Executive 2016/17 which received an Adverse opinion meaning statements were misrepresented and misstated, and Financial year 2017/18 which received Qualified opinion meaning financial statements' were fairly presented. The above problems still bedevil the Siaya County populace and other Kenyans with the other 46 Counties.

Through this study, the impact of the 3 software systems was realized, and the reasons why the problems mentioned above persist in public service was explained through data collected from respondents through questionnaires, the scholar utilized both descriptive research design in addition to the mixed mode method.

The mixed mode research design applied in the collection of data during pre - digitization and post-digitization of government operations by the 3 software systems; it was split into 2; Qualitative research was utilized in the gathering of descriptive info, while during info presentation plus tabulation Quantitative research design was applied.

Primary information was gathered by the utilization of structured questionnaire, whereas secondary data was congregated from writings found in libraries plus the internet. The research design applied was descriptive statistics.

The significance of this research explained all results obtained during this study. In this case, the expected result is that human beings (public servants) are the weakest link within the functionality of e-government in addition to the fact that digitalization of facility provision is crucial. It makes work more efficient and effective.

#### **1.6. Scope of the Study**

This research concentrated on integrated mandatory e-government in public service in Kenya, the case of the Siaya County government. Integrated mandatory E-government is defined as the formation of provisional or perpetual entities of an administration unit to amalgamate procedures and data structures. This study echoed the impact of GHRIS, IFMIS, and IPPD Software on Kenyan public service. Siaya county government is one of the 47 county government units in Kenya; these 47 county governments in Kenya face

homogenous challenges in service provision to their people hence the applicability of the exact solutions from one sample unit (Siaya county government in this case) to the other 46 county government units. The study targeted employees of Siaya County Assembly and the County Government Departments(Executive)including the human resources, treasury and finance, and ICT. These departments were convenient for sampling because they directly used the three software systems under study. The sample size of the research was 108 respondents and was calculated by use of Krejcie & Morgan (1970).

Through stratified sampling, the research gathered info within a population of 108 respondents, and the data was collected using an online questionnaire. This study took a period of approximately one year (1) to conclude and report.

### **1.7. Limitation of the study**

The factors beyond the researcher's control in this study include; Sensitive nature of data from the software systems; hence many respondents were unwilling to render out statistics affecting the quality of data collected. The researcher opted to provide anonymity response option so as to encourage as many respondents as possible.

The public servants'/bureaucrats' judgments, values, principles, prejudices, and attitudes would affect the research and constraints responses.

### **1.8. Delimitations of the research**

The research was conducted strictly to collect data that aim at answering the research questions. To manage time properly and complete the research within the schedule, the researcher maintained contact with the respondents to receive their response in time and apply them towards replying to the investigation enquiries. The researcher utilized the information collection tools, maintained the prescribed sample size, data collection techniques and applied the data analysis approaches as planned.

## **CHAPTER 2; REVIEW OF RELATED LITERATURE.**

### **2.0. Introduction**

This section appraises theoretical in addition to empirical readings that were carried out by other researchers relating to implementation of e-governance. First, write-up about e-governance are indicated, and then literature on three relevant theories; Diffusion of innovation then Unified Theory of Acceptance and Use of Technology (UTAUT), whose variables are performance expectancy, social influence, and effort expectancy, and the Technology Acceptance Model (TAM) variables; perceived usefulness and perceived ease of use, and TAM which is a component of the UTAUT alongside other seven sub-concepts. Literature on facilitating conditions for e-government is discussed last in this chapter. UTAUT is a comprehensive theory that consolidates eight theories, including the TAM.

### **2.1. Theoretical Framework**

There are three (3) theoretical frameworks that were relevant to the study: Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) and Roger's Diffusion of innovation Theory.

#### **2.1.1 Diffusion of innovation**

The theory originated from (E.M Rogers 1962) and is an ancient social science theory intended to elucidate how within a period of time impression and creations advance in impetus plus disseminates and spreads throughout a precise populace and communal organisation. Acceptance of novelties was followed, researched and studied for the past thirty years, plus it is among prevalent acceptance prototypes defined by Rogers within his writings. Many research work from several ideologies utilized this ideal as a basis for their study. (Dooley ,1999) and (Stuart,2000) highlighted some of this subjects as, public health, communications, history, political science, commerce, education, plus technology and dissimilar Rogers' theory to be a broadly utilized theoretical framework within technological dispersal plus implementation. This theory is mostly suitable in examining acceptance and implementation of technology in advanced teaching plus scholarly atmospheres (Medlin, 2001; Parisot, 1995). The theory hence became inapplicable in this

study due to the fact that it could not address the impact of integrated mandatory e – government in government service Kenya;

### **2.1.2 Technology Adoption model**

TAM, proposed by F. Davis (1989) in the other hand is widely accepted as a crucial input in the research of acceptance of internet technologies plus especially in the government institutions, Pavlou (2003) distinguished TAM as a theory that was established and designed to predict the behaviour of utilizers, receipt of information technology and information systems and its practise in diverse organizational chores.

Perceived Usefulness is defined as the user’s ability to feel that the innovation assists to make their work effective and advance results. Perceived Ease of Use evaluates the effort the user has to use to operationalise system (Chuttur, 2009). These binary features of TAM commands and effect behaviour of outside variables and usage of informational technological systems usability.

This study of Impact of Integrated mandatory e – government on Public Service Kenya; Case of Siaya County Government was too broad in context with its objectives tied to Unified theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, 2003) making TAM a single theory inapplicable as a theoretical framework for the research.

### **2.1.3 Unified theory of Acceptance and Use of Technology(UTAUT)**

UTAUT is highly acceptable for explaining acceptability of technology due to its comprehensiveness since it incorporates eight theories, including the Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), Innovation Diffusion Theory (IDT), Theory of Planned Behaviour (TPB), Motivational Model (MM), Model of PC Utilization (MPCU), Social Contingency Theory (SCT) and Combined TAMTPB (C-TAM-TPB). Venkatesh (2003) piloted a theory of study on the eight Information Technology (IT) simulations to test their value; hence developed the Unified Theory of Acceptance and Use of Technology. The scholars developed UTAUT by uniting substantial elements of the eight theories, as shown in table 1.

**Table 1: Determinants of UTAUT with other Technology Acceptance Models**

| Model Name                        | Determinants (UTAUT)        |                        |                       |                               |
|-----------------------------------|-----------------------------|------------------------|-----------------------|-------------------------------|
|                                   | Performance Expectancy (PE) | Effort Expectancy (EE) | Social Influence (SI) | Facilitating Conditions (FC)  |
| Technology Acceptance Model (TAM) | Perceived usefulness        | Perceived ease of use  | -                     | -                             |
| TAM2                              | Perceived usefulness        | Perceived ease of use  | Subjective norm       | -                             |
| Theory of Reasoned Action (TRA)   |                             |                        | Subjective norm       | -                             |
| Theory of Planned Behaviour (TPB) |                             |                        | Subjective norm       | Perceived behavioural control |
| C-TAM-TPB                         |                             |                        | Individual standard   | Perceived behavioral control  |
| MPCU                              |                             |                        | Social factors        | Facilitating conditions       |
| Innovation Diffusion Theory (IDF) |                             |                        | Image                 | Compatibility                 |
| Motivational Model (MM)           |                             |                        | -                     | -                             |
| Social Contingency                |                             |                        | -                     | -                             |

|              |  |  |  |  |
|--------------|--|--|--|--|
| Theory (SCT) |  |  |  |  |
|--------------|--|--|--|--|

Source: (Venkatesh, 2003)

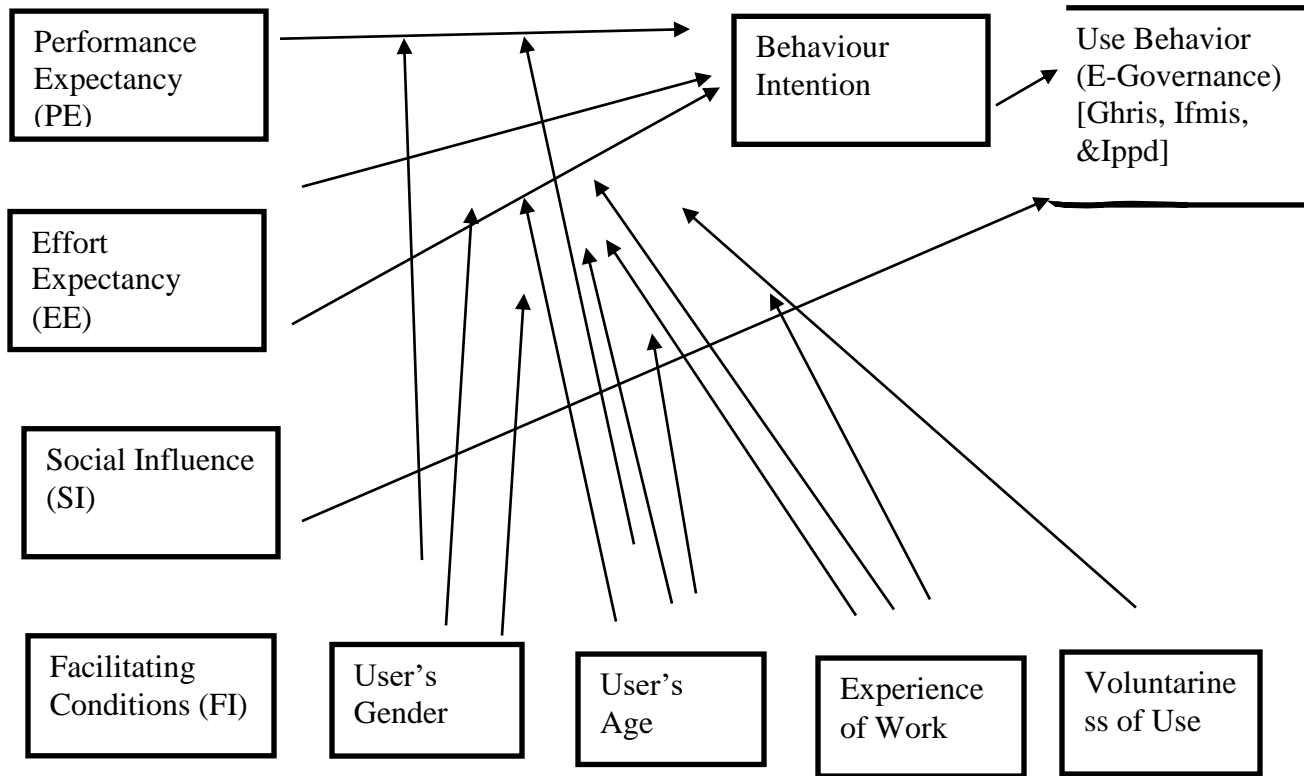
Figure: UTAUT Model

The model consists of four factors influencing the adoption of e-governance and ICT technologies: performance expectancy, effort expectancy, social influence, and facilitating factors. UTAUT theory consists of further superseding features (age, sex, skill, and voluntaries of usage), which also determine the acceptance and implementation of e-governance. The performance expectancy describes perceived efficiency, effectiveness, and quality of electronic-based governance executed by government agencies. Based on this factor, the continued use of the three software systems (GHRIS, IFMIS, and IPPD) depends on the continued utility that the public and the government derive from implementing e-governance. When the stakeholders (government and public) no longer experience the system's value in service delivery efficiency, quality, and effectiveness, they automatically abandon them and adopt alternatives.

Effort expectancy describes the degree of ease the public experiences when using the software systems to access government services. Therefore, the government should develop comprehensive e-governance systems with a user-friendly interface that consolidates all the public's services. For instance, the IFMIS should show financial statements and reports, short-term government budgets, contracts open for application, accounts receivable and payables, forums, and related government services such as the KRA tax filling. There should be a predictable arrangement pattern of the services offered by the government system so that the citizens do not spend much time retrieving specific amenities.

Social influence defined as the extent to which societal cultures and context influence the acceptance of e-governance platforms. For example, the organizational cultures, leadership and bureaucratic hierarchies, influential groups, and general mindset of the society about the development of the systems (GHRIS, IFMIS, and IPPD) influence the acceptability and implementation of e-governance strategy. Facilitation Conditions explore the extent of technical infrastructure's existence for the software systems' adoption. ICT infrastructure development relies on government support in manner like;

financial aid, expertise, awareness, plus legal policy. Implementation and operation of GHRIS, IFMIS, and IPPD cannot be successful without a strong internet connection and positive political will.



**Figure 1: The UTAUT Model**

Source: (Venkatesh, 2003)

## **2.2. Empirical Review**

### **2.2.1 E-Governance**

World Bank (2014) explains e-governance to be, implementation of government operations in government agencies through the utilization of information technologies (mobile computing, cloud computing, Wide Area Networks, and the Internet) to transform relationships with citizens, public service delivery and business transactions alongside additional systems of governance to the communities. Therefore, e-governance is a vehicle government uses to deliver its amenities and data to the citizens using electronic or internet platforms (Nkwe, 2011). Monga (2008) defines e-governance to be a technique by which ICT is employed to render government amenities efficiently and effectively the general population. For example, the National Education Management Information System (NEMIS) enables a link between education stakeholders and the ministry without paperwork. ICT in governance serves various ends; improved transactions with the corporate sector, improved distribution of government amenities to citizens, empowerment through efficient administration management, transparency and accountability, and access to information (Cheserek & Mugalavai, 2012; Hafifah & Sulisty, 2020).

#### **2.2.2. Adoption and Scope of E-Governance**

E-governance has four scopes; Government to Citizen (G2C), Government-to-Government (G2G), Citizens to Government (C2G), and Government to Business (G2B). Government to Citizens entails various techniques Administration utilizes in distributing facilities the populace (Sharifi, 2004) and private individual customers (Sarker et al., 2011; Sarpoulaki. M., 2008) ensuring that government facilities that are crucial data are freely accessible by voters. This ensures that the general public and private business communities find utility information online and access services through websites and service portals. For instance, the i-tax self-service portal enables citizens to file returns and collaborate the information provided by the taxpayer to the Kenya Revenue Authority Database for verification and entry of relevant journals in the financial management information system. Some government agencies have utilized fingerprint employment registers to collect information about employee attendance and math it with

their invoices for salary processing (Canedo et al., 2020). G2C services also facilitate disseminating democratic services such as Certification, Identification Cards, Taxation, Licensing, and Registration. The State Department of Public service developed GHRIS, IFMIS, and IPPD software systems to enhance the efficiency, transparency, and accountability of G2C public services. For instance, e-procurement, one of the components of IFMIS, has resulted in increased transparency, integrity, and accountability in public sector procurements. World Bank (2014), Nkwe (2011), and (Yong, 2014) posit that e-Governance in G2C relationships is going to include the integration of ICT to facilitate the smooth flow of government facilities to its people (Canedo et al., 2020). The implementation of e-governance depends on the dependent variables in this paper, plus easiness in utilization.

### **2.2.3. Performance Expectancy and Adoption of E-Governance**

Performance expectancy is among the core elements for consideration in adopting e-governance within Unified Theory of Acceptance and Use (UTAUT). Presentation efficiency is determined through its three components, quality, effectiveness, and efficiency (Venketesh et al., 2003). Monga (2008) asserts that advent of Information technology has enhanced public facility distribution by various administrative agencies. Equally, the progressive invention of e-governance, system modification, and regular update is significantly driven by the desire for efficient, timely, and cost-effective operations of government services. With a relatively diversified and distinguished economy from many peers in Africa, the economy of Kenya registered an average of 5.9% economic growth rate between 2010 and 2018; till the side effects of covid-19 plague interrupted it. This reflects the trend in expanding the size of the public sector and the need for integrated e-governance for stewardship of public resources and improved efficiency (Sabiri, 2020). The delivery of service in public administration still draws a keen eye from the outside and inside environment as many government offices still operate traditionally despite the government spending a lot of funds to build technological infrastructure and purchase equipment to implement software systems. For efficiency to be achieved in the public sector, the government should achieve its optimal objectives at minimum utilization of resources, a state of achieving expected goals

without wastage of resources. An efficient government can be achieved through various ways; one of which is of interest to this study is an investment in IT platforms to enhance financial services, human resource management, registration services, licensing, and payroll management, among other essential services.

Often, efficiency in production and service delivery is essential to operational cost management. However, in public service, timely delivery of financial services and ease of access to stakeholders' information are indispensable since this is the foundation for measuring administration and governance. The Regime services (county and national) and programs require the allocation of finances from the national treasury to maintain efficient services to the public. Utilization of the requisite funds in procurement services and products and payment for the staff further needs a great sense of accountability and transparency (World Bank, 2014). However, bureaucracies sometimes impede the effectiveness and efficiency the public expects in public services. Before the digital economy, the public service sector was accustomed to papers and files. This approach was slowly and largely ineffective due to long hours of waiting in the queue, a significant amount of time spent to retrieve data, manual employee register and detail verifications, and manual bookkeeping of financial data (Mertens et al., 2014). Manual preparation of financial statements, financial journals, and bank reconciliations alongside other financial information related to huge monetary distribution to and from government bodies was tedious and expensive (Mertens et al., 2014); accuracy was guaranteed.

Settles (2015) underscores the presence of a close association amid efficiency in public service conveyance and e-governance. He additionally ascertains, e-governance has empowered public establishments to manage their accounts receivables and payables effectively through e-payment modules that guarantee efficient, safe, and faster payment; with immediate, relevant electronic journal entries. With e-governance, individuals intending to make payments for government services only need access to an internet-enabled platform such as a computer and the internet/bundles to complete the transactions at no additional costs (Matavire et al., 2010). Tax deposit payments, banking, and payment for government services through online platforms are faster and more convenient than the traditional manual system dominated by long queues at the respective

government offices (Bhuiyan, 2009; Budhiraja, 2005). Sometimes, the cost that the citizen could incur to get to the government premise to make payment exceeded the amount paid, a definition of an inefficient system. GHRIS and A software help the public sector accumulate human resource data in the cloud and retrieve them when needed, irrespective of the location of the public servant. These systems have also guaranteed employee data safety by allowing authorized staff to use unique secret passwords to log in and find information. With a consolidated employee database, the government can effectively disburse timely and accurate automated payments to civil servants.

World Bank (2014) defines effectiveness as achieving maximum output using minimum resources. Explicit ICT abilities such as e-government strategy, planning, plus expansion should be synchronized within e-governance platforms to achieve effective and full functionality. Therefore, there is a need for proper e-government scheme expansion, e-government structure implantation plus maintenance, in addition to e-government facility plus operator backing (Bhuiyan, 2009). These modules are essential for the execution of public service mandates thru value to accomplish the organizational objectives. Real public sector service provision in the present digital world is contingent upon the growth of ICT infrastructures such as GHRIS, IPPD, and IFMIS, to improve speed and accuracy while minimizing costs (Reijswoud, 2008). E-governance enables the government to decentralize its services and avail them to citizens without traveling. For instance, the Independent Electoral and Boundaries Commission recently performed paperless mass recruitment of election officers for the august 2022 polls. Furthermore, the electronic voter system prompted many registered voters to confirm their registration details in the comfort of their houses. Bhuiyan (2009) asserts that the effectiveness of e-governance benefits both the citizens and the government; where the former access services at their convenience, efficiently, and at low costs while the latter cuts on costs of bureaucratic systems which require heavy investment in human resource for paper recording, verifications, and manual data analysis.

The role of public service in providing basic utility services to the members of the public is essential and cannot be abandoned by the public sector. Nevertheless, public sector bureaucracies impede innovation and creativity, which are significant for high quality

service; quality of work is defined based on customer perspectives, service performance, and perception and perspective. Papadomichelaki and Mentzas (2012) defined quality of work to be the variance amid the perceived as well as real value of facilities. In the case of e-governance, the excellence of amenity being provided is affected by the superiority of the system and information. A quality e-governance service should be reliable, responsive, credible, and secure (Papadomichelaki, 2012). The quality of information within the government organization also affects the quality of e-governance; hence, the need for a structured and clear technique of capturing and analyzing the shared information.

The advent of software systems (GHRIS, IPPD, and IFMIS) in the public sector has enhanced service quality to the citizens (Matavire et al., 2010). For instance, the implementation of GHRIS enables the government to collect all vital information about the employees and apply them in appraising employees effortlessly. For instance, age, gender, home addresses, employee performance history, education level, work ethics, and code of conduct, among other integral data, can be shared at various levels of governance through the system for effective employee assessment. E-governance also allows for the consolidation of related databases such as GHRIS and IPPD in enhancing the verifiability plus trustworthiness of information stored within existing structures and minimizes fraud opportunities. Concisely, e-governance improves the quality of management information; thus, decision-making is done in a conscious environment, where all variables are considered. Therefore, adopting e-governance is essential for performance improvement in the public sector (Gakiria, 2009; Mwaniki et al., 2017). However, the State Department for Public Service should collaborate with ICT specialists to enhance effectiveness and efficiency in implementing government solutions with features that align with citizens' needs and expectations (Settles, 2005).

#### **2.2.4. Efforts Expectancy and Adoption of E-Governance**

E-governance should be vibrant in relations to easy application, abilities essential to position and manoeuvre e-governance, plus risks operators are unhindered from while using the platform should be minimal; for e-governance to work successfully and convey efficiency and effectiveness, they sort. Therefore, to appreciate the paybacks of an e-

governance system, the composition of ICT infrastructure and technology deployed should be easy, especially among those seeking services from the platforms (Tomasz et al., 2007). Papadomichelaki and Mentzas (2012) define easiness of utilization of E-Systems as the comprehension of online contents and indices plus data supporting impeccable communication among the system operators and organisations in ways showing the connotation, comprehension, and coherency. The adoption of the three software systems (GHRIS, IPPD, and IFMIS) relies on the ease of use among the public to meet the effort expectancy condition.

Carter and Belanger (2012) researched e-governance and found that 63% of the respondents needed simplified e-governance platforms to enhance ease of use. The duo highlighted key areas that needed simplification as e-payments plus online business registration practises and techniques. Furthermore, the research revealed that 60% of respondents based in rural areas had no idea of the usability of e-government platforms in obtaining service provision. Therefore, to establish an effective e-government system, respective government agencies should simplify interface and e-governance modules, enhance community-based digital training shops and conduct aggressive sensitization training on e-governance.

World Bank (2014) asserted viability of e-governance could be increased through the enlargement of e-governance structure so as to permit persons in urban and in rural regions to be able to use government amenities easily. The World Bank further recommended that simplifications and modifications of systems are key to stress-free availability and usage by the populace to the administration and governance process. For instance, Africa experiences a high illiteracy rate, and inadequate access to e-governance networks exacerbates the difficulties of communication between citizens and government through the developed E-Systems. World Bank (2014) further studied the functionality of e-governance among populations. It established that approximately 70% of the rural population in Africa experience difficulty in accessing and use e-governance because of the technicality of ICT infrastructure. These reports indicate the need for government sector agencies and bodies to simplify information technology and make it functional in

rural areas; otherwise, e-governance remains a preserve of the urban population versed with ICT (Mwaniki et al., 2017).

Shareef et al. (2011) note that different e-governance systems plus components entail different measures, instructions, and targeted interested parties whom it serves, resulting in diverse e-governance angles of internal and external risks exposures. Expectancy efforts by users depend on the level of perceived risks; hence, it is incumbent upon government agencies that rely on electronic-based governance to implement good risk mitigation strategies to protect users while making it stress-free for the users to utilize the services. Colesca (2009) states the risks to be biased anticipation among the citizens that they will agonise losses while trailing the anticipated outcomes. For an e-governance system, risks are a general feeling that the impersonal nature of the electronic public system and the utilization of an objective technological support system may grow into a significant forfeiture of data relating to an individual or finances (Carter, 2012). For instance, technical problems may lead to system failures and loss of government data required for public utility (Shareef et al., 2011). The government agencies should emphasize building user trust on the online platforms to detach them from perceptions that compromise the integrity of e-governance platforms. Stanforth (2012) argues that users should feel reasonable comfort and safety in using online services confidently. Therefore, the perceived level of risks or real risks directly influences the adoption of e-governance. The perceived risk level effect is greater when the software system handles sensitive information such as payroll data and employee and financial matters. Hence, the adoption and use of GHRIS, IPPD, and IFMIS in the public service sector depends on the security of the systems (Stanforth, 2007).

Deficiency of comprehension amongst handlers on risk extenuation for technology used by the government agencies to protect the public is one of the primary impediments to the adoption of e-governance. The public expects a consistent and reliable system that keeps their data, education data, financial records, and work history, among other critical information upon which e-governance may be sought. MacDonald et al. (2011) claim that real and perceived risks the intention of the public to use government websites and service portals. This research furthered that since the inception of e-governance, less

emphasis has been laid by the government departments on training the public on the security levels of the online services and detection of malicious websites intended to defraud the public (Canedo et al., 2020; MacDonald, 2011). MacDonald highlighted various ways of mitigating e-governance service risks, as summarized in table 2.

Table 2: E-Governance Risks Mitigation Mechanisms

| <b>Mechanism</b>   | <b>Description</b>  |
|--|---|
| Enhancing operator awareness of websites and automation structures | Increase user sensitivity in addition to responsiveness of the e-government applications, websites, and electronic systems  |
| Enhancing the use of secure systems                                | Building a safe system with different authentication and approval layers reduces the security risk challenges. For instance, IPPD handles sensitive information about employee wages, allowances, capacity gaps, and education qualifications. This information should only be accessed by the employer and the respective employee |
| Being aware of project pitfalls                                    | Train the users on e-governance pitfalls, hence reducing the tendency   |
| Sensitization about phishing                                       | Sensitize the public about the presence of fraudulent individuals who are motivated to con them and inform them on how to identify and report them to the authorities   |
| Online pop-ups   | Most pop-ups are legitimate. However, they may destroy attention and initiate unplanned spending in terms of internet bundles.  |
| Pretexting   | Caution the public to abstain from  |

|  |   |
|--|---|
|  | <p>providing sensitive information through an online platform they are suspicious about. They should be educated on how to do background checks to ascertain the authenticity of a website.</p> |
|--|---|

### **2.2.5. Social Influence and Adoption of E-Governance**

Social influence refers to attitudes, beliefs, norms, and cultures drawn from the society people perceive things. Adoption of e-governance is not immune to the influence of social constraints because it directly affects the lives of the citizens. This research reviews community, peer stimulus, plus the government’s function in adopting e-governance (GHRIS, IFMIS, and IPPD). The community adopts prevailing cultures and norms as they arise. These affect in what way they answer to variations in their everyday livelihoods. For instance, the leadership structures and bureaucratic hierarchies influence the respective organizations or government agencies and the community (World Bank, 2014).

The community culture influences the mechanisms adopted by the government to render services. There are two overriding factors forming the culture of people; principles and standards. Beliefs are expectations individuals of a given community buy in about truths originating from or through their familiarity (Azhar, 2003), while values are ideals that followers of the society contemplate to be desirable and worth adhering to achieve. The adoption of software systems, for example, GHRIS, IFMIS, and IPPD, hinged on the psychological state in addition to preparedness by the community to accept that trend. This largely relies on their experience with the existing system and their expectations for higher utility from the new system.

Furthermore, beliefs and values also define whether the government agency adopts a given governance system or not (Sarker et al., 2011). Often, the government strives for greater efficiency and accountability while the public considers ease of accessibility, cost-benefit, and safety. The mindset of the inhabitants of a community and their code of conduct further influences their acceptability of e-governance. A corrupt government and

society will dismiss the implementation of the three software systems (GHRIS, IFMIS, and IPPD) due to the transparency they purport. Alternatively, a corrupt society can interfere with the system's functionality so that the value of data transmitted deviates from the actual information that ought to be recorded (Sarker et al., 2011). For instance, county governments and state departments that contradict the provisions of the employment laws in the human resource system and payrolls will seek excuses as to why they are not capable of using the developed systems. This also applies to IFMIS, especially where government tenders' awards are inconsistent with the prevailing laws.

World Bank (2014) reported that well-managed government agencies and those responsive to changes react positively to implementing software systems in governance. Public administration is normally regarded as and by high levels of bureaucracies, where the exertion of powerful influence from the hierarchies on the systems hampers the efficiency and transparency of e-governance. Therefore, as much as the government agencies adopt software systems, bureaucratic hierarchies and influential leaderships hinder effective execution and service delivery. This proves that the strength of the internal philosophy in the government agency influences the agency's aptitude to adapt and use the e-governance systems (Monga, 2008). McCarthy et al. (2000) assert that culture affects people's perception of e-governance and determines how the public interacts with the developed e-governance software systems and platforms. Thus, the government is responsible for developing a philosophy receptive to adopting the e-governance systems to guarantee an uninterrupted flow of superior in addition to efficient amenities to the public at reasonable cost, hence saving on the government's budget (Pérez-Mira et al., 2017; Šmýkala et al., 2017).

Talukder (2011) defines peer pressure's influence on adopting e-governance. The extent to which peer influence is felt in the organization reflects how they accept or reject the various organizational trends. For example, the use of smartphones and computers among the youthful population is a factor to focus on during the adoption of the three software systems because they primarily target the working population (Talukder, 2011). The government is also responsible for revamping and preparing citizens for a paperless public administration through restructuring the education system, like distributing

computers to primary school learners to accustom them to the basics of computer operation. The opinion shapers would also influence perception. Peer group perception influences how individuals think. Therefore, if the majority in a society recommends adopting a particular software system, the minority will be compelled to follow suit (Shareef et al., 2011).

Sarker et al. (2011) recommended government agencies seeking to enhance the acceptance and consumption of e-governance ought to motivate influential groups in the organization to champion the implementation. Laudon and Traver (2011) reinforce the assertion of Shareef and his colleagues by adding that value addition created by the adoption of e-governance systems determines the manners of peers and age mates within a team in endorsing specific software systems. Therefore, enthusiastic mobilization of the peer groups must be connected with the significance of e-governance systems to the public. Public members will observe the software systems' effects on their counterparts before replicating. Positive testimonials from those using e-governance and aggressive public sensitization will help break the traditional G2C communication culture (Sarkar et al., 2011). The government should strive towards convincing the public service sector of the economic benefits and efficiency advantage by adopting GHRIS, IFMIS, and IPPD.

#### **2.2.6. Facilitating Conditions and Adoption of E-Governance**

Facilitation conditions indicate preparedness of government institutions to install the software systems and apply them in performing their functions. Concisely, facilitation conditions involve the extent of implementation structures existing, such as practical infrastructure, transparency, government backing, moral support, and monetary support, amongst other vital factors, usage of the e-governance platforms (Venkatesh et al., 2003). This research facilitation circumstances include ICT infrastructure, government support, and accountability.

Implementing software systems (GHRIS, IFMIS, and IPPD) can only be viable through expanding and strengthening the ICT infrastructure to enable internet connectivity in the metropolitan and country side. The step must be undertaken since it's essential for government services equally, both in cities and rural settings (Carter, 2012). The requisite

ICT infrastructures for fully functioning e-governance in all parts of the country include network cables, fibre cables, and satellite transmitters.

World Bank (2014) notes that lack of network or poor ICT infrastructure is the main setback to electronic-based G2C communication. This report asserted that nearly 70% of the rural areas in Africa lack internet connection (3G and 4G), hence poor access to government services in the affected areas. However, Kenya has made significant progress in enhancing ICT infrastructure connection and electrification of the rural areas as the administration seeks to bring about equal opportunities plus facilities to those in remote in addition to the urban areas. For instance, electronic transmission of the presidential results to the (IEBC) Independent Electoral Boundaries Commission requires an internet connection in all parts of the country. The reviewed literature shows different perspectives in ideology and arguments regarding the relationship between ICT and e-governance. Borin (2002) argues that the implementation of software systems as a technic to render government services to the public relies on sufficient decentralized Information Technology (IT) networks. Therefore, according to Borin, GHRIS, IFMIS, and IPPD, systems will be ineffective without a strong IT connection. Stanforth (2012), on the other hand, asserts that the implementation of e-governance is a political project, is inherently influenced by political forces and processes, and has little to do with ICT infrastructure. However, with comparative evaluation, the two scholars seem to agree that IT networks are essential in implementing e-governance because the political will intervenes in adopting e-governance by setting up enabling environment. E-Governance systems are developed by the government and used by the government and the ICT infrastructure (Stanforth, 2007).

Njuru (2011) explores the need for an effective ICT network in a country that desires to digitize public sector administration. Since e-governance is aimed at expanding citizens' access to government services, robust ICT guarantees the website's stability and the system's ability to accommodate multiple people accessing government services simultaneously. For instance, when the deadline for submission of applications (such as job, KRA return filing, and teachers' schemes of work) is nearing, many people log in to various government portals and websites. In line with the United Nations Report 2003 on

Universal Public Sector, the existence of government software systems is not a qualification that people adopt and use. Queues could still be witnessed in government offices for services that are available online due to the digital divide in developing countries (Njuru, 2011). Therefore, the government may not deploy appropriate infrastructure in terms of online content and websites for progressive government services. Matavire et al. (2010) further a discussion about the impact of the digital split by asserting that the lack of coherent online digital policies, capable human capital growth, and ICT infrastructure hamper the operative adoption of e-governance. Therefore, the full utility of the three systems will be due to efforts of the government to develop ICT network connection and population literacy.

Increased accountability of stakeholders enhances the trustworthiness of e-governance platforms like government amenity provision channels (Reijswoud, 2008); it allows the populace in participating in decision-making process. Proper accountability in e-governance systems streamlines internal and external communication with improved speed, precision, and accuracy. High accountability is a core feature of government services, especially in public resource management. Integration of GHRIS, IFMIS, and IPPD promotes accountability of government agencies through transparency since government expenses, inventory reports, plus government developments are accessible online for examination and recommendations by public members and the citizenry. The critical areas of accountability in e-governance include transparency in government development projects and transparency in the utilization of public revenues. However, the extent to which accountability is reflected in e-governance depends on the ethical standards of the government officials, social values and beliefs, and legal standards (Matavire et al., 2010).

The Kenyan government has faced extensive countrywide pressure to evaluate plus apprise expenditure of public incomes within the principles of openness (Mwenda, 2015; Sihanya, 2011). Proper implementation of e-governance is one way of achieving transparent and lawful revenue spending. For instance, the Integrated Payroll and Personnel Database have considerable controlled payments to civil servants and procurements according to the stipulated law. The system provides verifiable evidence of

the government's cost drivers and makes it easy to call upon project and organization managers to explain any inconsistent payments. Further, transparency and accountability are enhanced by posting government audited financial reports online for review by the public and posting all procurement procedures for awarding government contracts on government websites to ascertain that the law adhered to the latter (Borins, 2002). E-Governance forms part of the decentralization of government functions and makes it possible to control corruption due to the fast and accurate transmission of information through website platforms.

The traditional human resource management system created loopholes for employing unqualified and incompetent people in various government positions. With integrity, implementing Government Human Resource Information System (GHRIS) minimizes chances of retaining unqualified individuals in government positions. For instance, artificial intelligence in human resource management automatically filters applications below the minimum qualifications based on predetermined criteria such as intelligence quotient tests, language tests, or education qualifications (Monga, 2008). Implementation of e-governance (IFMIS) contributes to transparency of the tendering process, which is one of the critical departments of various government agencies that consume the bulk of public revenue allocation. This calls for the development of a mandatory structured procedure for tendering process to reduce the influence of the political forces that threatens transparency and accountability in the process (GoK, 2010). Case in point, the ancient constitution of Kenya sited a prerequisite of all development schemes under control of the central government under the then decentralized units of provincial administration operating through and by the command National government administration (GoK, 2010). Nevertheless, Kenya's new constitution advocates for higher levels of public participation and involvement through the County Integrated Development Plans (CIDP), where all government development projects must be scrutinized by the public and supported by the majority (GoK, 2010). The Public Finance Act (2012) call for the county government to create a county development committee representing the public, whose views influence the formulation of the fiscal strategy.

Furthermore, public members can channel their comments regarding budgets, government contracts, and procurements through the online platform to the county development committees. Equally, the public can audit the projects or request the county government through an online forum to provide them with audited reports of various county government projects that they suspect lead to the misappropriation of public funds. ICT infrastructure and e-governance increase accountability, thus control of corruption in the government sector (Budhiraja, 2005).

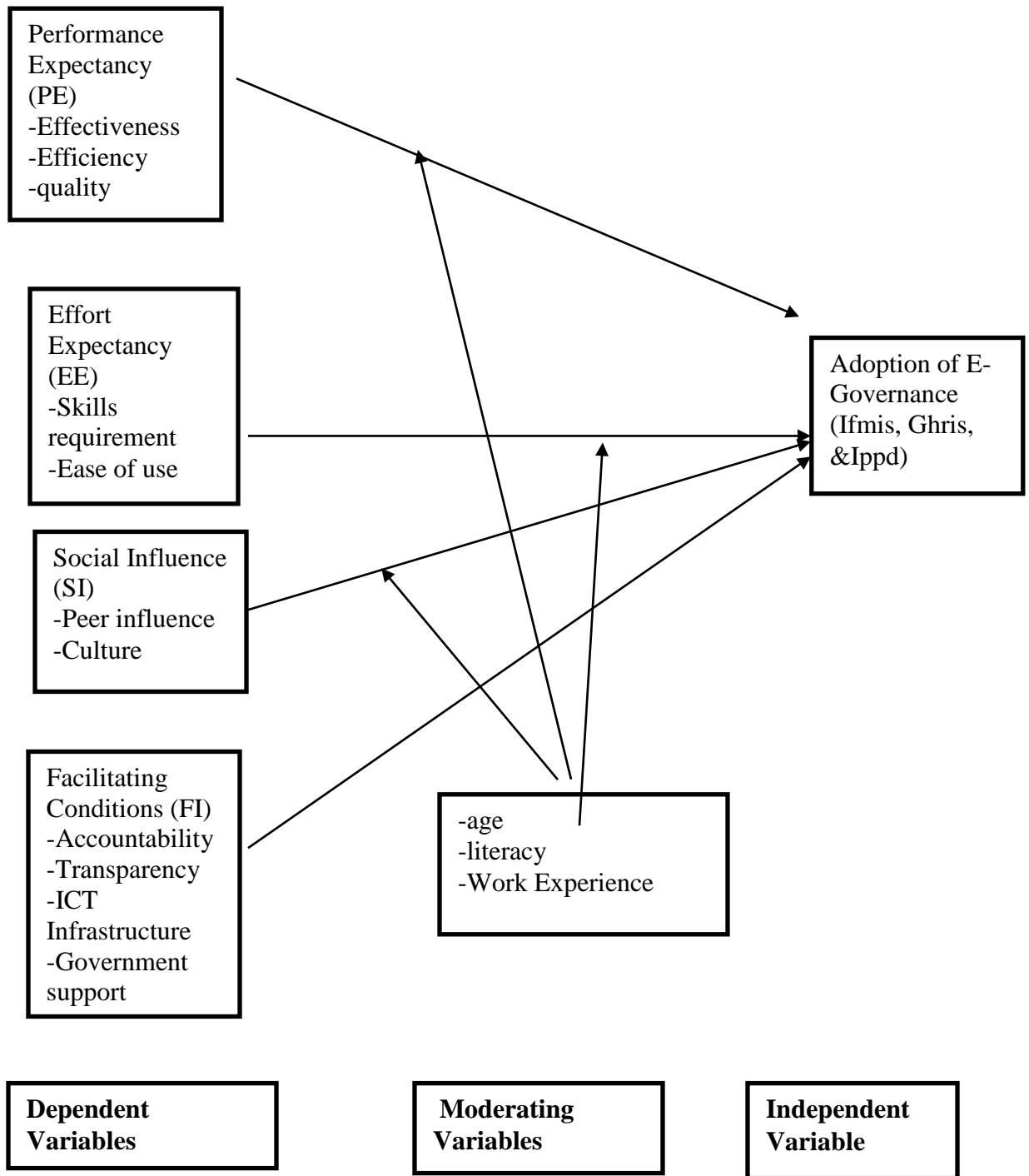
(Budhiraja, 2005; Carter, 2012; Stanforth, 2007), researched the e-governance factors and asserted the presence of unswerving relationship amid government backing and e-governance. Government backing in financial resources, policy design, e-government architecture, hardware and software systems, and essential skills in deploying e-governance initiatives has a momentous issue with the assumption of GHRIS, IFMIS, in addition to the IPPD (Sarker et al., 2011). In developing the three software systems, the government knows what they are expected to do and plans its designs accordingly. The e-governance systems, with their supportive elements such as ICT and rural electrification, are costly projects to operationalize and roll out. The government also intervenes by controlling and regulating the software systems. The government also provides knowledge and skills for the implementation and system assessment (Matavire et al., 2010); hence, the government is responsible for establishing capacity building and training for system developers and operating training clinics for employees and the public (Matavire et al., 2010). Therefore, previous literature confirms three facilitating conditions, government support, ICT infrastructure, and accountability mechanisms, are necessary to implement and fully operate the software systems (GHRIS, IFMIS, and IPPD). However, the effectiveness, efficiency, and functionality of the e-governance system in delivering public service depend not only on the three factors but is the shared responsibility of the government and society.

### **2.3. Conceptual Framework**

The structure underneath provides the conceptual framework for this research.

The conceptual framework consists of four dependent variables: the determinants of adoption and implementation of software systems in governance (GHRIS, IFMIS, and

IPPD). The determinants include the dependent Variables. The performance expectancy defines capability of information technology structure in performing various functions from end-user perspective. For instance, the efficiency of using the human resource information software system to update employees' information and store the changes without visiting the human resource department may motivate the adoption of the system (Venkatesh, 2003). Performance Expectancy is evaluated by efficiency level, effectiveness, and quality of output. Effort Expectancy (EE) is the easiness of utilization connected with the e-governance platforms. GHRIS, IFMIS, and IPPD will be utilized fully if the public can access the government services more easily than the manual systems. Social Influence includes the social context that influences the degree of importance of the three software systems in various government agencies and the public. They include the organizational and community culture, peer influence, and literacy levels. The Facilitating Conditions comprise government support, political influence, ICT network, rural and urban electrification, infrastructure, and accountability and transparency of the system.



**Figure 2: The Conceptual Framework for the Study**

Adapted from: (Venkatesh, 2003)

## **CHAPTER 3; RESEARCH METHODOLOGY**

### **3.0. Introduction**

The section summarizes the study approach utilized in collecting plus scrutinize data. The research design is indicated first, seconded by study variables, study site, target population, sampling technique and sample size, research instruments, validity and reliability, info collection procedures, info analysis and presentation, info management, and ethical considerations.

### **3.1. Research Design**

This research adopted a descriptive survey design to collect data and analyze findings. Sileyew (2019) defines descriptive survey design as collecting data to explain a situation or phenomenon without manipulating the environment and variables. A descriptive research study was convenient because it enabled collection of both qualitative and quantitative data in an unchanged research setting. It was also effective in analyzing the study's non-quantified variables, such as the impact of integrating the three software systems in public service governance (Sileyew, 2019). A mixed questionnaire was applied to gather information amongst randomly selected respondents.

### **3.2. Study Variables**

The research has one independent variable (adoption of e-governance) and four dependent variables (performance expectancy, effort expectancy, social influence, and facilitating conditions). The control variables in this study include age, work experience, and literacy.

The study explored the impacts of using the three software systems (GHRIS, IFMIS, and IPPD) to deliver services to citizens. Adopting the e-governance strategy is the independent variable influenced by the dependent and control variables. The performance expectancy defines the expectation of the stakeholders (County government staff and residents of Siaya County) regarding the system's operation. This is a subjective variable measured in relation of eminence of provision, efficiency, plus effectiveness of the service delivery process. This describes the technicality of the system in relation to the easiness of utilization and abilities vital for use of the software systems. The system's builders aim to minimize the efforts required to use the software system through effective

user interface planning, well-organized features, and friendly display. The easiness of utilization of the system determines level of acceptance and implementation of the software systems in e-governance.

Social influence measures the range of the society support on e-governance strategy. Successful adoption and implementation of the software systems depend on the readiness of society to use the developed system. This is influenced by institutional cultures, the mindset of society, and peer influence. The government should sensitize society regarding the benefits of the software systems, train the public on their use and minimize the risks involved to win social support. The implementation and functionality of e-governance are influenced by many intervening factors such as government support, political will, ICT network, infrastructural development, and the need for increased accountability and transparency in governance.

### **3.3. Study Site**

The research was conducted in Siaya County Government within selected departments; Public service board, human resource management, ICT, and finance. These are the primary users of the selected software systems (GHRIS, IFMIS, and IPPD); hence, their feedback could represent the shared experience while using the systems.

### **3.4. Target Population**

The study targeted employees of Siaya County Assembly and the County Government Department staff in the departments of public service, human resources, treasury and finance, and ICT. These departments were convenient for sampling because they directly use the three software systems under the study.

### **3.5. Sampling Technique and Sample Size**

The sample size of the research was 108 respondents. Krejcie & Morgan (1970) was adopted to determine the sample size.

$$S = \left[ \frac{X^2 NP(1-P)}{d^2(N-1)} + X^2 P(1-P) \right]$$

Where;

S= Sample size

X<sup>2</sup>= Chi-square value from the table for a degree of confidence at 1-degree anticipated confidence level; (3.841)

N= the populace size from which sample is drawn

P= the population proportion assumed to be 50%

d= degree of accuracy or standard deviation assumed at 5%

$$S=3.841 * 150 * 0.5(1 - 0.5)/[(0.05^2(150 - 1) + 3.841 * 0.50(1 - 0.50))]$$

=108.

Table 3: Sample Size Distribution

| Sector                               | Total | Percentage [%] | Sample size |
|--------------------------------------|-------|----------------|-------------|
| County Treasury and Finance          | 90    | 30%            | 27          |
| ICT                                  | 101   | 40%            | 40          |
| County Human Resource Department     | 70    | 30%            | 21          |
| County Public Service Board          | 10    | 50%            | 5           |
| Ward Managers & Ward Administrators' | 31    | 50%            | 15          |
| <b>Total</b>                         |       |                | <b>108</b>  |

Source: (Siaya County Government, 2022)

### 3.6. Research Instruments

The study relied on various research instruments to collect data, analyse and present the findings. These included questionnaires, observations, SPSS software, and discussions. SPSS software aided in qualitative analysis of the research findings including mean, variances, standard deviation correlations and frequencies of the data. This enhanced interpretation of the results and determination of association amongst dependent, independent and intervening variables.

### 3.7. Validity and Reliability

A pilot Google questionnaire survey was conducted using ten selected staff of the Siaya County Government to test the reliability and validity of using an online survey to collect data. Their responses were used to compute a Cronbach's Alpha to determine the reliability of the chosen data collection method.

The universal canon in the use of a Cronbach's alpha is that, indicators of 0.7 and above is good, 0.8 and above is better and above 0.9 and above is best.

### **3.8. Data Collection Procedures**

The research utilized primary data only. Structured mixed questionnaires existed to gather data from the sampled respondents. The Inquiry form had three parts; Part A sought to obtain demographic data of the respondent, such as name, age, gender, tenancy at the county, level of education, and job group. The second segment, Part B, contained questions relating to Performance Expectancy, while the third section, Part C, had questions on Effort Expectancy. The fourth section presented a questionnaire on Social Influence, and the last part was on Facilitating Conditions. An experimental test of ten questionnaires was utilized in examining reliability and validity of the data collection tool. Feedback had been used and applied to make corrections on questions that warranted clarity and simplify and those confusing to the respondents. For the actual data collection, questionnaires were sent to respondents through their emails, and a text message reminder sent to them to notify them that a link has been shared so they may participate in the study at their convenience.

### **3.9. Data Analysis and Presentation**

Raw info was analysed by use of Statistical Package for Social Sciences (SPSS). Correlation plus factor analysis were utilized to construct validity of the research questions about adopting the three software systems. Furthermore, data was analysed for percentages, means, frequencies, and regressions. Descriptive figures were indicated and offered through tables and statistics, and inferential statistics was tabulated. Besides, inferential statistics was used to explain any connection amongst the dependent, independent, and moderating variables. ANOVA and multi-regression was applied to determine significance level of the research variable.

### **3.10. Data Management Ethical Consideration**

The info collected from the respondents was protected furthermore were strictly applied to fulfil the research objectives. Consent was sought from the respondents, during which they requested to share their email addresses for sharing the questionnaire. This was in compliance with ethical standards and maintain confidentiality. Permission was sought from Siaya County Public Service Board and County Assembly through a presentation of an official letter from Kenyatta University to collect data from the premise.

## CHAPTER 4: DATA ANALYSIS AND INTERPRETATION

### 4.0. Introduction

The section presents the investigation of the key findings in the research. In particular, this chapter presents results of the rejoinder frequency, various descriptive statistics and inferential statistics analysis conducted including the factor analysis and multiple regression model. The research goal was to examine impact of the integrated mandatory e-government strategy in public service of Kenya, the case of Siaya County Government. This study assessed the extent to which three software systems (GHRIS, IFMIS, and IPPD) are implemented and utilized to increase efficiency in Administrative segment facility. The outcomes of the analysis are presented in both tabular and graphical formats.

### 4.1. Response Rate

Table 1 below presents the response rate

**Table 4: Response Rate**

|                             |                     |
|-----------------------------|---------------------|
| Target Sample Size          | 108                 |
| Achieved Sample Size        | 71                  |
| <b><i>Response Rate</i></b> | <b><i>65.7%</i></b> |

*Source: Survey Data*

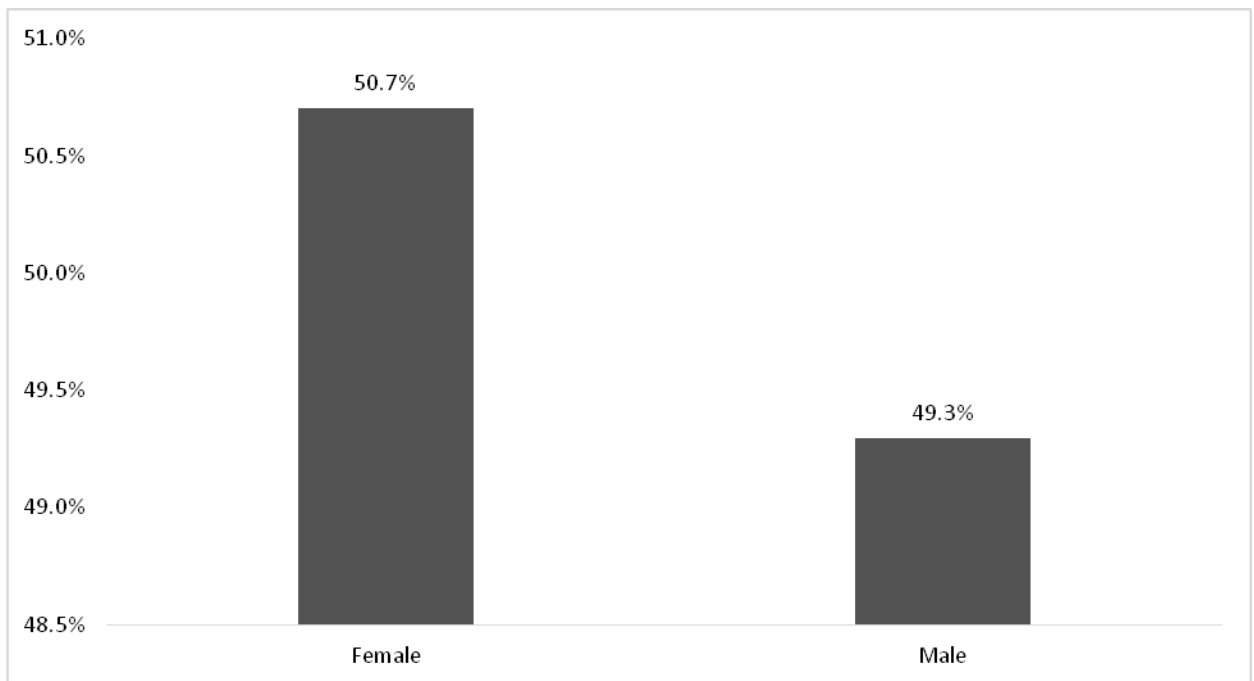
As presented in Table 1 above, the survey targeted 108 respondents. Of the targeted respondents, 72 responded to the survey and this translated into a reply degree of 66.7 percent. This response rate is considered adequate and desirable based on Schmid et al. (2012) who asserted and noted that however a 50 percent reply degree will always be satisfactory, a 60 percent reaction degree will always be required plus is attainable. Further, Gendall (2000) settled on a 50 percent reaction degree might be considered as “...a rough rule of thumb for a minimum acceptable response rate in survey research”

(2000: 5); and as such, the response rate for this survey is classified as acceptable. With the response rate classified as sufficient, then the sample was adequate for the study and hence the results are valid.

## 4.2. Demographic Characteristics

The segment presents finding of the key demographic features of the survey respondents. Specifically, this section grants effects for the sex and time of life distribution, plus the education status of the respondents. This segment also offers the results of the departments, which the respondents were placed.

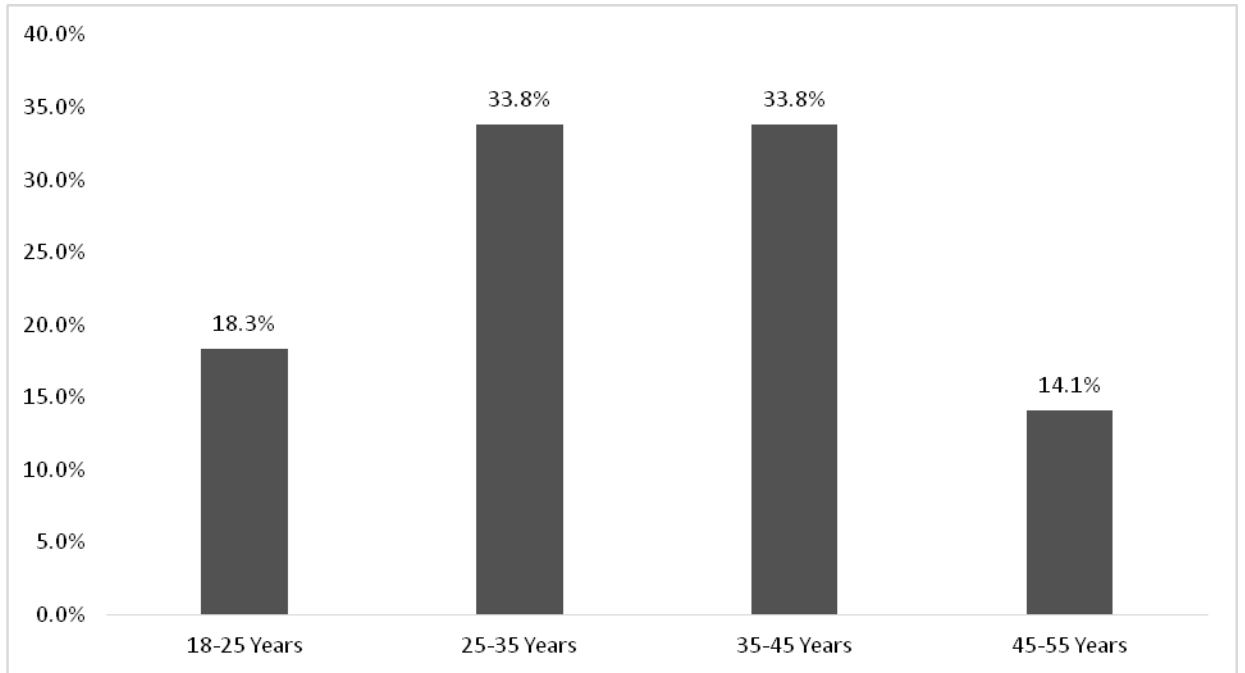
### 4.2.1 Sex of the Respondents



**Figure 3: Sex of the Respondents**

Of the surveyed respondents, the analysis shows that the majority 50.7 percent (n=36) were females, and 49.3 percent (n=35) were males. Despite the slight difference, the gender distribution was almost equal for both sexes, that is, male and females were equally distributed

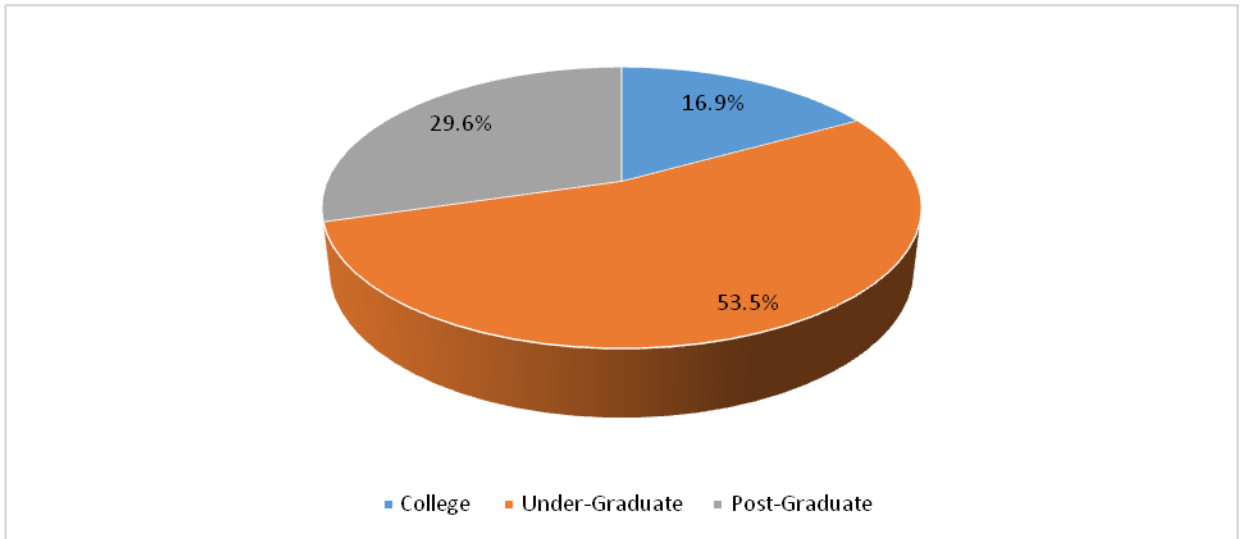
#### 4.2.2. Age of the Respondents



***Figure 4: Age of the Respondents***

Figure 2 above presents the age distribution of the respondents. According to the results, 18.3 percent (n=13) of the respondents were aged between 18 and 25 years, while 33.8 percent (n=24) were aged between 25 and 35 years. Further, the results show that another 33.8 percent (n=24) of the respondents were aged between 35 and 45 years, while 13.9 percent (n=10) were aged between 45 and 55 years. Suffice to note that the frequency of age of the respondent increased from 18 years to 35 years, then remained stagnant until 45 years before dropping thereafter.

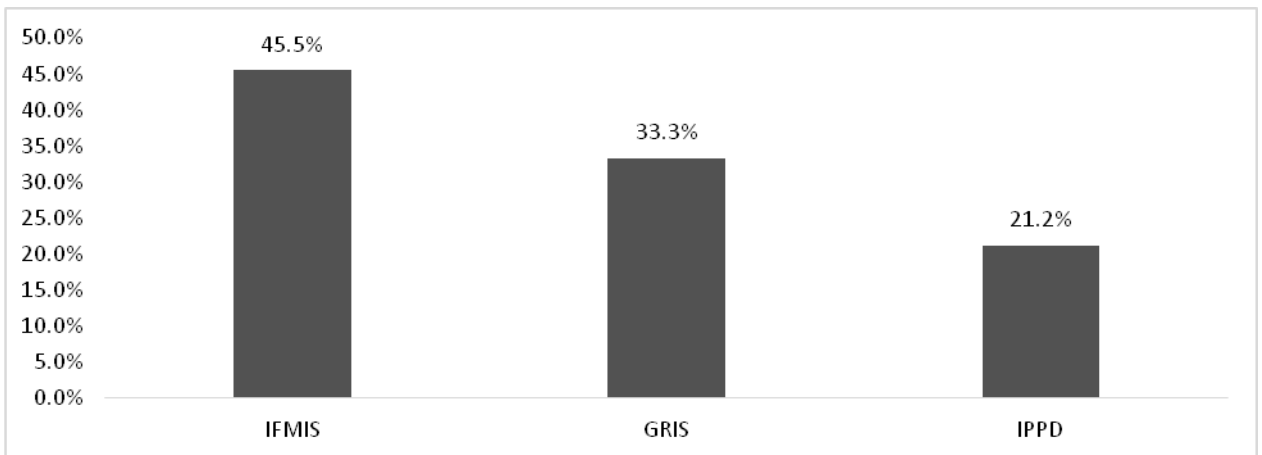
### 4.2.3. Education Level of the Respondents



**Figure 5: Education Level of the Respondents**

Of the 71 respondents interviewed, the results indicate that the majority (53.5 percent, n=38) had under-graduate education level, and 29.6 percent (n=21) had post-graduate education while 16.9 percent (n=12) had college education. Overall, 83.1 percent (n=59) of the respondents got either under-graduate or post-graduate education level.

### 4.2.4. Work Department



**Figure 6: Work Departments**

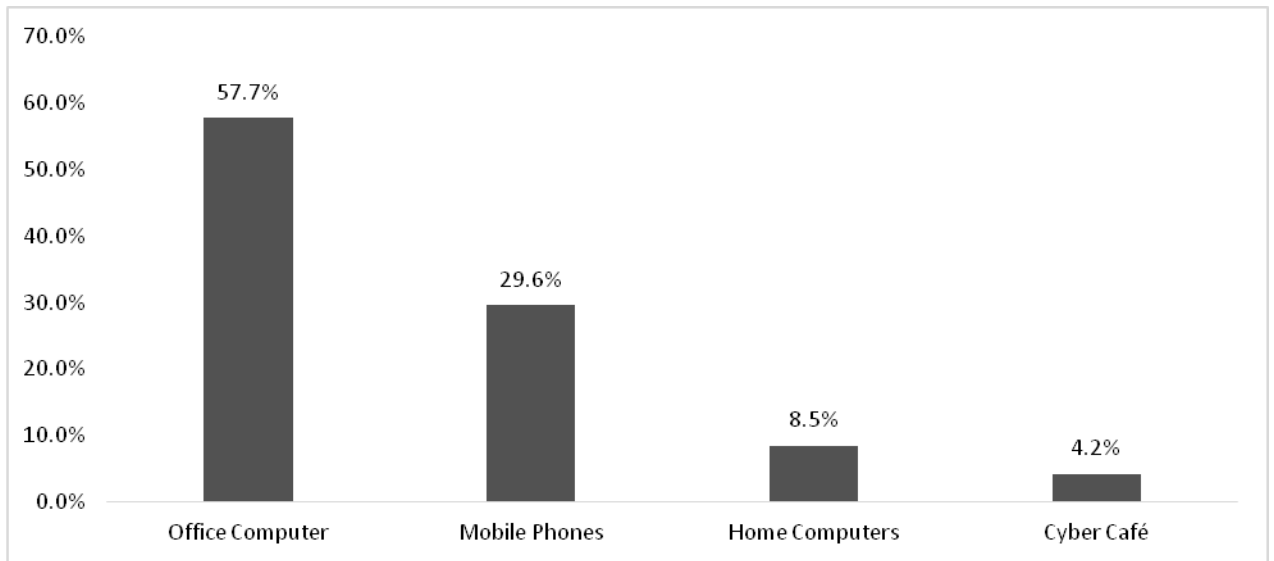
Figure 4 shows that 45.5 percent (n=30) were working in the IFMIS Department, 33.3 percent (n=22) were working in the GRIS Department and 21.2 percent (n=14) were

working in the IPPD Department. Suffice to note that five respondents (7%) of the overall respondents did not indicate the departments in which they were working, and as such, were excluded from the analysis.

### 4.3. E-Governance

The segment offers outcomes of e-Government. Specifically, this section presents the finding on means of accessing the e-Government, level of experience with e-Government and training on e-Government

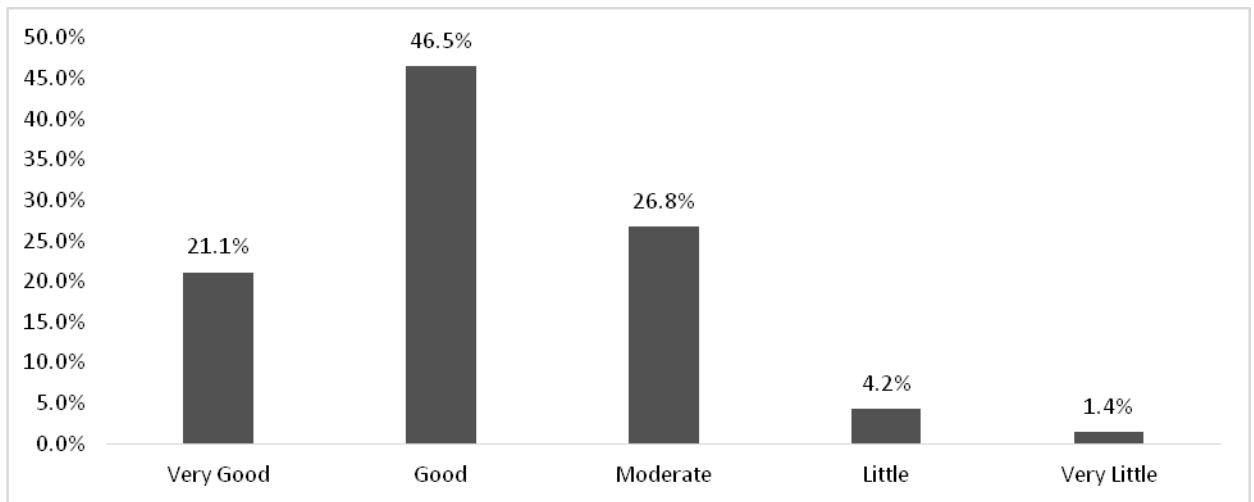
#### 4.3.1. Access to e-Government Provided by the Country Government



**Figure 7: e-Government Access**

According to the analysis, majority of the respondents were accessing the e-Government using the office computer with the estimate being 57.7 percent (n=41). Further, the results indicate that 29.6 percent (n=21) of the respondent access the e-Government using mobile phones while 8.5 percent (n=6) were accessing the e-Government using home computers. The results also show that 4.2 percent (n=3) of the respondents were accessing the e-Government through the Cyber Café.

### 4.3.2. Experience on e-Government Provided by the Country Government



**Figure 8: e-Government Experience**

Figure 4 above indicates that 21.1 percent (n=15) of the respondents displayed the fact that they had a *very good* comprehension of e-Government, while 46.5 percent (n=33) directed the fact that their involvement by the e-Government provided by the Siaya County Government was *good*. On the other hand, 26.8 percent (n=19) showed the fact that their involvement by the e-Government was *moderate*, while 4.2 percent (n=3) reported that their experience was *little* and 1.4 percent (n=1) indicate that the experience was very little. Overall, the majority of the respondents had good or very good experience with e-Government delivered by the County Government of Siaya.

To further understand the association amongst the e-Government experience plus the department the respondents worked for, a cross-tabulation analysis was done. Before the cross tabulation e-Government experience was grouped into three where *Very Good* and *Good* were classified as *Good*, *Moderate* was retained as *Moderate* and *Little* and *Very Little* were grouped into *Little*. Outcomes of the cross tabulation examination are presented in Table 2.

According to the analysis, 80 percent of the respondents who were working in the IFMIS Department had a good experience with the e-Government compared with 63.6 percent under the GRIS Department and 57.1 percent from the IPPD Department. However, Chi-

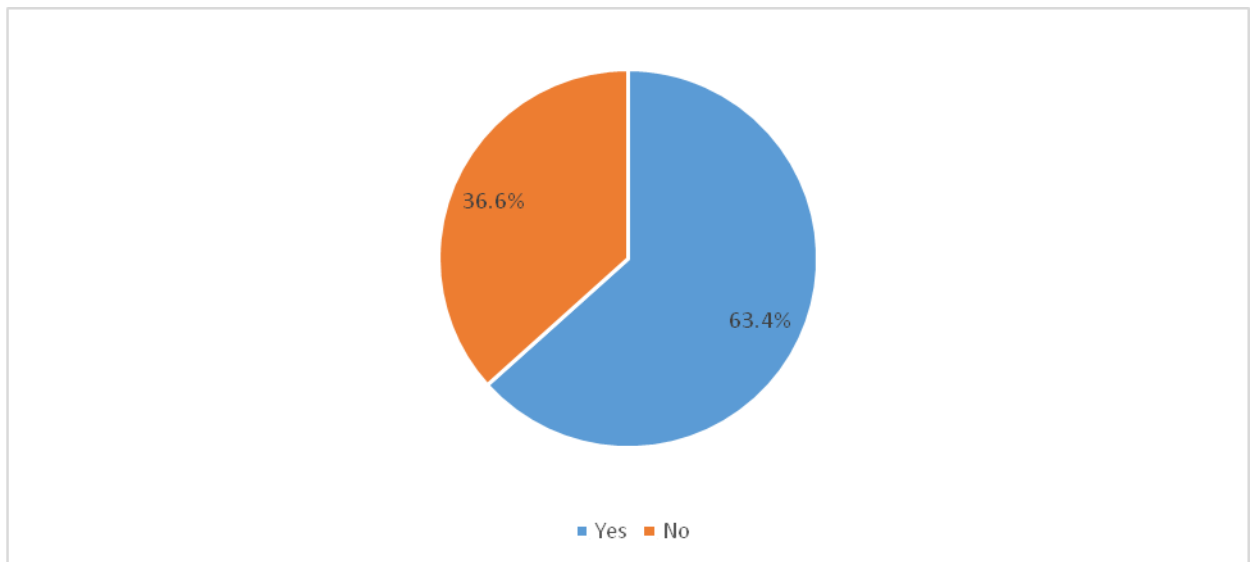
Square analysis showed that the difference was not significantly different (*Chi-Square=3.009, p=0.556*). This implies that although the respondents from the IFMIS had a better experience compared with the respondents from the IPPD and GRIS Departments, this difference was insignificant.

**Table 5: e-Government Experience and Work Department**

|                 |       |                     | e-Government Experience |              |             | Total         |
|-----------------|-------|---------------------|-------------------------|--------------|-------------|---------------|
|                 |       |                     | Good                    | Moderate     | Little      |               |
| Work Department | IFMIS | Frequency           | 24                      | 5            | 1           | 30            |
|                 |       | % within Department | 80.0%                   | 16.7%        | 3.3%        | 100.0%        |
|                 | GRIS  | Frequency           | 14                      | 7            | 1           | 22            |
|                 |       | % within Department | 63.6%                   | 31.8%        | 4.5%        | 100.0%        |
|                 | IPPD  | Frequency           | 8                       | 5            | 1           | 14            |
|                 |       | % within Department | 57.1%                   | 35.7%        | 7.1%        | 100.0%        |
| <b>Total</b>    |       | Frequency           | <b>46</b>               | <b>17</b>    | <b>3</b>    | <b>66</b>     |
|                 |       | % within Department | <b>69.7%</b>            | <b>25.8%</b> | <b>4.5%</b> | <b>100.0%</b> |

Source: Survey Data

#### 4.3.3. Training on using the e-Government



**Figure 9: e-Government Training**

Of the interviewed respondents, the results of the analysis indicate that 63.4 percent (n=45) had been trained on the e-Government System, while the rest (36.6 percent, n=26) had not been trained on the system.

Further analysis had been piloted to establish the connection amid training on e-Government plus the department of placement. According to the results, 80 percent of respondents from IFMIS Department had received training on the e-Government Structure. Additionally, the study showed the fact that 64.3 percent of the respondents from the IPPD had been trained on the system. Of the GHRIS respondents, the results of the analysis indicated that only half of them (50 percent) had been trained on the e-Government System. Chi-square analysis indicated the fact that there was statistically noteworthy variance on proportion for those trained on the e-Government plus departments at 10 percent level of significant (*Chi-Square=5.186, p=0.07*). This implies that the 10 level of significant, the proportion of respondents trained from the three departments was significantly different with the respondents from the IFMIS being the highest trained.

**Table 6: e-Government Experience and Work Department**

|            |       |                     | Training on e-Government |       | Total  |
|------------|-------|---------------------|--------------------------|-------|--------|
|            |       |                     | Yes                      | No    |        |
| Department | IFMIS | Frequency           | 24                       | 6     | 30     |
|            |       | % within Department | 80.0%                    | 20.0% | 100.0% |
|            | GRIS  | Frequency           | 11                       | 11    | 22     |
|            |       | % within Department | 50.0%                    | 50.0% | 100.0% |
|            | IPPD  | Frequency           | 9                        | 5     | 14     |
|            |       | % within Department | 64.3%                    | 35.7% | 100.0% |
| Total      |       | Frequency           | 44                       | 22    | 66     |

|  |                     |       |       |        |
|--|---------------------|-------|-------|--------|
|  | % within Department | 66.7% | 33.3% | 100.0% |
|--|---------------------|-------|-------|--------|

Source: Survey Data

Among the respondents who had been trained on the e-Government, the results as presented in Figure 8 show that 34 percent (n=17) had been trained on the online tax filing. In addition, 28 percent (n=14) had been trained on online approval of services and on using online payments; and 10 percent (n=5) had been trained on other e-Government services.

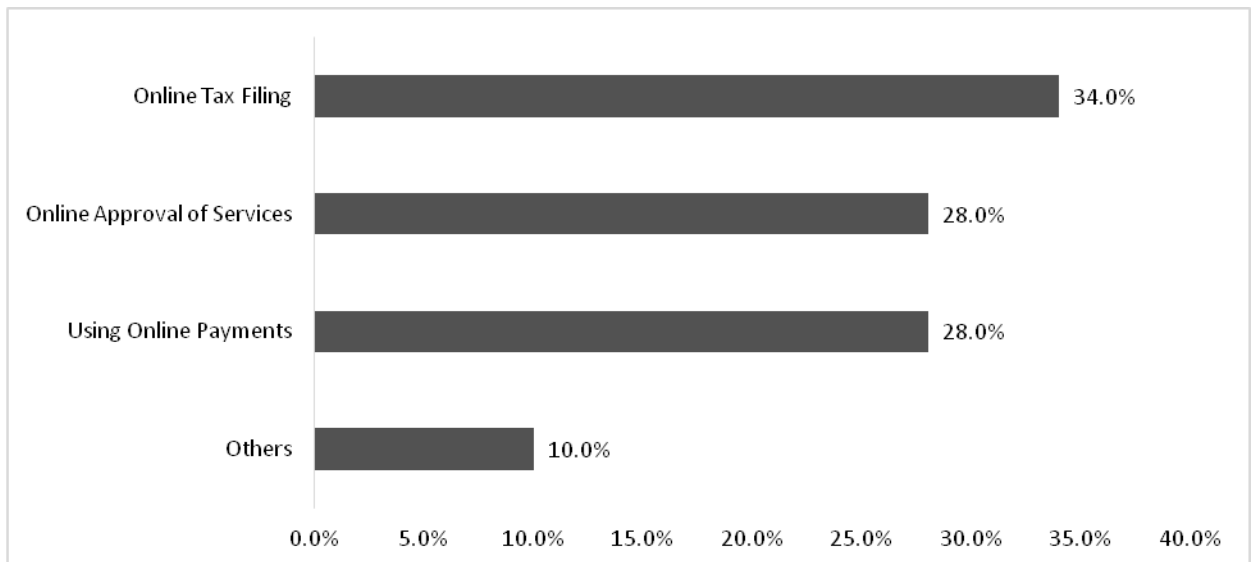


Figure 10: e-Government Training

#### 4.4. E-Governance Scoring

In total, eight questions were used to assess the e-Government. Table 4 presents the summary of the findings, which are presented in percentages, means and averages.

According to the analysis and focusing on the means, the eight statements had an average mean of slightly above 3.0, and none of the statements had less than that. The statement on “How would you recommend the expansion of e-governance in service delivery in Siaya County?” received the highest average score of 4.03 (SD: 1.0). These findings indicate that the main position of respondents understands how the e-Government works, in addition they utilized the e-Government largely.

**Table 7: e-Government Experience and Work Department**

| <b>E-Governance</b>   | <b>Not at all</b> | <b>Little Extent</b> | <b>Moderate</b> | <b>Great Extent</b> | <b>Very Great Extent</b> | <i>Mean</i> | <i>Standard Deviation</i> |
|---|-------------------|----------------------|-----------------|---------------------|--------------------------|-------------|---------------------------|
| What is your understanding on how e-government works?   | 5.6%              | 5.6%                 | 36.6%           | 39.4%               | 12.7%                    | 3.48        | 0.98                      |
| To what degree do you use e-governance?   | 7.0%              | 11.3%                | 35.2%           | 31.0%               | 15.5%                    | 3.37        | 1.09                      |
| To what extent has integration of e-governance in the public sector of Siaya County Government reduced the cost-of-service delivery.                          | 4.2%              | 18.3%                | 29.6%           | 36.6%               | 11.3%                    | 3.32        | 1.04                      |
| To what degree do you believe Ifmis software system in County Government has restored accountability of the treasury, accounting and procurement departments? | 7.0%              | 16.9%                | 25.4%           | 39.4%               | 9.9%                     | 3.30        | 1.08                      |
| To what degree do you believe that Ifmis software system has  | 2.8%              | 16.9%                | 35.2%           | 33.8%               | 11.3%                    | 3.34        | 0.96                      |

|  |      |       |       |       |       |      |      |
|--|------|-------|-------|-------|-------|------|------|
| improved effectiveness and efficiency in Siaya County?   |      |       |       |       |       |      |      |
| In your opinion, to what level has e-governance improved service efficiency in Siaya County?         | 2.8% | 16.9% | 31.0% | 38.0% | 11.3% | 3.38 | 0.99 |
| How has integration of e-governance influenced the service effectiveness in Siaya County Government? | 1.4% | 19.7% | 38.0% | 33.8% | 7.0%  | 3.25 | 0.91 |
| How would you recommend the expansion of e-governance in service delivery in Siaya County?           | 4.2% | 1.4%  | 18.3% | 39.4% | 36.6% | 4.03 | 1.00 |

*Source: Survey Data*

#### **4.5. Performance Expectancy**

In total, nine questions were used to assess the performance expectancy and Table 5 presents the summary of the findings, which are presented in percentages, means and averages.

The analysis of the finding indicated that of the nine statement considered under performance expectancy, eight of them received a mean score of above three indicate of the respondents agreeing to some extent on the statement. However, the statement on “Has e-governance reduced the level of corruption?” recorded the mean score of 2.99 (SD: 1.10) which would be considered moderate

**Table 8: Performance Expectancy**

| <b>E-Governance</b>   | <b>Not at all</b> | <b>Little Extent</b> | <b>Moderate</b> | <b>Great Extent</b> | <b>Very Great Extent</b> | <i>Mean</i> | <i>Standard Deviation</i> |
|---|-------------------|----------------------|-----------------|---------------------|--------------------------|-------------|---------------------------|
| To what degree do you believe that e-governance has helped in service delivery in Siaya County? | 2.8%              | 11.3%                | 38.0%           | 39.4%               | 8.5%                     | 3.39        | 0.90                      |
| What is the rate of your satisfaction with delivery of e-governance system?                     | 1.4%              | 16.9%                | 39.4%           | 32.4%               | 9.9%                     | 3.32        | 0.92                      |
| In your opinion, how do you believe e-governance has increased efficiency in service delivery?  | 2.8%              | 14.1%                | 35.2%           | 36.6%               | 11.3%                    | 3.39        | 0.96                      |
| To what degree has e-governance increased the quality-of-service delivery in Siaya County?      | 2.8%              | 19.7%                | 29.6%           | 38.0%               | 9.9%                     | 3.32        | 0.99                      |
| Rate the helpfulness of e-governance in enhancing effectiveness in public service delivery.     | 1.4%              | 18.3%                | 29.6%           | 31.0%               | 19.7%                    | 3.49        | 1.05                      |

|   |      |       |       |       |      |      |      |
|---|------|-------|-------|-------|------|------|------|
| To what degree has e-governance improved communication among the county stakeholders? | 4.2% | 12.7% | 35.2% | 38.0% | 9.9% | 3.37 | 0.97 |
| Has e-governance reduced the level of corruption?                                     | 8.5% | 25.4% | 35.2% | 21.1% | 9.9% | 2.99 | 1.10 |
| How easy is it to use the e-governance service portals or websites?                   | 5.6% | 15.5% | 35.2% | 33.8% | 9.9% | 3.27 | 1.02 |
| To what degree does e-governance enhance performance?                                 | 2.8% | 11.3% | 35.2% | 42.3% | 8.5% | 3.42 | 0.90 |

*Source: Survey Data*

#### **4.6. Effort Expectancy**

In total, five statements were used to assess the effort expectancy and Table 6 presents the summary of the findings, which are presented in percentages, means and averages.

The findings indicate that all the statements below recorded a mean score of above 3.00 and hence to a good extent the respondents agreed with the statements. The statement which had the highest mean score was “*to what extent do you feel safe to use e-governance platform to access and receive county services?*” which received a mean score of 3.48 (SD: 1.02). On the other hand, the statement which recorded the lowest mean score was “*To what extent is the information about the Siaya County on the e-government platform updated and reliable for use?*” which had a mean score of 3.13 (SD: 0.97) which was still above the 3.00 score for moderate.

**Table 9: Performance Expectancy**

| <b>E-Governance</b>   | <b>Not at all</b> | <b>Little Extent</b> | <b>Moderate</b> | <b>Great Extent</b> | <b>Very Great Extent</b> | <i>Mean</i> | <i>Standard Deviation</i> |
|---|-------------------|----------------------|-----------------|---------------------|--------------------------|-------------|---------------------------|
| To what degree are the e-governance platforms easy to use in Siaya County?  | 4.2%              | 16.9%                | 31.0%           | 38.0%               | 9.9%                     | 3.32        | 1.01                      |
| To what degree have benefitted from the Siaya County e-governance system to deliver or receive public service?                      | 5.6%              | 8.5%                 | 40.8%           | 32.4%               | 12.7%                    | 3.38        | 1.00                      |
| How easy is information about the county government of Siaya, and opportunities available on the respective e-government platforms? | 4.2%              | 9.9%                 | 43.7%           | 31.0%               | 11.3%                    | 3.35        | 0.95                      |
| To what degree is the information about the Siaya County on the e-government platform updated and reliable for use?                 | 2.8%              | 23.9%                | 39.4%           | 25.4%               | 8.5%                     | 3.13        | 0.97                      |
| To what degree do you   | 4.2%              | 9.9%                 | 36.6%           | 32.4%               | 16.9%                    | 3.48        | 1.02                      |

|   |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
| feel safe to use e-governance platform to access and receive county services? |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|

*Source: Survey Data*

#### **4.7. Social Influence**

In total, eight statements were used to assess the social influence and Table 7 presents the summary of the findings, which are presented in percentages, means and averages.

The analysis indicates that the average mean score varied by statement. Of the eight statement presented in the table below, six had a mean score of more than three indicative of some extent of agreement with the statement. On the other hand, two statements had a mean score of between 2.0 and 3.0 indicative of some little extent of agreement with the statements.

**Table 10: Social Influence**

| <b>E-Governance</b>   | <b>Not at all</b> | <b>Little Extent</b> | <b>Moderate</b> | <b>Great Extent</b> | <b>Very Great Extent</b> | <i>Mean</i> | <i>Standard Deviation</i> |
|---|-------------------|----------------------|-----------------|---------------------|--------------------------|-------------|---------------------------|
| To what degree do the residents of Siaya County expect to receive services through digital platforms? | 2.8%              | 29.6%                | 25.4%           | 25.4%               | 16.9%                    | 3.24        | 1.14                      |
| To what degree do you expect the residents of Siaya County to use e-                                  | 7.0%              | 16.9%                | 42.3%           | 22.5%               | 11.3%                    | 3.14        | 1.06                      |

|  |       |       |       |       |       |      |      |
|--|-------|-------|-------|-------|-------|------|------|
| government platforms efficiently?  |       |       |       |       |       |      |      |
| What is the current rate of use of e-government platforms among the residents of Siaya County?   | 8.5%  | 22.5% | 45.1% | 15.5% | 8.5%  | 2.93 | 1.03 |
| To what degree do the Siaya County residents believe that e-governance improves quality, effectiveness and efficiency of services offered by the county? | 7.0%  | 18.3% | 47.9% | 21.1% | 5.6%  | 3.00 | 0.95 |
| To what degree has your colleagues influenced the rate of use of digital platforms to access county government services?                                 | 1.4%  | 19.7% | 33.8% | 35.2% | 9.9%  | 3.32 | 0.95 |
| To what degree have you influenced the rate of use of digital platforms to access county government services by your friends and associates.             | 2.8%  | 15.5% | 35.2% | 33.8% | 12.7% | 3.38 | 0.99 |
| How frequent does the county government  | 25.4% | 23.9% | 31.0% | 11.3% | 8.5%  | 2.54 | 1.22 |

|   |      |       |       |       |       |      |      |
|---|------|-------|-------|-------|-------|------|------|
| train residents and employees on how to use the digital platforms for easy and convenient access of services? |      |       |       |       |       |      |      |
| How does culture of change and work ethics promote the adoption of e-governance system in Siaya County?       | 4.2% | 23.9% | 33.8% | 26.8% | 11.3% | 3.17 | 1.05 |

*Source: Survey Data*

#### **4.8. Facilitating Conditions**

In total, six statements were used to assess the facilitating conditions and Table 8 presents the summary of the findings, which are presented in percentages, means and averages. Of the six statement under this contract, five had a mean score of above 3.0, and only one had a mean score of between 2.0 and 3.0.

The statement which had the highest mean score was “*To what extent do you have skills and resources (smartphone, laptop, tablet, internet connection, skills) to access and use the digital platforms?*” which had a mean score of 3.58 (SD: 1.00). On the other hand, the statement which had the lowest mean score was “*To what extent has, enforcement and policies affected the adoption and use of digital platforms in service delivery*” whose mean score was 2.97 (SD: 0.91)

**Table 11: Social Influence**

| <b>E-Governance</b> | <b>Not at all</b> | <b>Little Extent</b> | <b>Moderate</b> | <b>Great Extent</b> | <b>Very Great Exten</b> | <b>Mean</b> | <b>Standard Deviation</b> |
|---------------------|-------------------|----------------------|-----------------|---------------------|-------------------------|-------------|---------------------------|
|---------------------|-------------------|----------------------|-----------------|---------------------|-------------------------|-------------|---------------------------|

|   |      |       |       |       | t     |      |      |
|---|------|-------|-------|-------|-------|------|------|
| What is the level of I.T infrastructure preparedness in Siaya County for the adoption of e-government system?   | 5.6% | 14.1% | 49.3% | 22.5% | 8.5%  | 3.14 | 0.96 |
| To what degree has the existing I.T networks promoted faster and quicker delivery, and access of e-government services in all parts of Siaya County including the remote areas? | 7.0% | 21.1% | 43.7% | 19.7% | 8.5%  | 3.01 | 1.02 |
| To what degree do you have skills and resources (smartphone, laptop, tablet, internet connection, skills) to access and use the digital platforms?                              | 4.2% | 11.3% | 21.1% | 49.3% | 14.1% | 3.58 | 1.00 |
| To what degree do you believe the adoption of e-governance in Siaya County has enhanced accountability of public service delivery?  | 5.6% | 16.9% | 50.7% | 19.7% | 7.0%  | 3.06 | 0.93 |
| To what degree has training of county   | 2.8% | 19.7% | 43.7% | 28.2% | 5.6%  | 3.14 | 0.89 |

|  |      |       |       |       |      |      |      |
|--|------|-------|-------|-------|------|------|------|
| officials and the public impacted adoption and use of e-government platforms?  |      |       |       |       |      |      |      |
| To what degree has, enforcement and policies affected the adoption and use of digital platforms in service delivery. | 4.2% | 23.9% | 47.3% | 18.3% | 5.6% | 2.97 | 0.91 |

*Source: Survey Data*

#### **4.9. Reliability Analysis**

Reliability analysis is a measure of consistency and stability of the objects that are used to define a scale. It is the degree to which an instrument would give similar results for the same individuals at different time points. To measure reliability analysis for Likert-scale data, the Cronbach’s Alpha is used. This is a statistic, which is used to measure reliability or the internal consistency.

The value of alpha may lie between 0 and 1 with a value of 0.7 being considered the threshold. The following are the proposed thresholds: 0.9 – 1.0 –Excellent, 0.8 - <0.9 – Good, 0.7 - <0.8 – Acceptable, 0.6 - < 0.7 – Questionable, 0.5 - < 0.6 – Poor, >0.5 – Unacceptable

**Table 12: Reliability Analysis**

| <b>Section</b>         | <b>Reliability Analysis</b> | <b>Number of Items</b> | <b>Classification</b> |
|------------------------|-----------------------------|------------------------|-----------------------|
| E-Governance           | 0.893                       | 8                      | Good                  |
| Performance Expectancy | 0.877                       | 9                      | Good                  |

|                         |       |   |           |
|-------------------------|-------|---|-----------|
| Effort Expectancy       | 0.906 | 5 | Excellent |
| Social Influence        | 0.894 | 8 | Good      |
| Facilitating Conditions | 0.809 | 6 | Good      |

*Source: Survey Data*

Based on the results of the reliability analysis as presented in Table 9 above, it was then concluded that tool had high internal consistency and hence reliable for the survey, implying that the tool was able to measure the constructs as intended to measure. With this conclusion, the factor analysis has been applied to develop the contracts as presented in the next section

#### **4.10. Factor Analysis**

This is a statistical technique used to recognize primary variables, or factors, that clarify patterns of connections with a set of experiential variables. Factor analysis is usually utilized in data reduction to identify a lesser amount of factors that give meaning to most of the variance seen in a much grander number of evident variables. Since there were thirty-six variables in this survey, this analysis had to be utilized to condense all factors. Dwivedi et al. (2006) suggested using this analysis so as to endorse convergent and discriminant validity beneath concept validity. Beforehand putting information through factor analysis, Kaiser-Meyer-Olkin (KMO) plus Bartlett's Test of Sphericity was undertaken.

The KMO evaluation is utilized to understand if info ought to be imperilled to factor analysis. In deciding if information ought to be exposed to factor analysis, KMO Statistics ought to be greater than 0.5; however, the following thresholds have been proposed by Dwivedi et al. (2006): 0.9 to 1.0 is considered "perfect", 0.7 to 0.8 is considered "very good", 0.6 to 0.7 is considered "average", 0.5 to 0.6 is considered "bad" while below 0.5 is considered "unacceptable". In this data, the KMO statistic was estimated 0.860, which was classified as "perfect", and hence factor analysis was applicable as presented in Table 10.

Further, the Bartlett’s Test of Sphericity was conducted, and the statistic was used to test for the correlation matrix was an individuality matrix, this hence found the factor model to be unsuitable. Factor analysis can only be useful when, there is a form of relationships between variables, plus if the R-matrix happen to be an identity matrix, at that point, entirely the correlation coefficients should be zero. For the research, Bartlett’s Test of Sphericity happened to be important; and for that reason, the related p-value was 0.000. According to Yil and Yil (2009), if the Bartlett’s test is significant, the factor model was suitable, and hence means that the correlation matrix may not have been an identity matrix and hence the factor analysis was suitable. The table below presents results of the KMO and Bartlett’s Test:

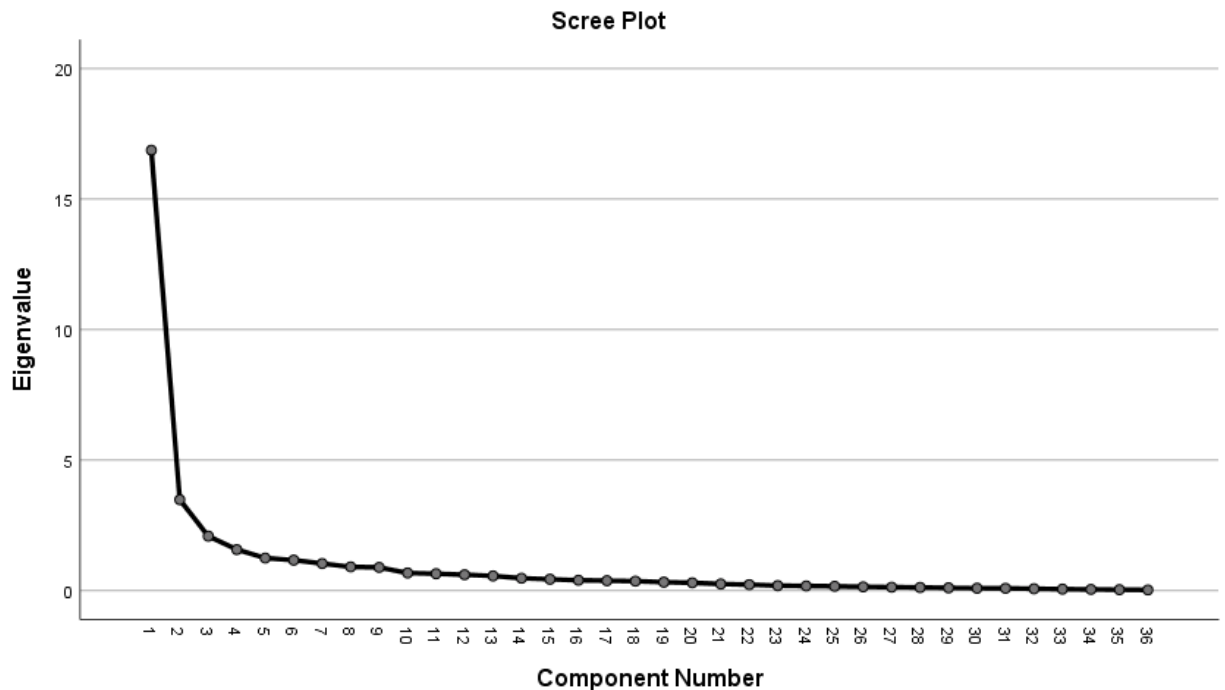
**Table 13: KMO and Bartlett’s Test**

|  |                    |          |
|--|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | 0.860    |
| Bartlett's Test of Sphericity                    | Approx. Chi-Square | 2303.592 |
|  | df                 | 630      |
|  | Sig.               | 0.000    |

*Source: Survey Data*

Since the results of the KMO and the Berlet statistics turned positive, then factor analysis was conducted on thirty-six variables since the variables were believed to have a relationship with the construct they proposed to measure. The apparent concepts were gotten within connected writings. Factor analysis expending main constituent analysis was piloted so as to decrease information and to progress the convergent validity of important concepts shown in chapter three (3). By means of controlling quantity for factors utilized, the co-variance of the variables was calculated. After that, the Eigen value and Eigen vectors were assessed for the variance co-variance matrix plus the information had to be altered into factors. Additionally, the factor marks, obtained from the factor analysis, had to be utilized to reach the variables to be encompassed within regression activities.

To determine all total number of factors to be retained and consequently to be used for the regression analysis, the scree plot and Kaiser Varimax rotation methods were used. Using the scree plot method, Kaiser (1959) suggested retaining the number of factors equivalent to the spot where the scree plot takes the elbow shape. The resultant screen plot (figure below) advocates about five significant factors – and henceforth five factors were reserved.



**Figure 11: Scree Plot**

Further, the Kaiser Varimax rotation scheme had been applied to assess factor loadings correlating the factors in addition to the variables. The rotated factor matrix of the five-factor model had to be produced. The factor loadings were made usage of to group the factors on the basis of factor loadings for the individual variables, indicated: Adoption of Adoption of e-Government (Factor 1); Performance Expectancy (Factor 2); Effort Expectancy (Factor 3); Social Influence (Factor 4) and Facilitating Conditions. The factors obtained through the Factor Analysis were utilized in making the association amid Employee Engagement plus the independent variables.

#### 4.11. Regression Analysis

Multiple Regression Model, a statistical method, that permits the forecasting of response variable founded through set of independent variables. This is a technique for learning the association amid the dependent variable and two or more independent variables. In this research, regression analysis was done between the adoption of e-Government and four dependent variables. The model used is found below:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \mathcal{E}$$

Where:

Y is the dependent variable (Adoption of e-Government)

X is the set of four independent variables described in the previous paragraph i.e.

X<sub>1</sub> - Performance Expectancy

X<sub>2</sub> - Effort Expectancy

X<sub>3</sub> – Social Influence

X<sub>4</sub> - Facilitating Conditions

$\beta_i$  ( $i=1,2,3,4$ ) are the parameters associated with the corresponding independent variable which are to be estimated (partial regression coefficients)

$\beta_0$  is the intercept

$\mathcal{E}$  is the error variability (error term)

The table below presents the results of the regression model based on the univariate analysis.

#### 4.11.1 Univariate Regression Model

Univariate analysis means developing a stand-alone model for each of the independent variable against the dependent variables. The table below presents the results of results of the univariate regression mode and includes the standard error, the t-statistic and the p-values. The p-values were used to make the conclusion whether the independent variables were significantly related with the team performance. The significance was tested at the 5 percent level of significance

The results of univariate regression model imply that when considered independently, each of the four independent variable was significantly associated with the dependent variable. That is, performance expectancy was significantly associated with the adoption of the e-Government ( $t=13.934$ ,  $p=0.000$ ), and based on the coefficient, a unit increase in performance expectancy increases the adoption of e-Government by 1.194 units ( $t=1.194$ ,  $p=0.000$ ). Further, a unit increase in effort expectancy, increases the adoption of e-Government by 1.114 units ( $t=6.564$ ,  $p=0.000$ ), while a unit increase in social influence increases the adoption of e-Government by 2.164 units ( $t=4.574$ ,  $p=0.000$ ). Finally, a unit increase in facilitating condition increases adoption of e-Government by 1.272 units ( $t=5.148$ ,  $p=0.000$ )

**Table 14: Regression Analysis – Univariate Model**

| Variables               | $\beta$ | SE    | t-statistic | p-value |
|-------------------------|---------|-------|-------------|---------|
| Performance Expectancy  | 1.194   | 0.06  | 13.934      | 0.000** |
| Effort Expectancy       | 1.114   | 0.137 | 6.564       | 0.000** |
| Social Influence        | 2.164   | 0.101 | 4.574       | 0.000** |
| Facilitating Conditions | 1.272   | 0.153 | 5.148       | 0.000** |

\*\* Significant at 5 percent level of significance

Performance expectancy was significantly associated with the adoption of the e-Government ( $t=13.934$ ,  $p=0.000$ ) this result was supported by (Davis ,1989; Venkatesh et al 2003) who established that success rate of a new technology adoption in firms and

companies is high, and technologies bring about expected return on investment i.e. improved performance and profitability.

The effort expectancy was found to be significantly impacting e - government adoption ( $t=6.564$ ,  $p=0.000$ ), (Venkatesh et al 2003) defines effort expectancy as the degree of ease associated with use of a system.

The Social Influence was also found to significantly impact adoption and usage of e-government ( $t=4.574$ ,  $p=0.000$ ). Social influence refers to "individuals' perception that those significant to them think he or she ought to or not engage in or act in away or engage in a behaviour in question" (Fishbein and Ajzen, 1975).

The facilitating conditions was found to be significantly impacting adoption of e-government ( $t=5.148$ ,  $p=0.000$ ) and this became the extent to which a person trusts that an organisation plus the mechanical substructure are available to support the utilization of the systems (Venkatesh et all 2003)

#### **4.11.2. Multivariate Regression Model**

Multivariate regression is a technique that estimates a single regression model with more than one outcome variable. In this case, the four independent variables are considered jointly in the model to estimate their influence on the adoption of the e-Government when controlling for each of the independent variable. Further, other confounding variables like age, sex and education have been entered in the multivariate model to estimate their influence on the adoption of the e-Government

The table below presents the results of results of the multivariate regression mode and includes the estimated coefficient for the model, the standard error, the t-statistic and the p-values. Just like in the univariate regression model, the p-values were used to make the conclusion whether the independent variables and other confounding factors were significantly related with the team performance. The significance was tested at 5 percent level of significance

The results presented in the table below indicate that of the four independent variables, performance expectancy, effort expectancy and social influence were all significantly associated with adoption of e-Government when considered together, and confounding factors have been considered. Specifically, the results indicate that a unit increase in performance expectancy increases the adoption of e-Government by 1.153 units ( $t=9.060$ ,  $p=0.012$ ). Similarly, a unit increase in effort expectancy leads to increased adoption of e-Government by 2.941 units ( $t=4.276$ ,  $p=0.000$ ) and a unit increase in social influence increases adoption of e-Government by 1.219 units ( $t=3.117$ ,  $p=0.010$ ).

**Table 15: Regression Analysis – Multivariate Model**

| Variables               | $\beta$ | SE    | t-statistic | p-value |
|-------------------------|---------|-------|-------------|---------|
| Performance Expectancy  | 1.153   | 0.126 | 9.060       | 0.012** |
| Effort Expectancy       | 2.941   | 0.093 | 4.276       | 0.000** |
| Social Influence        | 1.219   | 0.111 | 3.117       | 0.010** |
| Facilitating Conditions | 1.008   | 1.179 | 1.612       | 0.128   |
| Age                     | 1.389   | 1.519 | 1.079       | 0.907   |
| Sex                     | 1.351   | 1.428 | 0.654       | 0.285   |
| Education Level         | 1.176   | 1.821 | 0.769       | 0.516   |
| Constant                | 2.277   | 1.590 | 4.439       | 0.040** |

\*\* Significant at 5 percent level of significance

In the study all variables of facilitating conditions ( $p=0.128$ ), age ( $p=0.907$ ), sex ( $p=0.285$ ), education level ( $p=0.516$ ) had p-values of more than 0.05. This enables conclusion that the variables were significantly related to the e-governance adoption.

The overall model significant was tested using the Fishers Statistic, and the results indicate that the model was significant at 5 percent level of significance ( $F=27.437$ ,  $p=0.000$ ). Further, R-Square was used to test the strength of the model and the results indicate an R-Squared of 0.753 implying that 75.3 percent of the variation of the adoption

of the e-Government can be explained by the dependent variables, which were included in the model.

**Table 16: Fishers Statistic**

| Model            |            | Sum of Squares | df | Mean Square | F      | p-value |
|------------------|------------|----------------|----|-------------|--------|---------|
| 1                | Regression | 1981.629       | 7  | 283.090     | 27.437 | 0.000** |
|                  | Residual   | 650.033        | 63 | 10.318      |        |         |
|                  | Total      | 2631.662       | 70 |             |        |         |
| R Square = 0.753 |            |                |    |             |        |         |

\*\* Significant at 5 percent level of significance

#### 4.12. Correlation Analysis

Correlation analysis is a statistical procedure that is used to quantify the association between two variables i.e. dependent and independent variables. In this study correlation analysis was used to determine the level of association between *adoption of e-Government*, which was the independent variable and the dependent variables. The following were the results of the correlation analysis:

This outcomes of correlation analysis designated the fact that all the variables had an encouraging relationship with acceptance and implementation of the e-Government that is, an improvement in either of the variable leads to the improvement of the adoption of the e-Government. For instance, when performance expectancy improves, the team performance also improves. Similarly, an improvement in dependent Variables also leads to an improvement in the adoption of the e-Government. Performance expectant had the strongest association with the adoption of the e-Government ( $\alpha=0.859$ ,  $p=0.000$ ). The

results of the correlation analysis reflect the findings recorded through the univariate regression model

**Table 17: Correlation Analysis**

| <b>Adoption of e-Government</b> | <b>Pearson Correlation (<math>\alpha</math>)</b> | <b>p-value</b> |
|---------------------------------|--|----------------|
| Performance Expectancy          | 0.859  | 0.000          |
| Effort Expectancy               | 0.620  | 0.000          |
| Social Influence                | 0.482  | 0.000          |
| Facilitating Conditions         | 0.527  | 0.000          |

*\*\* Significant at 5 percent level of significance*

## **CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.0. Introduction**

The Section offers the summary of the finding, conclusion and recommendation of the research. The summary of main outcomes, conclusion and recommendations are instituted on the discoveries of the research.

The chapter is divided into three (4) sections: Summary, Conclusions, Recommendations and Recommendation for further research.

### **5.1. Summary**

The response rate of 66 percent for this study was estimated was considered sufficient to allow for statistical analysis of the collected data and make meaningful conclusion (Gendall (2000), Schmid et al. (2012).

There existed no significant disparity on sex of respondents, with masculine and feminine being equally represented in the sample. However, on age, the majority (68 percent) of the respondents interviewed stood at ages between 25 to 45. The study further established that nearly 70 percent of the respondent had a minimum of a university degree, indicative of a highly trained work force. Three departments were represented in the study, with nearly 46 percent being from the IFMIS department, and the rest from GHRIS and IPPD

The outcomes of the research indicated that a great number of the interviewed staff were accessing e-Government through the office computers, although it is important noting that there was an estimated 12

percent who accessed the systems through their home computers or cybercafé. The experience with the e-Government was mainly satisfactory with no significant variation across the three department.

The outcomes of the study exposed that approximately 37 out of a hundred of the staff had not been trained on the e-Government System, with a significant variation across the three departments. According to the results, nearly eight in ten staff working in the IFMIS had been trained on the e-Government System, while only half of the staff working in the GHRIS department had been trained. The main areas of training on the e-Government System were online tax filling, online approval of services and using online payments in that order.

Univariate regression analysis showed that all four dependent variables, were all significantly associated with adoption of e-Government. The relationship established by the univariate model was positive, indicating that adoption of e-Government was directly proportional to each of the four independent variables.

However, to control for confounding factors, a multiple regression model was fitted on the data. Based on this model, the outcomes showed that of the four dependent variables, were all significantly associated with adoption of e-Government when considered together, and confounding factors have been considered. Similar to the univariate model, the direction of relationship was positive indicating that adoption of e-Government was positively associated with the three independent variables. These results were further confirmed by the correlation analysis results which mirrored the results of the regression model

## **5.2. Conclusion**

As we finish, verdicts of this research clearly indicates that dependent

Variable in this paper had substantial optimistic influence going on with acceptance of e-government amenities within the Countries' devolved units of Administration.

It hence indicated and showed the fact that persons and firms (especially businesses) should be motivated to embrace e-government to advance performance in delivery of facilities, easiness of utilization of the local authorities structures plus amenities, whereas in the same moment, trust that the age mates and age sets plus coworkers expect all to utilize e-government.

In equal measure, facilitating conditions like faster online infrastructure, software platforms and computer systems, training, re-training and development for capability enhancement must be put within position, in addition to improvement recurrently because facilitating conditions had robust affirmative influence with implementation of e-government facilities.

Results and outcomes of the research enumerated the fact that UTAUT was valid model and was indispensable in this paper and research entailing implementation of e-government amongst the third (3) world nations, plus within the local systems of administration in Kenya. In this case, the usage of UTAUT as the main theoretical framework on this paper or research enabled testing of the four (4) dependent Variables, which showed statistical importance in e-government implementation and acceptance.

### **5.3. Recommendations**

#### **5.3.1. Further Areas for Policy and Practice**

Subsequent section indicates further areas for policy and practice on the basis of outcomes of this research:

- I. For the performance prospects, Siaya County Government should augment competence and effectiveness in distribution of amenities, value in filing plus expressing e-government amenities, plus guaranteeing superiority of e-government amenities to be explained beforehand, rolling out the e-government amenities to be implemented and operationalised. Monitoring and evaluation of all activities involving e – government services being offered must be carried to mitigate risks.
- II. For effort expectation, Siaya County Government should institute digitalized small shops in its locality and its towns, in which inhabitants and the populace will be educated in many areas and aspects on the components of e-government facilities plus in which manner they able to access and rightly use the government facilities. It will heighten the usage and will enhance acceptability and implementation degree of e-government facilities.
- III. For the social influence, Siaya government need to outline very important and prominent individuals amongst its employees or its bureaucrats, its commercial segment, in addition to the local public whom will and have the ability to champion the usage of e-government facilities. Civilisations, age mates and age sets tend to copy or to follow philosophies pressed by individuals they have reverence for, admire plus aim to be like.
- IV. Lastly for facilitating conditions, Siaya County Government should

guarantee the availability of passable ICT infrastructure in all its locality. This to include Wide Area Networks, Wifi Hot Spots, and Small Digitalized shops. The Siaya County government should ensure openness and answerability in e-government facilities by way of handing clients e-transaction receipts, correspondents logs, plus apt response. For this reason, confidence will be increased among citizens, accountability and openness with e-governance structure boosted, and also create trustworthiness that will enhance more acceptance and implementation of e-government facilities.

### **5.3.2. Recommendation for Further Research**

The research work had been restricted to usage of UTAUT as a theoretical framework. Its dependent variables had also been restricted to only four variables, Likewise, the research modifying variables had also been restricted to sex, age, skill in addition to voluntary of usage. The variables mentioned above cannot be comprehensive in investigating implementation and acceptance of e- governance.

Auxiliary research ought to embrace UTAUT model, nevertheless apply party-political temperatures, Management and following, degree of education plus other modifying dynamics to study implantation and acceptance of e- government facilities in the public segment, Kenya.

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**APPENDICES**

**QUESTIONNAIRE**

As part of my Master in Public Policy Administration Research Project at Kenyatta University, Nairobi, I Gloria Amondi Miganda, intends to conduct a survey that investigates the *Impact of Integrated E-Government in Public Service; Case of Siaya County Government*. I will appreciate if you could complete the following questionnaire and make additional comments if need be.

Any information obtained in connection with this study that can be identified with you will remain confidential.

**SECTION A: RESPONDENT DETAILS;**

**Name**

(Optional).....

**Age** (Tick) 18-25(...) 25-35(...) 35-45(...) 45-55(...) 55-60(...)

**Gender** (Tick) Male (...) Female (...)

**Department** (Tick) IFMIS (...) GHRIS (...) IPPD (...)

What is your highest level of education?

High school (...) College (...) University (...) Post Graduate (...)

Please indicate the method you used to access e-governance provided by County Government Siaya

Home Computer (...) Office Computer (...) Mobile Phone (...) Cyber Café (...) Table (...)

What is your level of experience with e-governance?

- A. Very Good Experience
- B. Good experience
- C. Moderate experience
- D. Little experience
- E. Very little

Have you ever been trained on how to access government services using e-governance?

- A. Yes (...)
- B. No (...)

If your answer above is yes, please indicate the training you received.

- A. Online tax filing
- B. Online approval for services
- C. Using online payment
- D. Other

specify

.....  
 .....

**RESEARCH QUESTIONS;**

**Please respond to the following questions on a scale of 1-5, where 1 is the least rating and 5 is the maximum (5-Very great extent, 4- Great extent, 3- Moderate, 2- Little extent, 1- Not at all).**

| <b>SECTION B: E-Governance</b>   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
| 1. What is your understanding on how e-government works?   |          |          |          |          |          |
| 2. To what extent do you use e-governance?   |          |          |          |          |          |
| 3. To what extent has integration of e-governance in the public sector of Siaya County Government reduced the cost-of-service delivery.                          |          |          |          |          |          |
| 4. To what extent do you believe Ifmis software system in County Government has restored accountability of the treasury, accounting and procurement departments? |          |          |          |          |          |
| 5. To what extent do you believe that Ifmis software system has improved effectiveness and efficiency in Siaya County?   |          |          |          |          |          |
| 6. In your opinion, to what level has e-governance improved service efficiency in Siaya County?  |          |          |          |          |          |
| 7. How has integration of e-governance influenced the service effectiveness in Siaya County Government?  |          |          |          |          |          |
| 8. How would you recommend the expansion of e-governance in service delivery in Siaya County?  |          |          |          |          |          |
| <b>SECTION C: Performance Expectancy</b>   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
| 9. To what extent do you believe that e-governance has helped  |          |          |          |          |          |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| in service delivery in Siaya County?   |  |  |  |  |  |
| 10. What is the rate of your satisfaction with delivery of e-governance system?                    |  |  |  |  |  |
| 11. In your opinion, how do you believe e-governance has increased efficiency in service delivery? |  |  |  |  |  |
| 12. To what extent has e-governance increased the quality-of-service delivery in Siaya County?     |  |  |  |  |  |
| 13. Rate the helpfulness of e-governance in enhancing effectiveness in public service delivery.    |  |  |  |  |  |
| 14. To what extent has e-governance improved communication among the county stakeholders?          |  |  |  |  |  |
| 15. Has e-governance reduced the level of corruption?  |  |  |  |  |  |
| 16. How easy is it to use the e-governance service portals or websites?                            |  |  |  |  |  |
| 17. To what extent does e-governance enhance performance?  |  |  |  |  |  |

| <b>SECTION D: Effort Expectancy</b>   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|---|----------|----------|----------|----------|----------|
| 18. To what extent are the e-governance platforms easy to use in Siaya County?  |          |          |          |          |          |
| 19. To what extent have benefitted from the Siaya County e-governance system to deliver or receive public service?                      |          |          |          |          |          |
| 20. How easy is information about the county government of Siaya, and opportunities available on the respective e-government platforms? |          |          |          |          |          |
| 21. To what extent is the information about the Siaya County on the e-government platform updated and reliable for use?                 |          |          |          |          |          |
| 22. To what extent do you feel safe to use e-governance platform to access and receive county services?                                 |          |          |          |          |          |
| <b>SECTION F: Social Influence</b>  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
| 23. To what extent do the residents of Siaya County expect to   |          |          |          |          |          |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| receive services through digital platforms?   |   |   |   |   |   |
| 24. To what extent do you expect the residents of Siaya County to use e-government platforms efficiently?   |   |   |   |   |   |
| 25. What is the current rate of use of e-government platforms among the residents of Siaya County?  |   |   |   |   |   |
| 26. To what extent do the Siaya County residents believe that e-governance improves quality, effectiveness and efficiency of services offered by the county?                    |   |   |   |   |   |
| 27. To what extent has your colleagues influenced the rate of use of digital platforms to access county government services?  |   |   |   |   |   |
| 28. To what extent have you influenced the rate of use of digital platforms to access county government services by your friends and associates.                                |   |   |   |   |   |
| 29. How frequent does the county government train residents and employees on how to use the digital platforms for easy and convenient access of services?                       |   |   |   |   |   |
| 30. How does culture of change and work ethics promote the adoption of e-governance system in Siaya County?   |   |   |   |   |   |
| <b>Facilitating Conditions</b>  | 1 | 2 | 3 | 4 | 5 |
| 31. What is the level of I.T infrastructure preparedness in Siaya County for the adoption of e-government system?   |   |   |   |   |   |
| To what extent has the existing I.T networks promoted faster and quicker delivery, and access of e-government services in all parts of Siaya County including the remote areas? |   |   |   |   |   |
| 32. To what extent do you have skills and resources (smartphone, laptop, tablet, internet connection, skills) to access and use the digital platforms?                          |   |   |   |   |   |
| 33. To what extent do you believe the adoption of e-governance in Siaya County has enhanced accountability of public  |   |   |   |   |   |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| service delivery?  |  |  |  |  |  |
| 34. To what extent has training of county officials and the public impacted adoption and use of e-government platforms?  |  |  |  |  |  |
| 35. To what extent has, enforcement and policies affected the adoption and use of digital platforms in service delivery. |  |  |  |  |  |

36. Suggest other ways you think e-governance may benefit Siaya County Government mission of achieving sustainable development and excellence through world class service delivery methods and technology

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37. Which other areas require integration of digital platforms to enhance e-government service and enable the county achieve its vision, core values and mission embodied in its service charter.....

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THANK YOU FOR YOUR TIME &PARTICIPATION