EFFECTS OF E- GOVERNMENT IN SERVICE DELIVERY TO ITS CITIZEN, A CASE OF ELGEYO MARAKWET COUNTY, KENYA

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A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF LAW, ARTS AND SOCIAL SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTERS IN PUBLIC POLICY AND ADMINISTRATION OF KENYATTA UNIVERSITY

NOVEMBER, 2024

DECLARATION

Declaration by the Student

This project is my original work and has not been presented for a degree in any other university.

Signature _____ Date _____

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This project has been submitted for review with my approval as the university supervisor:

Signature _____ Date _____

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DEDICATION

Dedicated to my unwavering commitment to knowledge, to the mentors who illuminated my path, to the challenges that shaped my resilience, and to the support of my loved ones who stood by me through every step.

I also dedicate it to the enduring memory of my beloved father, the Late John Kipse, whose unwavering belief in the power of education continues to inspire me every day. To my dear mother, Elizabeth Kipse, whose tireless efforts ensured that I had the opportunity to pursue knowledge and fulfill my aspirations. Your love, sacrifices, and guidance have shaped the very foundation of this achievement. This project stands as a tribute to your legacy and the values you instilled in me. Though you may not be here to witness its completion, your spirit lives on in every word, every discovery, and every accomplishment. Thank you for believing in me.

This work is a testament to the journey of growth, learning, and discovery. May it inspire others to pursue their passions and strive for excellence

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LIST OF ABBREVIATIONS AND ACRONYMS

ICT	Information and communication Technology
IT	Information Technology
PEOU	Perceived ease-of-use
PU	Perceived usefulness
SADC	Southern African Development Community
SSA	Sub-Saharan Africa
TAM	Technology Acceptance Model
UN	United Nations

OPERATIONAL DEFINITION OF TERMS

Computer and information literacy refers to county government staff and community member's ability to use computers to investigate, create, and communicate in order to participate effectively concerning implementation of electronic governance in Elgeyo Marakwet County, Kenya.

Implementation is the realization of electronic governance in Elgeyo Marakwet County with adoption of innovation technology.

Innovation is the practical implementation of ideas that result in the introduction of electronic governance.

Privacy is the ability of county government to seclude themselves or information about innovation technology, and thereby express themselves selectively on electronic governance.

Technical infrastructure refers to the set of infrastructure equipment needed for hosting and operating the computer and the IT infrastructure during electronic governance.

Technology refers to the application of scientific knowledge for practical purposes, especially in electronic governance.

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ABSTRACT

Technology-based service is now a must for both public and private enterprises in the changing, aggressive economic climate of modern globalized economy. The majority of devolved governments recently implemented e-Government platforms to enhance service delivery. These platforms enable residents, business associates, employees, other organizations and the government to receive information and services more quickly and at a lower cost. Due to the devolution of governmental duties, the County governments now have to deal with a huge debt load from former administrations as well as subpar revenue collection and service delivery methods. The goal of this study was to determine how innovation technology had affected Elgeyo Marakwet County's use of e-government platforms. The following research objectives also served as a guide for the study: to examine the impact of information literacy on that implementation, the impact of computers, the impact of privacy on that implementation, the effect of confidentiality on the adoption of electronic governance and services in Elgeyo Marakwet County, and the effect of technical infrastructure. The study's direction was guided by the Social-Economic View Theory and Technological Acceptance Model. The conclusions of the study were helpful to Elgeyo Marakwet County's leadership and staff by providing them with knowledge about how to oversee and handle E-Government in a manner that will improve service delivery and productivity. Academics and aspiring researchers who wish to understand more about E-Government and use the same findings to pinpoint fresh shortages that can speed up the implementation of legislation also find this study to be helpful. For the investigation, descriptive research was employed. The target population for the study consisted of 479 individuals, including 20 ward administrators, 350 members of the ward planning committee, 7 public engagement officials, 50 county legislatures and executives, 5 communications specialists, 15 members of the IT staff, and 15 public administration officials. To choose study participants from each of the selected components, simple random sampling was employed. 218 respondents made up the sample. Questionnaires were used to collect respondents' information for this study. 22 questionnaires were used in a pilot study by the researcher, who then distributed the results to participants in Uasin Gishu County. The study's goal was to evaluate the validity and dependability of research instruments. Qualitative data were analyzed using the thematic method. Descriptive and inferential statistics were used to analyze the data with the Statistical Package for Social Sciences (SPSS) version 25 frequencies, percentages, mean and standard deviation are all included in descriptive statistics. Multiple regression analysis and inferential correlations are used to determine the change in the dependent variable caused by the independent variables. Charts and tables were used to present the analyzed data. The results of the study were useful to Elgeyo Marakwet County's management and personnel, who acquired understanding of how the county government in their area may successfully adopt and operate electronic government to enhance delivery of services and productivity. This study be valuable to the academicians and future researchers who will like to study E-Government further and, from the same findings, determine further research gaps that can be useful in the furtherance of policies on E-Government s implementation.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In many nations across the world, e-government has gained popularity as a focus of government initiatives (Verkijika and De Wet, 2018). E-government solutions are being developed and implemented by an increasing number of governments worldwide in an effort to improve services, cut costs, free up time, and boost public service productivity and effectiveness. By using ICT as a resource in the workplace, e-government and the Internet have significantly altered the structure, values, culture, and business practices of the entire society.

E-government aims to do more than simply automate antiquated processes on an electronic network, transform paper-based data into digital information, and make that information available online (Rodrigues, Sarabdeen & Balasubramanian, 2016). E-Government describes the use of ICT tools, such as fax machines and wireless Palm Pilots, to automate routine governmental tasks (Simonofski, et al 2017). In order to ensure that residents engage in and are happy with the government process, the government has made a constant commitment to improving the interaction between the private citizen and the public sector through improved, cost-effective services. According to the widely accepted definition, e-Government is simply a network-driven activity that may be expanded to increase public access to knowledge, services, and information (Schnoll, 2015).

To spur the expansion of businesses, information infrastructures like e-Government services have become more integrated and networked with other infrastructures. (Glyptis, Christofi, Vrontis, Del Giudice, Dimitriou & Michael, 2020).

Using ICT in e-Government activities is viewed as a strategic step for innovation, goes this theory. One of the main goals of e-Government has been emphasized as being the faster and more cost-effective delivery of services and information to citizens, partners, professionals, different organizations, and the government (Choi & Chandler, 2020).

E-Government strategies aim to modernize government operations by improving accountability, transparency, and governance (Alenezi, Tarhini, & Sharma, 2015). Realizing these goals necessitates a comprehensive approach that includes technological advancements, organizational change, and human capacity building. This involves providing adequate training and education to all government staff, from top management to frontline workers, to foster a culture of innovation and digital adoption. Strong leadership support is also crucial to drive the e-Government initiative and overcome potential challenges (CP & Susanto, 2019). By investing in human capital and fostering a supportive environment, governments can harness the full potential of e-Government and deliver better public services (Al Shobaki & Abu-Naser, 2017; Iyer & Rao, 2017).

According to a study by Shareef, et al. (2012), Brazil has actively embraced innovation and technology to enhance its electronic governance (e-Gov) initiatives. By leveraging digital technologies, the country has streamlined public services, increased transparency, and improved citizen engagement. Key innovations include the use of digital signatures, online portals for citizen interaction, and mobile applications for accessing government services. These technological advancements have not only made government processes more efficient but have also reduced bureaucratic hurdles and corruption. However, challenges such as digital divide and cybersecurity threats persist. To address these issues, Brazil continues to invest in digital infrastructure, promote

digital literacy, and strengthen cybersecurity measures. By prioritizing innovation and technology, Brazil aims to further solidify its position as a global leader in e-Gov. (Katz & Callorda 2018).

Based on Duhamel and Sandoval-Almazán, (2021). Programs like E-Mexico utilize ICTs to improve government efficiency and citizen participation. Mexico has further integrated innovative technologies into its electronic governance initiatives. Despite challenges like the digital divide, technological advancements have facilitated the creation of online platforms for various government services, such as tax filing, permit applications, and citizen feedback. These digital tools have streamlined processes, reduced bureaucracy, and increased transparency, leading to improved governance in Mexico.

In agreement with Zioło et al (2022). The implementation of e-government initiatives, such as online portals for various government services, has streamlined processes, improved efficiency, and increased transparency in Monaco. It has streamlined government processes, making them more efficient and accessible for both citizens and businesses. Online platforms for various government services have reduced bureaucracy and waiting times, saving time and resources. Monaco has also leveraged innovative technologies to advance its electronic governance. Additionally, e-governance has increased transparency and accountability by providing citizens with easier access to information and opportunities to participate in decision-making processes. (Sofyani, Riyadh & Fahlevi, 2020)). By investing in high-speed internet infrastructure and supporting tech startups, the principality has fostered a thriving digital ecosystem. Furthermore, Monaco's commitment to sustainable development has

led to the adoption of innovative green technologies, solidifying its position as a leader in digital transformation.

As reported by Xu and Dai, (2024), China has harnessed innovation technology to significantly advance its e-governance. By investing heavily in advanced ICT infrastructure, such as 5G and AI, the government has laid the groundwork for digital transformation. This technological foundation has enabled the implementation of various e-government services, including online tax filing, digital ID systems, and smart city projects. These initiatives have streamlined government processes, improved service delivery, and increased transparency and accountability. Furthermore, China's focus on innovation has led to the development of cutting-edge technologies like facial recognition and big data analytics, which are being used to enhance public safety, optimize urban planning, and improve social services. (Xin & Huang, 2024)

According to Abou ElSeoud (2024), Egypt has benefited greatly from e-governance. Governments can simplify bureaucratic procedures by adopting digital technologies, which will enable citizens to more easily access necessary services like online tax filing and passport renewals. This lowers the possibility of corruption and inefficiency while also saving citizens time and effort. Additionally, e-governance encourages accountability and transparency by giving citizens access to government data and allowing them to keep tabs on public spending. People are more willing to participate in decision-making processes when there is greater transparency between the government and the populace. E-governance can also boost economic growth by luring in foreign capital and expediting corporate procedures. E-governance creates a more favorable business environment by lowering bureaucratic barriers and increasing efficiency, which promotes innovation and entrepreneurship. By giving people the

means to interact with and hold their government responsible, e-governance ultimately empowers citizens and creates a more democratic and responsive society.

In South Africa, e-governance has many benefits. Government services are made more effective and accessible by utilizing digital technologies, which also saves citizens time and lowers administrative barriers. (Maremi, Thulare, & Herselman, 2022, May) Online access to government information promotes greater accountability and transparency, which strengthens public confidence in the government and promotes increased involvement in decision-making. Additionally, by drawing in foreign investment and expediting corporate procedures, e-governance can promote economic growth. E-governance fosters innovation and entrepreneurship by lowering corruption and increasing efficiency, which improves the business climate. In the end, e-governance makes society more responsive and democratic by giving people the means to interact with and hold their government responsible. (Mukonavanhu, 2024).

A study done in Nigeria by Oghuvbu, Gberevbie, and Oni (2022), e-governance has many advantages. By digitizing government services, citizens can easily access necessary services online, which reduces bureaucratic obstacles and saves time. Greater involvement in decision-making processes results from the government and its citizens developing trust as a result of this enhanced accountability and transparency. E-governance can also boost economic growth by bringing in foreign investment and simplifying corporate procedures. E-governance improves the business environment by decreasing corruption and increasing efficiency, which promotes innovation and entrepreneurship. By giving people, the means to interact with and hold their government responsible, e-governance ultimately empowers citizens and creates a more democratic and responsive society.

The Kenyan County Governments were established across 47 counties, mirroring the structure of the National Government. Each county comprises the County Assembly and County Executive, as stipulated in the County Act of 2012. The County Public Service Board plays a crucial role in ensuring the enforcement of checks and balances during the implementation of new structures and changes. It is mandated to decentralize services and ensure their efficient delivery on a practical level. The County Government of Elgeyo–Marakwet, for instance, has enhanced its service delivery to both the business community and residents by introducing an E-service portal. This self-help portal offers a one-stop solution for various services, contributing to ongoing improvements in service accessibility and efficiency (Chepkoskei, 2020).

1.2 Statement of the Problem

Services based on technology are no longer an option for public and commercial businesses in today's dynamic, competitive, global economic climate. However, it is a need that has become essential for businesses to offer their clients an all-inclusive, cost-effective solution that improves the satisfaction of customers. Businesses must switch from a traditional approach to one that prioritizes supply chains, internet commerce, and procurement if they want to survive. This is a perfect example of how allowing businesses to select from a variety of online public services motivates them to frequently use the Internet and technology. As a result, the deployment of technology by the government promotes commercial adoption. Improved commercial IT and online usage may lead to a rise in e-business activity, which would improve state company performance in addition to increasing governmental effectiveness.

Due to the devolution of services by the national government, which resulted in Local authorities acquiring a lot of debt, poor tax collection, and inefficient service delivery

methods from previous councils, the majority of county devolved governments have implemented an e-Government program to ensure that the information available to citizens is affordable and quicker, company associates, employees, organizations, and the administration. As a result, the counties are better equipped to involve citizens in the development phase and public e-Services, which is expected to reduce conflict between the government and those who have complained about being left out of key decision-making.

The execution of the e-government initiative must overcome a range of technological challenges, including the absence of established standards and an integrated infrastructure across companies and agencies. People's concerns about privacy and secrecy considerably impede the implementation of an e-government program. The adoption of e-government program faces a number of technological obstacles, such as a lack of interoperable infrastructure across organizations and agencies and established standards. The implementation of an e-government program is also significantly hampered by individuals' worries about security and secrecy.

Although there has been a lot of literature on the impacts influencing user adoption of e-government services, the perspective of county governments is weak. The efficiency of e-Government projects depends on how well the people who are its target clients use its solutions. With the introduction of two government levels, analysis of the factors influencing county administrations' adoption of e-government would be highly beneficial. This study therefore is necessary in filling the existing research gap by studying on innovation technology and its influence on the implementation of electronic governance in Elgeyo Marakwet county, Kenya

1.3 Objectives of the Study

i. To establish the influence of innovation technology and its influence on the implementation of electronic governance in Elgeyo Marakwet county, Kenya
ii. To investigate the influence of innovation technology and its influence on the implementation of electronic governance in Elgeyo Marakwet county, Kenya
iii. To assess the influence of innovation technology and its influence on the implementation of electronic governance in Elgeyo Marakwet county, Kenya

1.4 Research Questions

i. What is the influence of privacy on implementation of electronic governance in Elgeyo Marakwet County?
ii. What is the influence of technological literacy on implementation of electronic governance in Elgeyo Marakwet County?
iii. What is the influence of technical infrastructure on implementation of electronic governance in Elgeyo Marakwet County?

1.5 Justification and Significance of the Study

Implementation of electronic governance needs technology-based service in order to ensure efficient communication and privacy of the information's. The study was needed in order to understand how innovative technology adopted by the county influence the implementation of electronic governance. Further, to understand the privacy innovative technology, technological literacy by the county government staffs and technical infrastructure during implementation of electronic governance. This is due to the fact that county government now needs to offer citizens a complete, affordable option in order to improve public satisfaction.

The study's findings were helpful to Elgeyo Marakwet County's management and personnel because they will help them understand how to manage and adapt eGovernment in a way that will improve delivery of services and productivity. The research's conclusions will help people understand how crucial it is to implement an effective system of government, which will make the county's operations more competitive. We'll talk about a few Electronic Government practices and outcomes. The study therefore was advantageous to the county's institutions as well as those of its affiliates. Future academics that wish to investigate electronic governance further and identify any gaps in the literature that can help advance the implementation of legislation found the study to be informative.

This research is crucial given the global trend toward digital governance. This study intends to identify potential advantages, difficulties, and best practices by investigating how e-government affects service delivery in a particular county. This study is important because it can offer residents, government representatives, and policymakers in Kenya and other developing nations insightful information. Service delivery, transparency, and citizen satisfaction can all be improved by knowing the elements that contribute to e-government success. In the end, this study adds to the larger conversation on how technology functions in contemporary government and how it affects sustainable development.

1.6 Assumptions of the Study

The study was carried out under the assumption that the respondents had enough knowledge on the study topic. This research is also done on the assumptions that the participants would willingly offer complete and truthful information as requested by the researcher. Moreover, it is assumed that innovation technology has an influence on

implementation of electronic governance in Elgeyo Marakwet County. Finally, it is assumed that the data generated was reliable and answer the research questions adequately.

1.7 Limitation and Delimitation of the Study

The study focused on influence of innovation technology and its influence on the implementation of electronic governance in Elgeyo Marakwet county, Kenya

The independent variables were privacy, computer and information literacy and technical infrastructure, while dependent variable was implementation of e-governance. Theis's study concentrated on the employees and citizens of Elgeyo Marakwet County. During the research, a limitation that is likely to exist is participants' reluctance to divulge all relevant information out of fear of facing disciplinary action from superiors. This can be minimized by developing a rapport with each participant while gathering data. Another restriction that was faced is the issue of confidentiality because the majority of county employees had a tendency to classify the majority of information as sensitive and private. As a result, most respondents found it challenging to offer insightful commentary because of fear of being treated unfairly. In order to reduce this danger, respondents were informed that the research was primarily educational and that any information submitted was kept confidential.

CHAPTERTWO

LITERATURE REVIEW

2.1 Introduction

This study reviewed related literature on the influence of privacy on the implementation of electronic governance, the influence of computer and information literacy on implementation of electronic governance and the influence of technical infrastructure on implementation of electronic governance. It also reviews the theoretical review and conceptual framework.

2.2 Empirical Review

2.2.1 Privacy and Implementation of Electronic Governance

Munyoka and Maharaj (2019) conducted a study to examine the effects of safety, trustworthiness, optimism bias, and possible danger on how individuals in the SADC use e-government services. This study offers an e-government usage paradigm. Information was gathered using a quantitative design by surveying of 489 program participants in Zimbabwe and Zambia in order to assess the model fit using structural equation modeling.

Dash and Pani (2016) conducted a study to provide a comprehensive image of e-Government using cloud technology and to illustrate the requirements and obstacles in creating the model in India. The service and distribution models for the installation of the e-gov cloud can be linked to resources for the e-governance modality. Although distributing e-Gov cloud infrastructure is one of ICT's largest difficulties, security and safety for the public and the government are the real concerns. The study however was done in India while the current study was a case of Kenya.

Agbozo, Alhassan and Spassov (2018) conducted study on the challenges to Sub-Saharan Africa's adoption, use, and growth of e-Government. Private details and personal information are essential for preserving consumer trust in any Information ICT system. Over the past ten years, e-Government projects have changed the civil service of various nations, largely raising the bar for providing citizen services. The security and secrecy issue hinders the growth of any electronic government system and could cause the public to lose trust in such services. The 2016 UN (United Nations) e-Government Report indicates that Sub-Saharan Africa is on the brink of steadily growing e-government, despite the region's general underachievement being attributed to a variety of issues. The study however was done in sub-Saharan Africa while the current study was a case of Kenya.

Elisa, Yang, Chao and Cao (2018 conducted research on the architecture of a safe and confidentiality of electronic government system based on blockchain. A framework is created to acknowledge that the five phases of electronic government might have various effects when six different groups of constituents are taken into account, building on and broadening stages of e-government outlined in past research. The relationships shown in various levels of implementing electronic governance are unique and complex, and they are affected by outside forces and constraints. The implementation and policy of electronic government must take these issues into account. Privacy in e-government problems alter significantly when global factors and constraints are considered throughout the complex architecture of organizational layers by constituency. The study however was not specific on how privacy affects the implementation of e governance.

2.2.3 Technological Literacy and Implementation of Electronic Governance

Pérez-Morote et al., (2020) Researchers were able to examine the potential effects of the knowledge gap on electronic government programs by assessing a wide range of residents to identify the demographic characteristics that influence utilization of e-government services. The results demonstrate that criteria including income, level of education, age and Internet consumption volume significantly influence how frequently consumers use e-government services. digital divide exists in the community, both in terms of skills and access. The study did not however show implementation of e-government as it is the case of the current study.

Apleni and Smuts (2020) undertook research to build a framework for the use of electronic government in developing states. Government agencies were encouraged and given the authority to prioritize specific areas in their execution plans, with a focus on bettering the quality of e-government services by taking the structure of electronic government execution into account. Developing country governments continue to encounter numerous obstacles as they attempt to modernize, including a lack of resources, a lack of managerial commitment and a lack of electronic government interoperability. The study was however never showed how computer and information literacy influences implementation of e-governance.

Ong'ang'a (2017examined the electronic control and communications technology architecture used by Kisumu County's local government. Two of the data analysis techniques used in the study were inferential analysis and descriptive analysis. The study's conclusions illustrated the necessity of successfully integrating ICT into devolved government's high-value activities in order to produce effective and efficient services that satisfy stakeholders. The report suggests that the county government

embrace the use of the internet as the new' venue for political and social organization since information technology adoption and utilization have not reached the levels necessary to understand the benefits of technology in service delivery. Contrary to the current study, which is a case of Elgeyo Marakwet County, this study was conducted in Kisumu County.

2.2.3 Technical Infrastructure and Implementation of Electronic Governance

Wairiuko, Nyonje and Omulo (2018) conducted research to determine how the ICT infrastructure in Kenya's Kajiado county affects the adoption of electronic government. Using a descriptive survey, this inquiry was conducted. power failures in order to ensure that issues like power outages, a lack of infrastructure, and poor connections are addressed, the report suggests that Kenya's government develop a policy that is specifically tailored for County governments. In order to ensure quality and efficiency in the supply of services and goods to the County governments, the Central government should put measures in place to solve information challenges. The study however majored on ICT infrastructure unlike the current study which is on technical infrastructure.

Müller, Gil-Garcia and Tirelli (2018) did a study on the Impact of Political, Technological and Social Variables on the Development of Local E-Government: The statistical information was obtained through surveys given to managers and experts in information technology in cities in the southernmost region of Brazil. In the majority of the townships we studied, electronic governance was still in its infancy, confined to increased existence, better involvement, and transactional occurrence to some levels. The results also demonstrate the strongest correlation between the level of electronic government maturity and parameters related to financial resources, population size,

GDP, and illiteracy. The study was however done in Brazil unlike the current study which is done in Kenya.

2.3 Theoretical Review

2.3.1 Technology Acceptance Model (TAM)

TAM broadly asserts that a person's attitude toward using technology and perception of the technology's utility may both be used to describe how strongly they intend to use a particular technology. According to the model, a variety of elements, such as PU (perceived usefulness) and reported ease-of-use, influence customers' choices over how and when to adopt new technologies. It keeps the chain of beliefs, intentions, and behaviors going. (Martín-García, Redolat & Pinazo-Hernandis, 2022). Although not everyone in a tax-filing environment has the same opportunity or the necessary skills to use information systems, TAM was developed with the goal of promoting information system usage in various parts of the organization, where access to technological tools, training, information systems experience, and client experience are somewhat homogenous.

Perceived utility and perceived ease of use (PEOU) are cognitive concepts that fully mediate the influence of external circumstances on information technology usage behavior (PU), according to one of the fundamental principles of the Technology Acceptance Model (TAM1). Social media's perceived utility (PU) is therefore thought to have an impact on a manager's choice to incorporate such technologies into automation processes. Tay (2023) demonstrated that people's attitudes toward using something are influenced by its perceived utility. Additionally, PBC is impacted by control beliefs. This concept states that in order to enhance service quality, counties should incorporate technology-based systems with features that will attract users and

captivate them. Also, the program needs to be simple to use and free of confusing terms. Furthermore, a central government's IT platform will be useless if the counties or users do not use it, regardless of how well-developed it is to support its operations. The current E-Procurement project, which was initiated by the federal government but is encountering fierce resistance from county administrations, is a noteworthy example. This technology is heavily influenced by acceptance theory.It is argued that, in contrast to the other model, which was asked to predict technical adoption, the TAM model was unable to predict the adoption of ICT (information communication technology). There was adequate data in the study to draw the conclusion that TAM was suggested and that it was unable to take into consideration societal impact, motivating factors for action, or significant precedents for cell use (Napitupulu, 2017; Torres, & Gerhart, 2017). Another of the paradigm's defenses and criticisms is the notion that the Technology Alignment Model illiteracy. They could be able to explain unusual behavior. However, it has apparently been demonstrated that the TAM is insufficient to account for how customers act while making purchases, rejecting innovations, or accepting them.

2.3.2 Socio-Economic view Theory

This study also adopted the socio-economic theory developed by Szirmai in 2015. The socio-economic theory is a response to the need to make the process more legitimate, credible, and hence sustainable by re-introducing the notions of participation inclusion and pursuing a quest for legitimacy in all aspects of the regulatory governance system, starting from its design of institutions, processes, policies, and instruments (Valentinov, Van Assche & Hermans, 2023). Social-economic factors promote better water actability by increasing the trust, participation, and communication of policies, hence improving regulatory compliance, acceptance,

and legitimacy. It does so through increased participation, inclusion, and equity in regulatory processes and through improved communication channels.

Social capital serves as a significant factor in explaining societies' capacity to effectively manage their internal relations in a manner that benefits all and endures over time (Xie, Wang & Lee. 2021). This is particularly crucial because when individuals feel that their interests and preferences are adequately represented in regulatory processes and outcomes, they are more inclined to accept and comply with them. Consequently, this enhances the prospects of establishing and sustaining a regulatory governance system that is both sustainable and successful. The inclination to comply, rooted in social norms, is influenced by the perceived legitimacy of regulatory bodies responsible for implementing regulations. Research indicates that a fundamental aspect of perceived legitimacy is the integration of fairness and inclusivity into the procedures governing regulation development and implementation (Morin et al., 2016).

Therefore, it is essential for regulatory authorities to identify the processes and practices perceived as fair and inclusive by the population segments affected by regulations. Moreover, regulatory compliance is influenced by the perceived legitimacy of the regulations, which is shaped by both the outcomes achieved and the processes employed in regulatory governance (Tsai & Bagozzi, 2014). Once the regulatory system gains legitimacy, individual compliance is anticipated to be influenced by the behavior of others, as determined by the cognitive, emotional, and social influence within the community, contingent upon the larger community's perception of the institution's legitimacy.

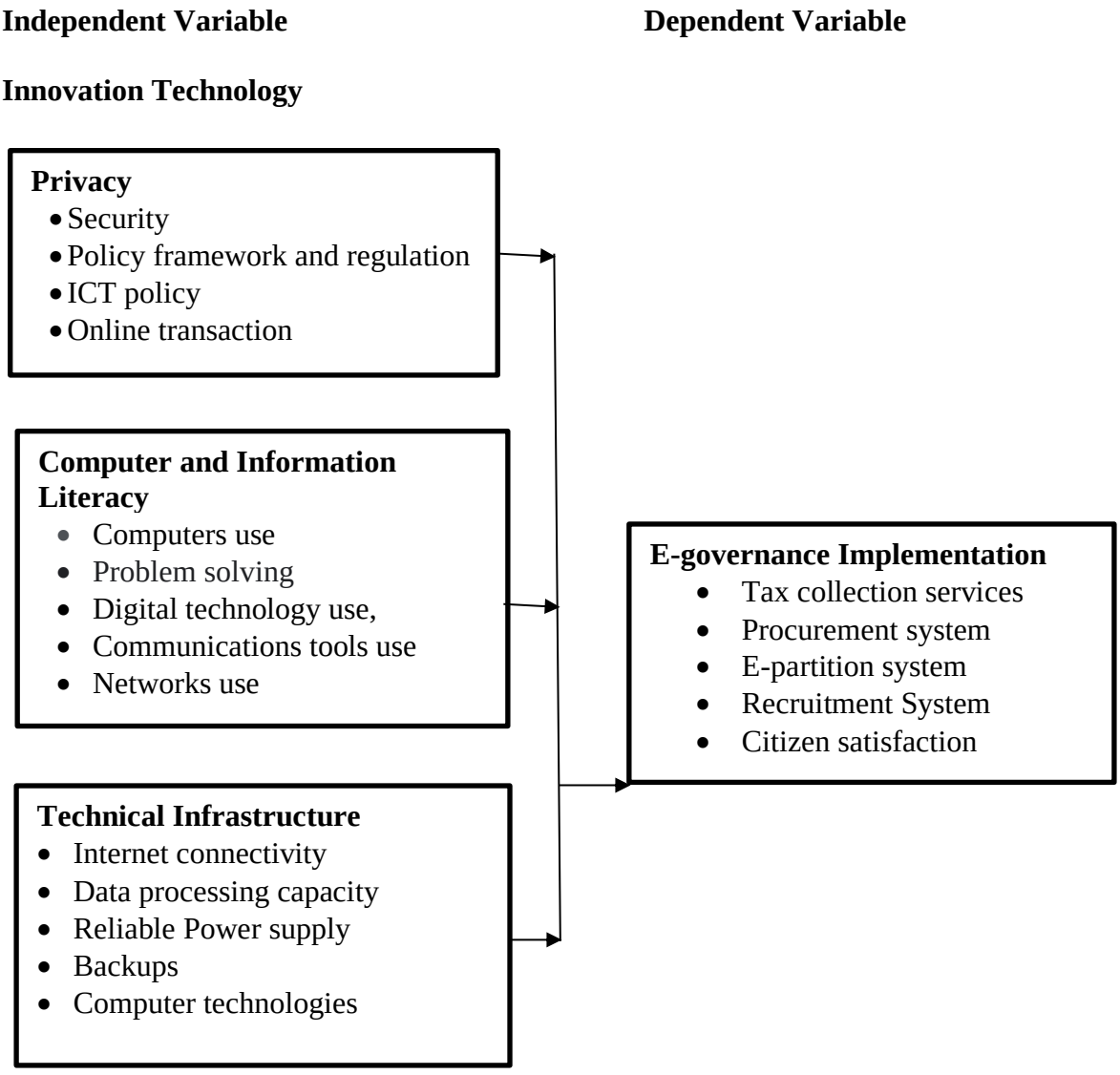
Socio-economic theory has evolved within the framework of a capitalist economy, where the means of production and distribution are privately owned and utilized for

personal profit. It presupposes a stable government and specific socio-economic institutions, such as private property, self-interest, economic liberalism (or laissez-faire), competition, and the price system. The government's role is to uphold the rules of the game within the market. These institutional assumptions form the foundation of microeconomic theories, which pertain to the fundamental nature of the economy, its physical structure, or layout, and the level of technological advancement. In the short term, economic theories are constructed on the basis of fixed resources and technology.

Social economics is relevant because it focuses on the connections between social conduct and economies and how doing so might facilitate the acceptance of electronic governance. The concept aids in examining how social ideologies such as those that are now in vogue, ethical considerations, and other social philosophies impact access to water. It uses current affairs, historical data, politics, current affairs, and other social sciences to anticipate the future consequences of shifts in the economy or society. Social, economic theory often considers subject matter outside the focus of mainstream economics and environment. The main criticisms of socio-economic theory are that it is not social, not capital, and not a theory. This does not leave the concept with much substance, leading some authors to describe the concept as fundamentally flawed. In addition, it has been claimed that it is impossible to measure, that problems of circularity make it a tautology, and that the possibility for positive or negative outcomes makes it context-dependent.

2.4 Conceptual Framework

A conceptual framework is a diagram that show the relationship between the independent and dependent variables under a study (Varpio, et al 2020). Figure 2.1 represents the conceptual framework for this study. The independent variables were privacy, computer and information literacy, technical infrastructure while E-governance implementation is the dependent variable.



(Source: Researcher, 2024)

Figure 2.1 Conceptual Framework

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The study population, research design, determining the sample size, sampling procedure, data analysis, research instrument, data presentation and reliability and validity were all discussed in this section.

3.2 Research Design

This is the precise means and ways of getting required information. It's a general way of research that shows which information is gathered from which place and by which method. (Kuada, 2012). The research design for this study was a descriptive survey. The primary element of survey research is to use questionnaires to elaborate on the intended characteristics of a wide group of people, things, or institutions (Aithal & Aithal, 2020). This design was suitable since data was taken from the same place (Elgeyo Marakwet County) from different people. A descriptive study takes data so that it can provide solutions about the questioned status of the subject (Orodho, 2013) This quick research involves reporting the experiences that an individual or group of individuals in a research study have.

3.3 Categories of Analysis.

The independent variables in this study were online transactions, ICT policy, policy framework and regulation, and privacy as measured by security. Measures of computer and information literacy include the use of computers, networks, digital technology, problem-solving skills, and communications tools. Technical infrastructure can be estimated using computer technologies, backups, dependable power supplies, internet connectivity, and data processing capacity. E-governance implementation was the study's dependent variable, and it was assessed using the following methods: tax collection services, procurement systems, e-partition systems, human resource systems, and citizen satisfaction. The study was conducted from July to September 2021 in Elgeyo Marakwet County, Kenya.

3.4 Site of the Study

The investigation was conducted in Elgeyo-Marakwet County. This county is located in Kenya's North Rift Region. The county has four sub-counties: Marakwet East, Marakwet West, Keiyo North, and Keiyo South. Elgeyo Marakwet County has a total population of 370,712 people, with a density of 123 people per square kilometer, according to the 2019 Census of Population and Housing. The region was picked because it recognized the value and role that ICTs played in Elgeyo Marakwet's economic development. But it hasn't been adopted entirely yet. The County Assembly's website and its "paperless" zones, which are marked by MCAs who possess notebooks and who send emails with softcopies of documents, show the Assembly's progress in achieving Information Communication Technology compliance. With regard to the infrastructure, organized cabling, a wireless router, and a cutting-edge file and gateway server have been purchased. Even when all of these objectives have been accomplished,

it is still challenging to find employees and increase the skill set of MCAs. The sub-County level still has ICT at a lesser level. As long as employees use modems to access the internet, high-speed internet not fully realized. ICT infrastructure generally is not set up. Investments in skill development and training are important because employee abilities present a barrier. The goal of this study was to ascertain how the adoption of electronic governance in Elgeyo Marakwet County has been impacted by new technologies.

3.5 Target Population

Participants in the study were comprehensive group of individual cases of objects with a common set of observable behaviors (Clark & Watson, 2016). The group of persons to which a researcher aims to extensively apply the results of a study was known as the target audience. This research had 272 participants comprising of; 35 public administrators, 140 ward development committees, 7 public participation officers, 50 county assemblies and executives, 5 communication officers, 15 ICT officers, and 15 public administration officers and the General public as its target audience. The table displays the breakdown of the target group (Table 3.1).

Table 3.1 Target Population

Strata	**Total population**
Ward development committee	140
Public participation officer	7
County assembly and executive committee members	50
Communication officers	5
ICT officers	15
Public administration officers	35
General public's representative	20
Total	**272**

Source: Elgeyo Marakwet County (2024)

3.6 Sampling Techniques and Sample Size

This section discussed sampling techniques and sample size.

3.6.1 Sampling Techniques

The sample size was proportionally distributed among the following categories of participants in the study (8 categories): 140/162*162=83 ward development committee, 7/162*162=4 public participation officer, 50/162*162=30 county assemblies, and executive, 5/162*162=3 communication officers, 15/162*162=9 ICT officers, 35/162*162=21 public administration officers and 20/162*162=12 general public's representative. This guaranteed that the sample is taken in accordance with the size of the population. This study selected participants from each of the selected components using simple random sampling. Using a simple random sampling technique, random numbers generated by computers was used.

3.6.2 Sample Size

The unit of analysis for this study was; ward administrators, ward development committee, public participation officer, county assemblies and executive, communication officers, ICT officer, and public administration officers. The sample size was obtained using the Yamane formula ($n=N/1+Ne^2$).

Where;

n=sample size

N = population size

e= 5% error

$n=N/1+Ne^2$

$n=272/1+272x0.05^2$

n=272/1.68

n= 162

162 respondents make up the sample size, as shown in the table (3.2).

Table 3.2 Sample Size

Strata	**Sample size**
Ward development committee	140
Public participation officer	4
County assemblies and executive	30
Communication officers	3
ICT officers	9
Public administration officers	21
General public's representative	12
Total	162

3.7 Research Instruments

The data for this study was collected by administering structured questionnaires to participants. A survey, as defined by Kombo (2016), serves as a research tool for obtaining information from a diverse group of individuals. Rowley (2014) underscores the role of surveys in providing participants with the opportunity to express their opinions and make suggestions. Opting for individual survey completion was deemed cost-effective, particularly in managing a sizable and dispersed participant pool, especially those with expertise, as highlighted by Cornick et al. (2022). The research findings are maintained as confidential, eliminating the possibility of bias due to the presentation of information in written form. The use of questionnaires facilitated straightforward data description in this study. The researcher created both open-ended and closed-ended questionnaires to collect data from participants. The closed-ended surveys employed a Likert scale (1–5), where 5 indicated strong agreement, 4 denoted agreements, 3 indicated uncertainty, 2 denoted disagreement, and 1 denoted strong disagreement. These questionnaires gathered both qualitative and quantitative information from a combination of closed and open-ended questions.

One notable advantage of questionnaires is their capacity to generate a substantial amount of data, allowing the researcher to obtain a comprehensive coverage of descriptive data efficiently. To ensure the research instruments' validity and reliability, a pilot test was conducted by distributing 16 research instruments to respondents in Uasin Gishu County. This pilot involved 10% of the total sample size, following the approach recommended by Doody and Doody (2015). The outcomes of the piloted questionnaires provided insights into the consistency of respondents' answers, enabling the researcher to make adjustments to the items as needed through revisions to the research instrument.

3.8.1 Validity of Research Instruments

Validity and reliability increase transparency and decreases opportunities for research bias in qualitative research (Singh, 2014). The supervisors and instructors in the study area at the institution had access to research instruments to review test items and evaluate test validity. Before beginning data collection, this was done to ensure that they were centered on the subject areas.

3.8.2 Reliability of Research Instruments

A measurement is said to be reliable if it produces consistent results with similar values. It evaluates the reliability, accuracy, reproducibility, and consistency of research (Chakrabartty, 2013). To determine the internal consistency dependability of the instruments' items, data from the pilot tests was used. In order to ascertain how items within a single instrument correlate with one another, the results were subjected to the Cronbach's Alpha test. This was meant to test for the reliability of the questionnaire. The study had an Alpha value of 0.887, meaning the questionnaire was very reliable.

3.9 Data Collection Techniques

First, the researcher requested for an approval from Kenyatta University in the form of an official letter of introduction allowing the researcher to proceed. The researcher then proceeded to obtain a permit from the NACOSTI for data collection (National Commission for Science, Technology, and Innovation). After obtaining the permit, the researcher utilized it to request authorization from the Elgeyo Marakwet County Government department to interview the chosen workers. During data collection day, the researcher visited the study area and issue research questionnaires personally. The researcher informed the respondents of their rights, ethical consideration, and available assistance in case of misunderstandings. After data collection, the instruments were checked and stored for data analysis.

3.10 Data Analysis and Presentation

To make the information gathered from the field more useful, data analysis includes interpreting, organizing, and presenting the acquired data (Safa et al., 2016). Both qualitative and quantitative data were gathered for the study. Thematic analysis was used to examine qualitative data. Quantifiable data was gathered, organized, and edited to remove any duplicates, mistakes, or anomalies that would have complicated analysis. Descriptive and inferential statistics was utilized to examine the data using SPSS (Statistical Package for Social Sciences). The regression model that was applied is as follows:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon}$$

Where:

Y represent implementation of electronic governance

$\boldsymbol{\beta_0}$ represent constant term

β_1, β_2 and β_3 represent beta coefficients

X_1 represent privacy

X_2 represent technological literacy

X_3 represent technical infrastructure

ε represent Error term

3.10.1 Assumptions of Regression Model

The research's main area of interest is on the results of multiple regressions. The models assume that the data used in the regression model have a regularly distributed distribution. To ascertain if the study variables were regularly distributed, Shapiro-Wilk and Kolmogorov-Smirnov were utilized. Gelman and Hill (2006) state that a Kolmogorov-Smirnov p value of less than 0.05 and a Shapiro-Wilk p value of less than 0.05, respectively, are indicators of non-normality. When the p values for Kolmogorov-Smirnov and Shapiro-Wilk are higher than 0.05, the data are still normally distributed.

The presumption that independent variables are independent is known as multicollinearity (Darlington, 1968; Keith, 2006). When collinearity is low (Keith, 2006; Poole & O'Farrell, 1971), the researcher can understand regression coefficients as the impacts of the independent factors on the dependent variables. Variance and tolerance inflation parameter was used to perform the multicollinearity test assumption (VIF). A VIF more than 10 or a tolerance of less than 0.10 indicated significant issues with multicollinearity (Miles, 2014).

3.11 Logistical and Ethical Considerations

The key ethical issues include informed permission, confidentiality and privacy, secrecy, informed consent, and the responsibility of the researcher. The purpose of the study was explained to the participants, after which consent from participants was

sought. Numbers was used to identify participants so that the confidentiality of the owners is not breached. There is need to maintain the confidentiality of private information shared by the parties. The right to remain anonymous extends to maintaining the unique qualities of each study participant. As a result, the researcher would get approval from the relevant authorities before collecting responses from participants. The researcher made sure that subjects are aware of the intended uses for the data and that any data collected was kept confidential and won't be shared or discussed with any inappropriate parties.

CHAPTER FOUR

DATA ANALYSIS AND DATA INTERPRETATION

4.0 Introduction

Data analysis, research presentation, and interpretation of results in light of the current study's goals were the focus of this section. The purpose of this study was to study the study of innovation technology on the implementation of e-governance in Elgeyo Marakwet County.

4.1 Demographic Statistics

The demographics of the participants included their gender, age and level of education.

4.1.1 Demographic Statistics of the Citizens

It was requested of the Citizens participants that they provide Demographic Statistics of them. The findings are shown in Table 4.1.

Table 4.1 Demographic Statistics of the Citizens Respondents

Category		Frequency	Percent
Gender	Female	35	25.7
	Male	101	74.3
	Total	**136**	**100.0**
Age	Between 21-30 years	93	68.4
	Between 31-40 years	37	27.2
	Between 41-50 years	6	4.4
	Total	**136**	**100.0**
Level of Education	Certificate	11	8.1
	Diploma	28	20.6
	Higher National diploma	1	.7
	Degree	81	59.6
	Masters	15	11.0
	Total	**136**	**100.0**

Table 4.1 shows that majority 101(74.3%) of the respondents were male while 35(25.7%) of the respondents were female. Further the findings show that 93(68.4%) of the respondents were aged between 20-30 years, 37(27.2%) were aged between 31-40 years and 6(4.4%) were aged between 41-50 years. The study also shows that 11(8.1%) of the respondents were of certificate level, 28(20.6%) were of diploma level, 1(0.7%) were of higher national diploma, 81(59.6%) were of degree level and 15(11.0%) were of masters' level.

4.1.2 Demographic Statistics of the Staff

The county staff respondents were asked to provide demographic statistics of them. the findings are shown in Table 4.2.

Table 4.2 Demographic Statistics of the Staff Respondents

		Frequency	**Percent**
Gender	Female	7	25.0
	Male	21	75.0
	Total	**28**	**100.0**
Age	Between 21-30	10	35.7
	Between 31-40	11	39.3
	Between 41-50	5	17.9
	Above 50 years	2	7.1
	Total	**28**	**100.0**
Working Experience	Below 2 Years	5	17.9
	Between 2-5 Years	12	42.9
	Between 5-8 Years	9	32.1
	Above 8 years	2	7.2
	Total	**28**	**100.0**
Level of Education	Certificate	2	7.1
	Degree	11	39.3
	Diploma	7	25.0
	Masters	7	25.0
	PhD	1	3.6
	Total	**28**	**100.0**

According to Table 4.2, the majority of respondents—21, or 75 percent—were men, while 7 respondents, or 25 percent, were women. Additionally, the results indicate that 10 (35 percent) of the respondents were between the ages of 20 and 30, 11 (39 percent) were between the ages of 31 and 40, 5 (17 percent) were between the ages of 41 and 50, and 2 (7 percent) were over the age of 50. Additionally, the study reveals that 5 (17.9%) of the respondents had worked for two years, 12 (42.9%) had worked for two to five years, 9 (32.9%) had worked for five to eight years, and 2 (7.2%) had worked for eight years. According to the study, two respondents (7.1%) had a certificate, seven respondents (25.0%) had a diploma, eleven respondents (39.3%) had a degree, seven respondents (25.0%) had a master's degree, and one respondent (3.6%).

4.2 Privacy

The study sought to establish the influence of privacy on implementation of electronic governance in Elgeyo Marakwet County.

4.2.1 Security of Information While Using Technology

The study sought to find out from County staff if there is security of information while using technology in place used in the implementation of electronic governance in the county. The findings are shown in Table 4.3

Table 4.3 County staff on Security of Information While Using Technology

Security of Information	Frequency	Percent
No	10	35.7
Yes	18	64.3
Total	**28**	**100**

From Table 4.3 shows that majority 18(64.3%) of the County staff stated that there is security of information while using technology in place used in the implementation of

electronic governance in the county. On the other hand, 10(35.7%) of them stated that there is no security of information while using technology in place used in the implementation of electronic governance in the county.

4.2.2 Policy Framework and Regulation

The study sought to find out if there is a policy framework and regulation that has been developed by the County Government to support E-Governance. The findings are shown in Table 4.4

Table 4.4 County staff Response on Policy Framework and Regulation

Policy Framework and Regulation	Frequency	Percent
No	7	25.0
Yes	21	75.0
Total	**28**	**100.0**

From Table 4.4 shows that majority 21(75.0%) of the County staff stated there **is** a policy framework and regulation that has been developed by the County Government to support E-Governance. On the other hand, 7(25.0%) of them stated that there is no policy framework and regulation that has been developed by the County Government to support E-Governance.

4.2.3 Regulations in Electronic Services

The study sought to find out if their rules and regulations in electronic services. The findings are shown in Table 4.5

Table 4.5 Citizens Response on Regulations in Electronic Services

Regulations in Electronic Services	Frequency	Percent
No	55	40.4
Yes	81	59.6
Total	136	100.0

From Table 4.5 shows that majority 81(59.6%) of the County staff stated there are rules and regulations in electronic services. On the other hand, 55(40.4%) of them stated that there is no rules and regulations in electronic services.

4.2.4 ICT policy

The study sought to find out if there is an ICT policy put in place to ensure implementation of electronic governance. The findings are shown in Table 4.6

Table 4.6 County staff Response on ICT policy

ICT policy	Frequency	Percent
No	10	35.7
Yes	18	64.3
Total	**28**	**100.0**

From Table 4.6 shows that majority 18(64.3%) of the County staff stated there **is** an ICT policy put in place to ensure implementation of electronic governance. On the other hand, 10(35.7%) of them stated that there is no ICT policy put in place to ensure implementation of electronic governance.

4.2.5 Details Online

The study sought to find out if the respondents trust putting their details online. The findings are shown in Table 4.7

Table 4.7 County staff Response on Details Online

Details Online	Frequency	Percent
No	15	53.6
Yes	13	46.4
Total	**28**	**100.0**

From Table 4.7 shows that majority 15(53.6%) of the County staff stated they don't trust putting their details online. On the other hand, 13(46.4%) of them stated that they stated they trust putting their details online. The findings are shown in Table 4.8.

Table 4.8 Citizens Response on Details Online

Details Online	Frequency	Percent
No	81	59.6
Yes	55	40.4
Total	**136**	**100.0**

From Table 4.8 shows that majority 81(59.6%) of the County staff stated they don't trust putting their details online. On the other hand, 55(40.4%) of them stated that they stated they trust putting their details online.

4.2.6 Travelling to The County Government Offices

The study sought to establish if the citizens prefer travelling to the County Government Offices to get face to face services than online. The findings are shown in Table 4.9.

Table 4.9 Citizens Response on Travelling to The County Government Offices

	Frequency	**Percent**
Strongly Agree	68	50.0
Agree	31	22.8
Disagree	10	7.4
Strongly Disagree	27	19.9
Total	**136**	**100**

According to Table 4.9 shows that majority 68(50.0%) of citizen respondents strongly agreed that they prefer travelling to the County Government Offices to get face to face services than online, 31(22.8%) agreed, 10(7.4%) disagreed and 27(19.9%) of the citizens strongly disagreed.

4.2.7 Influence of Privacy on Implementation of Electronic Governance

The study sought to establish the influence of privacy on implementation of electronic governance in Elgeyo Marakwet County. To achieve this, a five-point Likert scale was used where; 1 =Strongly Disagree, 2= Disagree, 3= Neutral Agree.4= Agree, 5=Strongly Agree. The findings are shown in Table 4.10 and Table 4.11

Table 4.10 County staff Response on Influence of Privacy on Implementation of Electronic Governance

Statement		SD	D	N	A	SA	Mean	Std. Deviation
There is security in innovation technology in terms of firewalls	**F**	9	9	3	4	3	2.39	1.370
	%	32.1	32.1	10.7	14.3	10.7		
There is security in innovation technology in terms of encrypted password	**F**	7	10	4	5	2	2.46	1.261
	%	25.0	35.7	14.3	17.9	7.1		
There are policy framework and regulation governing the use of innovation technology	**F**	11	6	4	6	1	2.29	1.301
	%	39.3	21.4	14.3	21.4	3.6		
ICT policy emphasizes on privacy of county government documents	**F**	8	11	2	4	3	2.39	1.343
	%	28.6	39.3	7.1	14.3	10.7		
Innovation technology secure environment to transact online	**F**	10	7	4	6	1	2.32	1.278
	%	35.7	25.0	14.3	21.4	3.6		

According to Table 4.10, 7(25%) of respondents agreed that there is security in innovation technology in terms of firewalls. However, 18 (64.2%) of respondents disagreed that there is security in innovation technology in terms of firewalls. Furthermore, the survey results revealed, in terms of mean and standard deviation, that respondents disagreed that there is security in innovation technology in terms of firewalls (Mean=2.39, standard deviation=1.370).

Also, 7(25%) of the respondents agreed, and 17(60.7%) disagreed that there is security in innovation technology in terms of encrypted password. Further, results also showed that in terms of mean and standard deviation, the respondents disagreed that there is

security in innovation technology in terms of encrypted password (Mean=2.46, standard deviation=1.261).

Further, 7(25%) participants there are policy framework and regulation governing the use of innovation technology. However, 17(60.7%) of the respondents disagreed that there are policy framework and regulation governing the use of innovation technology. Further, the study results also showed mean and standard deviation; the respondents disagreed there are policy framework and regulation governing the use of innovation technology (Mean=2.29, standard deviation=1.301).

Furthermore, 7(25%) participants agreed that ICT policy emphasizes on privacy of county government documents. However, 19(67.9%) of the respondents disagreed ICT policy emphasizes on privacy of county government documents. Further, the study results also showed mean and standard deviation; the respondents disagreed ICT policy emphasizes on privacy of county government documents (Mean=2.39, standard deviation=1.343).

Finally, it was noted that 7(25%) of the participants agreed that innovation technology secure environment to transact online. On the contrary, it was noted that 17(60.7%) disagreed that innovation technology secure environment to transact online g. Further, results also showed, in terms of mean and standard deviation, that innovation technology secure environment to transact online (Mean=2.32, standard deviation=1.278).

Table 4.11 Citizens Response on Influence of Privacy on Implementation of Electronic Governance

Statement		SD	D	N	A	SA	Mean	Std. Deviation
You prefer travelling to the County Government Offices to get face to face services than online	F	16	31	10	27	52	3.50	1.475
	%	11.8	22.8	7.4	19.9	38.2		
There is security in innovation technology in terms of firewalls	F	34	42	31	23	6	2.45	1.166
	%	25.0	30.9	22.8	16.9	4.4		
There is security in innovation technology in terms of encrypted password	F	14	22	11	51	38	3.57	1.326
	%	10.3	16.2	8.1	37.5	27.9		
There are policy framework and regulation governing the use of innovation technology	F	15	21	14	42	44	3.58	1.369
	%	11.0	15.4	10.3	30.9	32.4		
ICT policy emphasizes on privacy of county government documents	F	14	25	13	42	42	3.54	1.366
	%	10.3	18.4	9.6	30.9	30.9		
Innovation technology secure environment to transact online	F	13	16	25	42	40	3.59	1.285
	%	9.6	11.8	18.4	30.9	29.4		

According to Table 4.11, 79(58.1%) of respondents agreed that you prefer travelling to the County Government Offices to get face to face services than online s. In contrast, 47(34.6%) disagreed and agreed that you prefer travelling to the County Government Offices to get face to face services than online. In terms of mean and standard deviation, the survey also found that respondents agreed that you prefer travelling to the County Government Offices to get face to face services than online (Mean=3.50, standard deviation=1.475).

Furthermore, 29(21.3%) of respondents agreed that there is security in innovation technology in terms of firewalls. However, 76(55.9%) of respondents disagreed that there is security in innovation technology in terms of firewalls. Furthermore , the survey findings revealed that, in terms of mean and standard deviation, respondents disagreed that there is security in innovation technology in terms of firewalls (Mean=2.45, standard deviation=1.166).

The study further noted that 89(65.4%) of the participants agreed, and 48(15.4%) disagreed that there is security in innovation technology in terms of encrypted password. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed with the statement that there is security in innovation technology in terms of encrypted password (Mean=3.57, standard deviation=1.326).

The study further noted that 86(63.3%) of the participants agreed, and 36(26.4%) disagreed that there are policy framework and regulation governing the use of innovation technology. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed with the statement that there are policy framework and regulation governing the use of innovation technology (Mean=3.58, standard deviation=1.369).

Finally, the majority of the respondents, 270(86.8%), agreed that innovation technology secure environment to transact online. However, 27(8.7%) of the respondents disagreed innovation technology secure environment to transact online. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed with the statement that innovation technology secure environment to transact online (Mean=3.59, standard deviation=1.285).

4.3 Technological Literacy

The study sought to investigate the influence of technological literacy on implementation of electronic governance in Elgeyo Marakwet County.

4.3.1 Electronic Devices usage by County staff

The study evaluated if staff are using electronic devices in their offices for service delivery. The findings are shown in Table 4.12

Table 4.12 County staff Response on Electronic Devices usage

	Frequency	**Percent**
No	1	3.6
Yes	27	96.4
Total	**28**	**100.0**

From Table 4.12 shows that majority 27(96.1%) of the of the County staff stated that are using electronic devices in their offices for service delivery, while 1(3.6%) of the of the County staff stated that are not using electronic devices in their offices for service delivery.

4.3.2 Type of electronic Devices Used

The study sought to find out the type of electronic devices the respondents use. The findings are shown in Table 4.13 and Table 4.14.

Table 4.13 County staff response on of electronic Devices Used

	Frequency	**Percent**
Desktop Computer	5	17.9
Desktop Computer, Laptop	9	32.1
Desktop Computer, Laptop, Phone	11	39.3
Desktop Computer, Laptop, Phone, iPad	1	3.6
Desktop Computer, Laptop, Phone, Tablet	1	3.6
Laptop, Phone	1	3.6
Total	**28**	**100.0**

Study findings from Table 4.13 revealed that majority 11(39.3%) of the respondents stated that they used Desktops computers, Laptops and phones, 9(32.1%) stated that they use desktop computer and Laptops, 5(17.9%) stated desktop computer, 1(3.6%) stated desktop computer, laptop, phone and iPad, also 1(3.6%) stated desktop computer, laptop, phone and tablet and finally 1(3.6%) stated laptop and phone.

Table 4.14 Citizens Response on of Electronic Devices they owned

	Frequency	Percent
Computer	3	2.2
Computer, Laptop, Phone	15	11.0
Computer, Laptop, Phone, Modem	1	.7
Computer, Laptop, Phone, Smart watch, tablets	1	.7
Computer, Laptop, Phone, TVs	1	.7
Laptop	21	15.4
Laptop, Phone	43	31.6
Laptop, Phone, MIFI	1	.7
Phone	49	36.0
Phone, Television	1	.7
Total	**136**	**100.0**

Study findings from Table 4.14 revealed that majority 49(36%) of the respondents stated that they own a phone, 21(15.4%) stated laptop, 15(11%) stated computer, laptop and phone, 3(2.2%) stated computer, 1(0.7) stated computer, laptop, phone and modem also 1(0.7%) stated they owned Computer, Laptop, Phone, Smart watch and tablets. Further 1(0.7%) stated Computer, Laptop, Phone and TVs, 1(0.7%) owned Laptop, Phone and MIFI and finally 1(0.7%) of the respondents owned Phone and Television.

4.3.3 User Account

The study sought to find out the County staff have a user account as employees. The findings are shown in Table 4.15.

Table 4.15 County staff Response on User Account

	Frequency	Percent
No	20	71.4
Yes	8	28.6
Total	**28**	**100.0**

The study findings in Table 4.15 shows that majority 20(71.4%) of the County staff respondents do not have a user account. However, 8(28.6%) of the respondents had user accounts.

4.3.4 Computers adequacy

The study sought to find out there were adequate computers in the County. The findings are shown in Table 4.16.

Table 4.16 County staff Response on Computers adequacy

	Frequency	Percent
No	25	89.3
Yes	3	10.7
Total	**28**	**100.0**

Table 4.16 shows that majority 25(89.3%) of County staff respondents stated that there were no adequate computers in the County only 3(10.7%) of the respondents stated that the computers were adequate.

4.3.5 Digital Training

The study sought to find out if County staff have ever received any form of Digital Training. The findings are shown in Table 4.17.

Table 4.17 County staff Response on Digital Training

	Frequency	Percent
No	12	42.9
Yes	16	57.1
Total	**28**	**100.0**

Table 4.17 shows that majority 16(57.1%) of the County staff respondents had received some form digital training. However, 12(42.9%) had not received any digital training.

4.3.6 Level of Technological Literacy

The study sought to find out level of technological literacy of the citizens. The findings are shown in Table 4.18.

Table 4.18 Citizens Response on Level of technological literacy

	Frequency	Percent
High	57	41.9
Low	1	.7
Moderate	53	39.0
Very high	24	17.6
Very low	1	.7
Total	**136**	**100.0**

The findings in Table 4.18 shows that majority 57(41.9%) of citizens respondents had high level of technological literacy, 53(39.0%) had Moderate level of technological literacy, 24(17.6%) had very high level of technological literacy,1(0.7%) had low very

high level of technological literacy and also 1(0.7%) had very low level of technological literacy.

4.3.7 Implementation of Electronic Governance

The accessed the staff ability to use computer to solve problems concerning implementation of electronic governance. The findings are shown in Table 4.19.

Table 4.19 County Staff Response on Implementation of Electronic Governance by County staff

	Frequency	**Percent**
No	34	25.0
Yes	102	75.0
Total	**136**	**100.0**

The findings in Table 4.19 shows that majority 102(75%) of the citizens respondents stated that the staff were not able to use computer to solve problems concerning implementation of electronic governance the staff able to use computer to solve problems concerning implementation of electronic governance. On the other hand, 34(25%) stated that the staff were able to use computer to solve problems concerning implementation of electronic governance.

4.3.8 Internet Surfing

The sought to know if the citizens were conversant with internet surfing. The findings are shown in Table 4.20.

Table 4.20 Citizens Response on Internet Surfing

	Frequency	**Percent**
No	8	5.9
Yes	128	94.1
Total	**136**	**100.0**

The findings in Table 4.20 shows that majority 128(94.1%) of the citizen respondents were conversant with internet surfing only 8(5.9%) were not conversant with internet surfing.

4.3.9 Influence of Technological Literacy on the Implementation of Electronic Governance

The study sought to investigate the influence of technological literacy on implementation of electronic governance in Elgeyo Marakwet County. To achieve this, a five-point Likert scale was used where; 1 =Strongly Disagree, 2=Disagree, 3= Neutral Agree.4=Agree, 5=Strongly Agree. Table 4.21 and Table 4.22 presented the results.

Table 4.21 County staff Response on Influence of Technological Literacy on Implementation of Electronic Governance

Statement		SD	D	N	A	SA	Mean	Std. Deviation
Staffs have ability to use computer to participate effectively in county activities	**F**	1	7	5	11	4	3.67	1.129
	%	3.6	25.0	17.9	39.3	14.3		
Digital technology use has improved information creation in order to function in a knowledge society	**F**	2	5	3	13	5	3.50	1.201
	%	7.1	17.9	10.7	46.4	17.9		
Communications tools use has improved communication with citizens in order to participate effectively in community	**F**	2	4	5	10	7	3.57	1.230
	%	7.1	14.3	17.9	35.7	25.0		
Network's use has improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community	**F**	6	12	3	6	1	2.43	1.169
	%	21.4	42.9	10.7	21.4	3.6		

The study results in Table 4.21 showed that the majority, 15(53.6%) of the respondents, agreed that Staffs have ability to use computer to participate effectively in county activities. On the contrary, 8(28.6%) of the respondents disagreed that Staffs have ability to use computer to participate effectively in county activities. Further, the study results also showed, in terms of mean and standard deviation, that Staffs have ability to use computer to participate effectively in county activities (Mean=3.67, standard deviation=1.129).

Also, the study findings noted that 18(64.3%) of the respondents agreed and 7(25%) disagreed that digital technology use has improved information creation in order to function in a knowledge society. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed digital technology use has improved information creation in order to function in a knowledge society (Mean=3.50, standard deviation=1.201).

The study further revealed that 17(60.7%) of the participants agreed that Communications tools use has improved communication with citizens in order to participate effectively in community. On the contrary, 8(21.4%) of the respondents disagreed Communications tools use has improved communication with citizens in order to participate effectively in community. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed with the statement that Communications tools use has improved communication with citizens in order to participate effectively in community (Mean=3.57, standard deviation=1.230).

Finally, the study showed that 7(25%) participants agreed that Network's use has improved access, manage, integrate, evaluate, and create information in order to

function in a knowledge community. Contrary to those findings, 18(64.3%) respondents disagreed that Network's use has improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community. Further, the study results also showed, in terms of mean and standard deviation, that Network's use has not improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community (Mean=2.43, standard deviation=1.169).

Table 4.22 Citizens Response on Influence of Technological Literacy on Implementation of Electronic Governance

Statement		SD	D	N	A	SA	Mean	Std. Deviation
Staffs have ability to use computer to participate effectively in county activities	F	14	19	14	55	34	3.56	1.287
	%	10.3	14.0	10.3	40.4	25.0		
Digital technology use has improved information creation in order to function in a knowledge society	F	15	19	13	55	34	3.65	1.213
	%	10.3	14.0	10.3	40.4	25.0		
Communications tools use has improved communication with citizens in order to participate effectively in community.	F	12	17	17	55	35	3.62	1.242
	%	8.8	12.5	12.5	40.4	25.7		
Network's use has improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community	F	13	18	18	52	35	3.57	1.269
	%	9.6	13.2	13.2	38.2	25.7		

The study results in Table 4.22 showed that the majority, 89(65.4%) of the respondents agreed staffs have ability to use computer to participate effectively in county activities. On the contrary, 33(24.3%) of the respondents disagreed that staffs have ability to use computer to participate effectively in county activities. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed with the statement that staffs have ability to use computer to participate effectively in county activities (Mean=3.56, standard deviation=1.287).

Also, the study findings noted that 89(65.4%) of the respondents agreed and 33(24.3%) disagreed that digital technology use has improved information creation in order to function in a knowledge society**.** Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed digital technology use has improved information creation in order to function in a knowledge society (Mean=3.65, standard deviation=1.213).

The study further revealed that 90(70.1%) of the participants agreed that Communications tools use has improved communication with citizens in order to participate effectively in community**.** On the contrary,29(21.3%) of the respondents disagreed Communications tools use has improved communication with citizens in order to participate effectively in community**.** Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed that Communications tools use has improved communication with citizens in order to participate effectively in community (Mean=3.62, standard deviation=1.242).

Finally, the study showed that 87(63.9%) participants agreed that network's use has improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community. Contrary to those findings, 31(22.8%)

respondents disagreed that network's use has improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed network's use has improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community (Mean=3.57, standard deviation=1.269).

4.4 Technical Infrastructure

The study sought to find out the influence of technical infrastructure on implementation of electronic governance in Elgeyo Marakwet County.

4.4.1 IT Infrastructure

The study sought to find out from the County staff if the County Government have in place adequate IT infrastructure to support E-Governance. The findings are shown in Table 4.23.

Table 4.23 County staff Response on IT Infrastructure

	Frequency	**Percent**
No	24	85.7
Yes	4	14.3
Total	**28**	**100.0**

Table 4.23 shows that majority 24(85.7%) of the County staff respondents stated that the County Government do not have in place adequate IT infrastructure to support E-Governance. However, 4(14.3%) stated that the County Government have in place adequate IT infrastructure to support E-Governance.

4.4.2 Connectivity to the Internet

The study sought to find out if the County have a connection to the Internet. The findings are shown in Table 4.24.

Table 4.24 County staff Response on Connectivity to the Internet

	Frequency	**Percent**
No	8	28.6
Yes	20	71.4
Total	**28**	**100.0**

Table 4.24 shows that majority 20(71.4%) of the County staff stated that the County have a connection to the Internet. On the other hand, 8(28.6%) stated that the County have no connection to the Internet.

4.4.3 Computer Network Infrastructure the County Use

The study sough to know the type of computer network infrastructure does the County use. The findings are shown in Table 4.25.

Table 4.25 County staff Response on Computer Network Infrastructure the County Use

	Frequency	**Percent**
Local Area Network	12	42.9
Local Area Network, Wi-Fi	8	27.6
Local Area Network, Wide Area Network, Wi-Fi	4	14.3
Wi-Fi	3	10.7
Wide Area Network, Wi-Fi	1	3.6
Total	**28**	**100.0**

Table 4.25 shows that majority 12(42.9%) of the County staff respondents stated that the County use Local Area Network, 8(27.6%) stated that county used Local Area Network and Wi-Fi, 4(14.3%) stated Local Area Network, Wide Area Network and Wi-Fi, 3(10.7%) stated Wi-Fi and 1(3.6%) stated Wide Area Network and Wi-Fi.

4.4.4 Internet Speed

The study sought to find out the speed of the internet in the County. The findings are shown in Table 4.26.

Table 4.26 County staff Response on Internet Speed

	Frequency	**Percent**
10 Mps	8	28.6
100 Mps	4	14.3
5 Mps	10	35.7
I don't know	3	10.7
It is not constant. Often fluctuates	2	7.2
No internet in some offices	1	3.6
Total	**28**	**100.0**

The findings in Table 4.26 shows that majority 10(35.7%) of the County staff respondents stated that the internet speed was 5 Mps, 8(28.6%) stated the speed was 10 Mps, 4(14.3%) stated the speed of 100 Mps, 3(10.7%) don't know about the speed, 2(7.2%) stated that it was not constant, often fluctuates and 1(3.6%) stated that there was no internet in some offices.

4.4.5 Internet Connectivity

The study sought to find out if the county having a reliable internet connectivity. The findings are shown in Table 4.27.

Table 4.27 Citizens Response on Internet Connectivity

	Frequency	**Percent**
No	84	61.8
Yes	52	38.2
Total	**136**	**100.0**

Table 4.27 shows that majority 84(61.8%) of citizens respondents stated that the county does not have a reliable internet connectivity while 52(38.2%) stated that the county have a reliable internet connectivity.

4.4.6 Internet access

The study sought to find out how citizens access Internet. The findings are shown in Table 4.28.

Table 4.28 Citizens Response on Internet access

	Frequency	**Percent**
Cyber Café	8	5.9
Cyber Café, Laptop, Personal Phone	7	5.1
Cyber Café, Personal Phone	5	3.7
Cyber Café, Personal Phone, MIFI	1	.7
Laptop	17	12.5
Laptop, Personal Phone	23	16.9
Personal Phone	75	55.1
Total	**136**	**100.0**

Table 4.28 show that majority 75(55.1%) of the citizens respondents accessed internet through their Personal phones, 23(16.9%) accessed through Laptop and Personal Phone, 17(12.5%) accessed through Laptop, 8(5.9%) accessed through Cyber Café, 7(5.1%) accessed through Cyber Café, Laptop and Personal Phone, 5(3.7%) accessed through Cyber Café and Personal Phone and finally 1(0.7%) accessed through Cyber Café, Personal Phone and MIFI.

4.4.7 Power Supply in The County

The study sought to find out from citizens if there was reliable power supply in the County. The findings are shown in Table 4.29.

Table 4.29 Citizens Response on Power Supply in The County

	Frequency	**Percent**
No	41	30.1
Yes	95	69.9
Total	**136**	**100.0**

Table 4.29 shows that majority 95(69.9%) of the citizens respondents stated that there is reliable power supply in the County while 41(30.1%) stated that there is no reliable power supply in the County.

4.4.8 Power Backup

The study sought to find out from County staff if there was power backup in the County. The findings are shown in Table 4.30.

Table 4.30 County staff Response on Power Backup

	Frequency	Percent
No	13	46.4
Yes	15	53.6
Total	**28**	**100.0**

Table 4.30 shows that majority 15(53.6%) of the staff respondents stated that there is power backup in the County. However, 13(46.4%) stated that there is no power backup in the County.

4.4.9 The County Server

The study sought to find out if the County have a server in place. The findings are shown in Table 4.31.

Table 4.31 County staff Response on the County Server

	Frequency	Percent
No	1	3.6
Yes	27	96.4
Total	**28**	**100.0**

Table 4.31 shows that most 27(96.4%) of the County staff respondents stated that the County have a server in place only 1(3.6%) stated the County have no server in place.

4.4.10 Influence of Technical Infrastructure on Implementation of Electronic Governance

The study assessed the influence of technical infrastructure on implementation of electronic governance in Elgeyo Marakwet County. To achieve this, a five-point Likert

scale was used where; 1=Strongly Disagree, 2= Disagree, 3= Neutral Agree.4= Agree, 5=Strongly Agree. Table 4.32 and Table 4.33 presents the findings. 2(7.2%)

Table 4.32 County staff Response on Influence of Technical Infrastructure on Implementation of Electronic Governance

Statement		SD	D	N	A	SA	Mean	Std. Deviation
County have reliable internet connectivity to allow for implementation of electronic governance	F	10	8	3	5	2	2.32	1.335
	%	35.7	28.6	10.7	17.9	7.1		
The innovation technology adopted by the county government has data processing capacity	F	10	10	3	3	2	2.18	1.249
	%	35.7	35.7	10.7	10.7	7.1		
There is reliable power supply for implementation of electronic governance	F	7	9	5	6	1	2.46	1.201
	%	25.0	32.1	17.9	21.4	3.6		
There are adequate computer technologies for implementation of electronic governance	F	10	9	6	2	1	2.11	1.100
	%	35.7	32.1	21.4	7.1	3.6		
The technology infrastructure in the county ensures there is backups system of documents	F	7	12	7	1	1	2.18	.983
	%	25.0	42.9	25.0	3.6	3.6		

Table 4.32 shows that of the respondents, 7(25%) agreed that County have reliable internet connectivity to allow for implementation of electronic governance. On the contrary, 18(64.3%) disagreed that County have reliable internet connectivity to allow for implementation of electronic governance**.** Additionally, the study's findings demonstrated that, based on the mean and standard deviation, the respondents disagreed County have reliable internet connectivity to allow for implementation of electronic governance (Mean=2.32, standard deviation=1.335).

Also, 5(17.8%) of the respondents agreed that the innovation technology adopted by the county government has data processing capacity. However, 5(71.4%) of

the respondents disagreed that the innovation technology adopted by the county government has data processing capacity. Additionally, the study's findings demonstrated that, based on the mean and standard deviation, the respondents disagreed that the innovation technology adopted by the county government has data processing capacity (Mean=2.18, standard deviation=1.249).

Further, 3(10.7%) of respondents agreed that there are adequate computer technologies for implementation of electronic governance**.** However, 19(67.8%) of the respondents disagreed that there are adequate computer technologies for implementation of electronic governance**.** Additionally, the study's findings demonstrated that, based on the mean and standard deviation, the respondents disagreed that there are adequate computer technologies for implementation of electronic governance (Mean=2.11, standard deviation=1.100).

Lastly, from the study, 2(7.2%) of the participants agreed, and 19(67.9%) disagreed that the technology infrastructure in the county ensures there is backups system of documents. Additionally, the study's findings demonstrated that, based on the mean and standard deviation, the respondents disagreed with the statement that the technology infrastructure in the county ensures there is backups system of documents (Mean=2.18, standard deviation=0.983).

Table 4.33 Citizens Response on Influence of Technical Infrastructure on Implementation of Electronic Governance

Statement		SD	D	N	A	SA	Mean	Std. Deviation
County have reliable internet connectivity to allow for implementation of electronic governance	F	43	41	19	20	13	2.40	1.324
	%	31.6	30.1	14.0	14.7	9.6		
The innovation technology adopted by the county government has data processing capacity	F	52	29	13	31	11	2.41	1.401
	%	38.2	21.3	9.6	22.8	8.1		
There is reliable power supply for implementation of electronic governance	F	50	41	5	21	19	2.39	1.462
	%	36.8	30.1	3.7	15.4	14.0		
There are adequate computer technologies for implementation of electronic governance	F	48	38	15	21	14	2.38	1.371
	%	35.3	27.9	11.0	15.4	10.3		
The technology infrastructure in the county ensures there is backups system of documents	F	12	26	14	47	37	3.52	1.310
	%	8.8	19.1	10.3	34.6	27.2		

Table 4.33 shows that of the respondents, 33(28.7%) agreed that County have reliable internet connectivity to allow for implementation of electronic governance. On the contrary, 84(61.7%) disagreed that County have reliable internet connectivity to allow for implementation of electronic governance**.** Additionally, the study's findings demonstrated that, based on the mean and standard deviation, the respondents disagreed County have reliable internet connectivity to allow for implementation of electronic governance (Mean=2.40, standard deviation=1.324).

Also, 42(30.9%) of the respondents agreed that the innovation technology adopted by the county government has data processing capacity. However, 81(59.5%) respondents disagreed that the innovation technology adopted by the county government has data processing capacity. Additionally, the study's findings demonstrated that, based on the mean and standard deviation, the respondents disagreed that the innovation technology adopted by the county government has data processing capacity (Mean=2.41, standard deviation=1.401).

Further, 40(29.4%) of respondents agreed that there is reliable power supply for implementation of electronic governance**.** However,91(66.9%) of the respondents disagreed that there is reliable power supply for implementation of electronic governance**.** Additionally, the study's findings demonstrated that, based on the mean and standard deviation, the respondents disagreed there is reliable power supply for implementation of electronic governance (Mean=2.39, standard deviation=1.462).

Furthermore, 35(29.4%) of respondents agreed that there are adequate computer technologies for implementation of electronic governance**.** However,86(63.2%) of the respondents disagreed that there are adequate computer technologies for implementation of electronic governance**.** Additionally, the study's findings demonstrated that, based on the mean and standard deviation, the respondents disagreed there are no adequate computer technologies for implementation of electronic governance (Mean=2.38, standard deviation=1.371).

Lastly, from the study, 84(61.8%) of the participants agreed, and 38(27.9%) disagreed that the technology infrastructure in the county ensures there is backups system of documents. Additionally, the study's findings demonstrated that, based on the mean and standard deviation, the respondents agreed with the statement that the

technology infrastructure in the county ensures there is backups system of documents (Mean=3.52, standard deviation=1.310)

4.5 Governance Implementation

The study sought to find out implementation of electronic governance in Elgeyo Marakwet County.

4.5.1 Revenue Collection

The study sought to find out from County staff how they collect revenue in the County. The findings are shown in Table 4.34.

Table 4.34 County staff Response on Revenue Collection

	Frequency	**Percent**
Cash	16	57.1
Cash, Mobile Application	3	10.7
Cash, Mobile Application, County Government Application	1	3.6
Cash, Till Number	1	3.6
Mobile Application	2	7.1
Mobile Application, County Government Application	5	17.9
Total	**28**	**100.0**

Table 4.34 shows that majority 16(57.1%) of the County staff respondents said that revenue collection in the County was in cash, 5(17.9%) said mobile application and county government application, 3(10.7%) said was cash and Mobile application, 2(7.1%) said mobile application, 1(3.6%) said cash and till number and also 1(3.6) said cash, mobile application and county government application.

4.5.2 E-Procurement System

The study sought to know from County staff if the County have an E-Procurement system. The findings are shown in Table 4.35.

Table 4.35 County staff Response on E-Procurement System

	Frequency	Percent
No	6	21.4
Yes	22	78.6
Total	**28**	**100.0**

Table 4.35 shows that majority 22(78.6%) of the County staff respondents stated that the County have an E-Procurement system while 6(21.4%) stated that the County have no E-Procurement system.

4.5.3 The Citizens, businesses and other E-Government Inquiry

The study sought from the County staff how they get inquiries from the Citizens, businesses and other E-Government users. The findings are shown in Table 4.36.

Table 4.36 County staff Response on The Citizens, businesses and other E-Government Inquiry

	Frequency	Percent
E-Mail, Phone Call, SMS	3	10.7
E-Mail, Phone Call, SMS, social media	7	25.0
E-Mail, Phone Call, SMS, social media, Physical visit- word of mouth and suggestions box	1	3.6
E-Mail, Phone Call, SMS, social media, Physical visits	2	7.1
E-Mail, Phone Call, SMS, social media, Through their leaders	1	3.6
E-Mail, Phone Call, social media	1	3.6
E-Mail, social media	1	3.6
Phone Call	1	3.6
Phone Call, Office visits	1	3.6
Phone Call, SMS, Public forums	1	3.6
Phone Call, SMS, social media	3	10.7
Phone Call, SMS, social media, Office visits	1	3.6
SMS	1	3.6
SMS, social media	1	3.6
Social media	3	10.7
Total	**28**	**100.0**

Table 4.36 show that majority 7(25.0%) of the staff respondents said that inquiries from the Citizens, businesses and other E-Government users was through Mail, Phone Call, SMS and social media. Further 3(10.7%) said was through E-Mail, Phone Call and SMS, also 3(10.7%) said was through Phone Call, SMS and social media and again 3(10.7%) said was only through social media. In addition, 2(7.1%) said was through E-

Mail, Phone Call, SMS, social media and Physical visits. Finally, E-Mail, Phone Call, SMS, social media, Physical visit- word of mouth and suggestions box; E-Mail, Phone Call and social media; E-Mail and social media; Phone Call; Phone Call and Office visits; Phone Call, SMS and Public forums; Phone Call, SMS, social media and Office visits were responses of 1(3.6%) of County staff.

4.5.4 Statistics of E-Government services

The study sought to establish from County staff if they collect usage statistics of E-Government services. The findings are shown in Table 4.37.

Table 4.37 County staff Response on Statistics of E-Government services

	Frequency	**Percent**
No	24	85.7
Yes	4	14.3
Total	**28**	**100.0**

The findings in Table 4.37 reveals that majority 24(85.7%) of the staff respondents stated that there was no collection of usage statistics of E-Government services while 4(14.3%) stated that there was collection of usage statistics of E-Government services.

4.5.5 County Government Online services

The study sought to find out from citizens if they have ever heard or utilized online County Government services. The findings are shown in Table 4.38.

Table 4.38 Citizens Response on County Government Online services

	Frequency	Percent
No	44	32.4
Yes	92	67.6
Total	**136**	**100.0**

Table 4.38 show that majority 92(67.6%) of the citizen respondents stated that they have ever heard or utilized online County Government services while 44(32.4%) stated that they have not ever heard or utilized online County Government services.

4.5.6 Access of Online Support Services

The study sought to find out from the citizens how they access online support services. The findings are shown in Table 4.39.

Table 4.39 Citizens Response on Access of Online Support Services

	Frequency	Percent
Cyber Café	10	7.4
Cyber Café, Laptop, Personal Phone	11	8.1
Cyber Café, Personal Phone	7	5.1
Laptop	19	14.0
Laptop, Personal Phone	24	17.6
Personal Phone	65	47.8
Total	**136**	**100.0**

Table 4.39 shows that majority 65(47.8%) of the citizen respondents stated that they accessed online support services from their Personal Phone, 24(17.6%) accessed from Laptop and Personal Phone, 19(14%) accessed from Laptop, 11(8.1%) accessed from Cyber Café, Laptop and Personal Phone, 10(7.4%) accessed from Cyber Café and finally 7(5.1%) accessed from Cyber Café, Laptop and Personal Phone.

4.5.7 E-Government services

The study sought the thoughts of citizens if E-Government services can reduce the cost of delivering services in the County. The findings are shown in Table 4.40.

Table 4.40 Citizens Response on E-Government services

	Frequency	**Percent**
No	8	5.9
Yes	128	94.1
Total	136	100.0

Table 4.40 shows that most 128(94.1%) of the citizens respondents stated that E-Government services can reduce the cost of delivering services in the County. On the other hand 8(5.9%) stated that E-Government services cannot reduce the cost of delivering services in the County.

4.5.8 E-Governance Implementation

The research also established E-Governance Implementation in Elgeyo Marakwet County. To achieve this, a five-point Likert scale was used where; 1 =Strongly Disagree, 2= Disagree, 3= Neutral Agree.4= Agree, 5= Strongly Agree. The results are presented in Table 4.41 and Table 4.42.

Table 4.41 County staff Response on E-Governance Implementation

Statement		SD	D	N	A	SA	Mean	Std. Deviation
E-governance implementation has improved tax collection services in the county	F	12	8	2	4	2	2.14	1.325
	%	42.9	28.6	7.1	14.3	7.1		
There are improved procurement systems in the county government	F	3	3	3	12	7	3.61	1.286
	%	10.7	10.7	10.7	42.9	25.0		
Citizens are satisfied with implementation of E-governance	F	8	12	3	3	2	2.25	1.206
	%	28.6	42.9	10.7	10.7	7.1		
There is cost reduction in service delivery in the county	F	9	8	3	5	3	2.46	1.401
	%	32.1	28.6	10.7	17.9	10.7		
There is efficient and effective communication in the county	F	8	8	6	4	2	2.43	1.260
	%	28.6	28.6	21.4	14.3	7.1		

According to Table 4.41, findings indicate that 8(21.4%) of the respondents agreed and 20(53.6%) disagreed that E-governance implementation has improved tax collection services in the county. More, the study's findings revealed that in terms of mean and standard deviations, E-governance implementation has not improved tax collection services in the County (mean=2.14standard deviation=1.325). Furthermore, 10(76.9%) agreed, and 2(15.4%) disagreed that there are improved procurement systems in the county government. In terms of mean and standard deviations, they agreed that there are improved procurement systems in the county government (mean=3.61, standard deviation=1.286).

Further, 8(28.6%) of the respondents agreed, and those who disagreed, 17(60.7%), that there is cost reduction in service delivery in the county. Furthermore, the study's

findings revealed In terms of mean and standard deviations, disagreed there is cost reduction in service delivery in the county (mean=2.46, standard deviation=1.401). Finally, 6(21.4%) of the respondents agreed that there is efficient and effective communication in the county. However,16(57.2%) of the respondents disagreed there is efficient and effective communication in the county. Additionally, the study results on mean and standard deviation revealed the respondents agreed that there is efficient and effective communication in the county (Mean=3.85, standard deviation=1.28).

Table 4.42 Citizen Response on E-Governance Implementation

Statement		SD	D	N	A	SA	Mean	Std. Deviation
E-governance implementation has improved tax collection services in the county	F	14	17	24	47	34	3.51	1.276
	%	10.3	12.5	17.6	34.6	25.0		
There are improved procurement systems in the county government	F	16	18	14	50	38	3.56	1.338
	%	11.8	13.2	10.3	36.8	27.9		
Citizens are satisfied with implementation of E-governance	F	14	22	16	43	41	3.55	1.343
	%	10.3	16.2	11.8	31.6	30.1		
There is cost reduction in service delivery in the county	F	16	14	22	51	33	3.52	1.288
	%	11.8	10.3	16.2	37.5	24.3		
There is efficient and effective communication in the county	F	14	21	15	44	42	3.58	1.342
	%	10.3	15.4	11.0	32.4	30.9		

According to Table 4.42, findings indicate that 81(59.6%) of the respondents agreed and 31(22.8%) disagreed that E-governance implementation has improved tax collection services in the county. More, the study's findings revealed that in terms of mean and standard deviations, the learning process at E-governance implementation

has improved tax collection services in the county (mean=3.51standard deviation=1.276).

Furthermore, 88(64.7%) agreed, and 34(25%) disagreed that there are improved procurement systems in the county government. In terms of mean and standard deviations, they agreed that there are improved procurement systems in the county government (mean=3.56, standard deviation=1.338).

Further, 84(61.7%) of the respondents agreed, and those disagreed 26(26.5%) that Citizens are satisfied with implementation of E-governance. Furthermore, the study's findings revealed that participants agreed that Citizens are satisfied with implementation of E-governance (mean=3.55, standard deviation=1.288).

Also, 83(61.8%) of the respondents agreed, and those disagreed 30(22.1%) that there is cost reduction in service delivery in the county. Furthermore, the study's findings revealed that participants agreed that there is cost reduction in service delivery in the county (mean=3.52, standard deviation=1.288)

Finally, the majority, 86(63.3%) of the respondents, agreed that there is efficient and effective communication in the county. However,25(25.7%) of the respondents disagreed that there is efficient and effective communication in the county. Additionally, the study results on mean and standard deviation revealed the respondents agreed that there is efficient and effective communication in the county (Mean=3.58, standard deviation=1.342).

4.6 Multiple Regression Assumptions Test

4.6.1 Test of Linearity

The linearity of the data was examined by means of a correlation analysis. A linear relationship between the variables is inferred if there is a significant correlation between the independent variables and the dependent variable. There is no linear relationship between the independent variables and the dependent variable if the correlation coefficient is not significantly different from zero. Table 4.43 displays the results of the linearity analysis.

Table 4.43 Test of Linearity

Variables	Pearson Correlation	Sig.
Privacy	.548**	.000
Technological literacy	.585**	.000
Technical infrastructure	.539**	.000

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

Results presented in Table 4.11 revealed Privacy had a correlation coefficient of 0.548. Technological literacy had a correlation coefficient of 0.585. and technical infrastructure, the correlation coefficient was 0.539. These indicated that the linearity assumption was made due to the non-zero values of the correlation coefficients for the three research variables. Inferring linearity in the data used.

4.6.2 Homoscedasticity Assumption

The homoscedasticity assumption was tested using the Levenes test of equality of error variances. Table 4.44 displays the results of the assumed-true-positive tests.

Table 4.44 Homoscedasticity Assumption

Variable	Levene Statistic	df1	df2	Sig.
Privacy	1.756	**15**	146	.310
Technological literacy	1.104	16	147	.357
Technical infrastructure	2.841	15	146	.356

The study results in Table 4.44 indicated that the p-value in Levenes test for Privacy was 0.310. P-value in Levenes test for Technological literacy was 0.357. P-value in Levenes test for Level Technical infrastructure was 0.356. All the P-values were 0.05. Thus, the homoscedasticity assumption was made showing that data used had no heteroscedasticity.

4.6.3 Normality Assumption Test

The study employed the Shapiro-Wilk test to determine whether or not the data significantly deviated from the assumed normal distribution. If the significance value was less than 0.05, the data were considered to be normally distributed (Tabachnic, 2001).

Table 4.45 Normality Assumption Test

	Shapiro-Wilk		
	Statistic	**df**	**Sig.**
Privacy	.952	164	.000
Technological literacy	.901	164	.000
Technical infrastructure	.955	164	.000

Research results showed that all Shapiro-Wilk values in Table 4.45 were statistically significant at the 0.05 level or lower. Since the significance values were smaller than

0.05, the data were assumed to have come from a normal distribution. The assumption of normality in linear regression (Connor & ONeill, 2017). If the Kolmogorov-Smirnov value is less than 0.05, then the data is normally distributed, while if it is larger than 0.05, then the data considerably deviates from a normal distribution, as stated by Tabachnic and Fidell (2001).

4.6.4 Multicollinearity Assumption Test

Using VIFs (variance inflation factors) and tolerance, the research examined the validity of the multicollinearity assumption. Table 4.46 details the study's findings.

Table 4.46 Multicollinearity Assumption Test

Variables	Tolerance	VIF
Privacy	.650	1.539
Technological literacy	.548	1.826
Technical infrastructure	.658	1.519

To test for multicollinearity, we inflated the variances (VIF). Multicollinearity is present if the VIF value is greater than 10, as stated by Field (2009). Table 4.46 displays that the Privacy were 1.539%, Technological literacy was 1.826%, and technical infrastructure were 1.519%. We observed that the results were fewer than 10, hence there is no multicollinearity as defined by Field (2009). The data showed that the multicollinearity assumption was correct due to the high tolerance values for all variables (above 0.10).

4.6.5 Autocorrelation Assumption Test

The study used Durbin- Watson statistic to test for autocorrelation. Table 4.47 shows the value of Durbin–Watson coefficient was 1.922. The value of Durbin-Watson

coefficient gets close to 0 when autocorrelation is positive of error terms and is 2 when autocorrelation is negative. The recommended threshold of Durbin-Watson value is 1.5-2.5. Therefore, the Durbin-Watson Coefficient of 1.922 indicates that observations are within the threshold.

Table 4.47 Autocorrelation Assumption Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.673a	0.453	0.443	0.77870	1.922

4.7 Inferential Analysis

Correlation and multiple regression models were utilized for inferential analysis in this section. The interplay between the explanatory variables and the criterion variable was shown by means of correlation and multiple regression analysis.

4.7.1 Correlation Analysis

The degree and direction of the relationship between the dependent and independent variables was analyzed using Pearson's correlation. The outcomes are shown in Table 4.48.

Table 4.48 Multiple Correlation Analysis Results

		electronic governance	Privacy	Technological Literacy	Technical Infrastructure
Electronic Governance	Pearson Correlation	1	.548**	.585**	.539**
	Sig. (2-tailed)		.000	.000	.000
	N	164	164	164	164
Privacy	Pearson Correlation	.548**	1	.575**	.442**
	Sig. (2-tailed)	.000		.000	.000
	N	164	164	164	164
Technological Literacy	Pearson Correlation	.585**	.575**	1	.567**
	Sig. (2-tailed)	.000	.000		.000
	N	164	164	164	164
Technical Infrastructure	Pearson Correlation	.539**	.442**	.567**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	164	164	164	164

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

According to Table 4.48, the research found that privacy was positively associated with implementation of electronic governance in Elgeyo Marakwet County (r=0.548; p=0.000). The results show a favorable, statistically significant association between technological literacy and implementation of electronic governance in Elgeyo Marakwet County (r=0.585; p=0.000). Technical Infrastructure was found to have a

statistically significant (r=0.539; p=0.000) favorable relationship with implementation of electronic governance in Elgeyo Marakwet County.

According to Orodho (2003), the presence of two or more variables with a high correlation indicates that these variables are connected to one another in a significant manner, whereas the presence of two or more variables with a low correlation indicates that these variables are not connected at all. When interpreting the results of an experiment, a value of 0.00 indicates that there is no association between the variables.

4.7.2 Results for Multiple Regression Analysis

The power of a link between the dependent variable and several predictor variables was evaluated with multiple regression analysis, and the relative relevance of each predictor was determined, typically with the effect of other predictors eliminated statistically.

4.7.3 Model Summary

The coefficient of determination (R^2) and correlation coefficient (R) showed the degree of association between dependent and independent variables. The results are presented in Table 4.49.

Table 4.49 Interpretation of Multiple Regression Models

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.673a	0.453	0.443	0.77870

Table 4.49 displays the regression findings, which showed an R-Square of 0.453 and an R-value of 0.673. The high linear correlation between the dependent and

independent variables was indicated by the R-value of 0.673. According to the coefficient of determination (R^2), the independent variables provided 0.453 of the total explanation. The regression model accounted for roughly 45.3% of the observed variation in the independent variable.

4.7.4 Regression Model Fitness Test

The model's fitness was checked to see if it provided the best possible fit for the data. Table 4.50 shows the outcomes of the investigation.

Table 4.50 The Fitness of Regression Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	80.278	3	26.759	44.130	.000b
	Residual	97.020	160	.606		
	Total	**177.298**	**163**			

Table 4.50 displayed an F-statistic of (F =44.130), which was statistically significant at the p=0.000 level, demonstrating that the model was accurate. This means that the data were well-fit by the multiple regression model. That is why it was important considering the independent variables while designing the system.

4.7.5 Regression Model Coefficients

Running a regression model yielded coefficients for use in the regression equation. Table 4.51 details the study's findings.

Table 4.51 Regression Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.801	0.233		3.436	0.001
	Privacy	0.277	0.074	0.271	3.734	0.000
	Technological literacy	0.270	0.076	0.282	3.571	0.000
	Technical infrastructure	0.291	0.081	0.259	3.591	0.000

Table 4.51 shows that the influence of privacy had a positive linear effect on implementation of electronic governance in Elgeyo Marakwet County. (β_1=0.277, p=0.00). This shows that a 0.277-unit improvement in influence of privacy can be attained by instituting a more stringent collection approach. Implementation of electronic governance in Elgeyo Marakwet County was also found to be positively correlated with technological literacy (β_2=0.270, p=0.000) Therefore, a rise in technological literacy results in a 0.270-unit rise in implementation of electronic governance. The influence of technical infrastructure on implementation of electronic governance is favorable and statistically significant (β_3=0.291, p=0.000). The resulting regression equation is as follows:

$Y = 0.801 + 0.277X_1 + 0.270X_2 + 0.291X_3$……. Equation 4.1

Y Implementation of electronic governance

X_1 Privacy

X_2 Technological literacy

X_3 Technical infrastructure

4.8 Hypotheses Testing

The study hypothesized privacy has no significant influence on the implementation of electronic governance in Elgeyo Marakwet County. The null hypothesis (**Ho_1**) was rejected and concluded that there was a significant effect of Privacy on the implementation of electronic governance in Elgeyo Marakwet County (β_1=0.277, p=0.000).

The study hypothesized that technological literacy has no significant influence on the implementation of electronic governance in Elgeyo Marakwet County. The null hypothesis (**Ho_2**) was rejected and concluded that there was a significant effect of Technological literacy on the implementation of electronic governance in Elgeyo Marakwet County (β_2=0.270, p=0.000).

The study hypothesized that technical infrastructure has no significant influence on the implementation of electronic governance in Elgeyo Marakwet County. The null hypothesis (**Ho_3**) was rejected and concluded that there was a significant effect of technical infrastructure on the implementation electronic governance in Elgeyo Marakwet County (β_3=0.291, p=0.000).

Table 4.52 Summary of Hypotheses Test Results

Hypotheses	**β and P values**	**Decision rule(accept/reject)**
H01 Privacy has no significant influence on the implementation of electronic governance in Elgeyo Marakwet County.	β_1=0.277, p=0.000<0.05	Rejected the null hypothesis
H02 Technological literacy has no significant influence on the implementation of electronic governance in Elgeyo	β_2=0.270, p=0.000<0.05	Rejected the null hypothesis
H03 Technical infrastructure has no significant influence on the implementation of electronic governance in Elgeyo	β_3=0.291, p=0.000<0.05	Rejected the null hypothesis

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section summarized study findings, conclude and make recommendations. It further suggested areas for further research in the following sub sections.

5.2 Summary of the Study Findings

This section presents the summary of the study findings based on the research objectives.

5.2.1 Privacy

The study first objective was to establish the influence of privacy on implementation of electronic governance in Elgeyo Marakwet County. The finding shows that majority of the County staff stated that there is security of information while using technology in place used in the implementation of electronic governance in the county also majority of the County staff stated there **is** a policy framework and regulation that has been developed by the County Government to support E-Governance. Further the findings shows that majority of the County staff stated there are rules and regulations in electronic services.in addition majority of the County staff stated there **is** an ICT policy put in place to ensure implementation of electronic governance. Furthermore, majority of the County staff stated they don't trust putting their details online. Also, the findings shows that majority of citizen respondents strongly agreed that they prefer travelling to the County Government Offices to get face to face services than online

Furthermore, the study results revealed, that County staff respondents disagreed that there is security in innovation technology in terms of firewalls. In line the citizens respondents also disagreed that there is security in innovation technology in terms of

firewalls. In addition, the study results reveal that County Staff respondents disagreed that there is security in innovation technology in terms of encrypted password. on the contrary, the citizens respondents also agreed that there is security in innovation technology in terms of firewalls.

In addition, the study results reveals that the County respondents disagreed there are policy framework and regulation governing the use of innovation technology. However, the citizens respondents agreed that there are policy framework and regulation governing the use of innovation technology. Further the study results reveals that the county staff respondents disagreed ICT policy emphasizes on privacy of county government documents. in the contrary the citizens respondents agreed that there are policy framework and regulation governing the use of innovation technology.

The study results also reveals that the County staff respondents disagreed that innovation technology secure environment to transact online while the citizens respondents agreed that innovation technology secure environment to transact online. Finally, the study results reveal that citizens respondents agreed that you prefer travelling to the County Government Offices to get face to face services than online.

5.2.2 Technological Literacy

The study second objective was to investigate the influence of technological literacy on implementation of electronic governance in Elgeyo Marakwet County. The study findings shows that majority of the of the County staff stated that are using electronic devices in their offices for service delivery. Also, majority of the respondents stated that they used Desktops computers, Laptops and phones. Further the findings shows that majority of the County staff respondents do not have a user account. In addition, majority of County staff respondents stated that there were no adequate computers in

the County. Furthermore, the study findings shows that majority of the County staff respondents had received some form Digital Training. In addition, majority of citizens respondents had high level of technological literacy. In line majority of the citizen respondents were conversant with internet surfing. The findings again shows that majority of the citizens respondents stated that the staff were not able to use computer to solve problems concerning implementation of electronic governance the staff able to use computer to solve problems concerning implementation of electronic governance.

Further, the study results showed that County staff and citizen respondents activities respectively agreed that County Staffs have ability to use computer to participate effectively in county. Furthermore, the study results showed, that the County staff respondents agreed digital technology use has improved information creation in order to function in a knowledge society. Also, the citizens respondents agreed digital technology use has improved information creation in order to function in a knowledge society.

In addition, the study results showed, that the respondents that Communications tools use has improved communication with citizens in order to participate effectively in community. Inline the citizens respondents also agreed that Communications tools use has improved communication with citizens in order to participate effectively in community. Finally, the study results also showed, in terms of mean and standard deviation, that Network's use has not improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community. Also, the citizens respondents agreed that network's use has improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community.

5.2.3 Technical Infrastructure

The third study objective was assessing the influence of technical infrastructure on implementation of electronic governance in Elgeyo Marakwet County. The study findings shows that majority of the County staff respondents stated that the County Government do not have in place adequate IT infrastructure to support E-Governance. However, majority of the County staff stated that the County have a connection to the Internet. Further the study findings showed that majority of the County staff respondents stated that the County use Local Area Network us the main source of internet. Also, majority of the County staff respondents stated that the internet speed was 5 Mps. In addition, majority of citizens respondents stated that the county does not have a reliable internet connectivity. The study findings also show that majority of the citizens respondents accessed internet through their Personal phones. Furthermore, the findings shows that majority of the citizens respondents stated that there is reliable power supply in the County. In concurrent majority of the staff respondents stated that there is power backup in the County. Also, most of the County staff respondents stated that the County have a server in place

Furthermore, the study results reveal that the county staff respondents disagreed County have reliable internet connectivity to allow for implementation of electronic governance Additionally, the citizens respondents also disagreed that County have reliable internet connectivity to allow for implementation of electronic governance. Also, the study results reveal that the county staff respondents disagreed that the innovation technology adopted by the county government has data processing capacity inline the citizens respondents also

disagreed that the innovation technology adopted by the county government has data processing capacity.

Further the study results reveal the respondents disagreed that there are adequate computer technologies for implementation of electronic governance. also, the citizens respondents disagreed that there is reliable power supply for implementation of electronic governance. Finally, the study results reveal that the county staff respondents disagreed that the technology infrastructure in the county ensures there is backups system of documents. on the other hand, the county respondents agreed that the technology infrastructure in the county ensures there is backups system of documents.

5.3 Conclusions of the Study

The study concluded that there is security of information while using technology in place used in the implementation of electronic governance in the county also a policy framework and regulation that has been developed by the County Government to support E-Governance. Further there are rules and regulations in electronic services.in addition there is an ICT policy put in place to ensure implementation of electronic governance. However, County staff don't trust putting their details online. On the other hand, citizen prefer travelling to the County Government Offices to get face to face services than online. Furthermore, there is no security in innovation technology in terms of firewalls used by County. In addition, also there is no security in innovation technology in terms of encrypted password. Also, there are policy framework and regulation governing the use of innovation technology in the County. Further ICT policy does not emphasize on privacy of county government documents. In addition,

the innovation technology is not a secure environment to transact online. Hence prefer travelling to the County Government Offices to get face to face services than online.

The study further concluded that County staff use electronic devices in their offices for service delivery which include desktops computers, Laptops and phones. However, no adequate computers in the County in addition majority of the staff do not a user account. Furthermore, majority of county staff had received some form of Digital training thus they have high level of technological literacy this us allowed the staff to be able to use computer to solve problems concerning implementation of electronic governance to use computer to solve problems concerning implementation of electronic governance. Also, majority of citizen are conversant with internet surfing. Further, County Staffs have ability to use computer to participate effectively in county. Furthermore, digital technology use has improved information creation in order to function in a knowledge society. In addition, Communications tools use has improved communication with citizens in order to participate effectively in community. However, Network's use has not improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community.

The study finally concluded that the County Government do not have in place adequate IT infrastructure to support E-Governance. However, County have a connection to the Internet non the less the connectivity is not reliable. Further the Local Area Network is the main source of internet in the county. Also, the internet speed is 5 Mps. In addition, does not have a reliable internet connectivity. Furthermore, there is reliable power supply in the County though there is no power backup in the County. Furthermore, the County do not have reliable internet connectivity to allow for implementation of electronic governance. Also, the innovation technology adopted by the county

government has no data processing capacity. Further there are no adequate computer technologies for implementation of electronic governance. In addition, there is no reliable power supply for implementation of electronic governance. However, the technology infrastructure in the county ensures there is backups system of documents.

5.4 Recommendations of the Study

The study recommends that the County government should come up with clear are policy framework and regulation governing the use of innovation technology in the County. The policies should emphasize on privacy and security of the data. The study also Recommends The county government should provide adequate and reliable electronic devices to their staff in their offices for service delivery to citizens. In addition, they should come up with clear Communications tools use to help improved communication with citizens in order to participate effectively in community. Finally, the study recommends that the County Government should put in place adequate IT infrastructure to support E-Governance. They should ensure reliable and high-speed Internet connectivity and stable power supply connectivity.

5.5 Suggestions for Further Research

The focus of this study was to investigate the influence of innovation technology on the implementation of electronic governance in Elgeyo Marakwet County, Kenya where variables studied were only limited to three which included, privacy, technological literacy and technical infrastructure. The study recommends that other factors that influences implementation of electronic governance need to be identified and their effects assessed as well.

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APPENDICES

APPENDIX I: QUESTIONNAIRE FOR THE STAFF

INSTRUCTIONS:

I am conducting research on "**Innovation Technology and Its Influence on The Implementation of Electronic Governance in Elgeyo Marakwet County, Kenya"** I kindly request you to participate in my study. Your responses to the items in the questionnaire was treated with utmost confidentiality. The questionnaire is made up of six sections A, B, C, D. E, and F.

SECTION A: DEMOGRAPHIC INFORMATION

1. Gender

1) Male [ ] (2) Female [ ] (3) Other [ ]

2. What is your age bracket (Tick where applicable)

1) Between 21-30 years [ ]
2) Between 31-40 years [ ]
3) Between 41-50 years [ ]
4) Above 50 years [ ]

3. For how long have you worked in the County Government? (Tick where applicable)

1) Below 2 Years [ ]
2) Between 2-5 Years [ ]
3) Between 5-8 Years [ ]
4) Other (Specify)_____

4. What is your level of education? (Tick where applicable)

1) Certificate [ ]
2) Diploma [ ]

3) Degree [ ]

4) Masters [ ]

5) PhD [ ]

6) Other (Specify)_____

SECTION B: PRIVACY

5. Is there security of information while using technology in place used in the implementation of electronic governance in the county?

1) Yes [ ] 2) No [ ]

6. Is there a policy framework and regulation that has been developed by the County Government to support E-Governance?

1) Yes [ ] 2) No [ ]

6.1. If yes, is there any legal framework on (Tick where applicable):

1. Access to information such as the Freedom of information Act [ ]
2. Personal data protection including digital security [ ]
3. Open Government Data [ ]
4. Digital Identity [ ]
5. Digital Signature [ ]
6. E-Procuremen [ ]
7. Digital publishing [ ]
8. Data interoperability [ ]
9. Digital Government as a right [ ]

7. Is there an ICT policy put in place to ensure implementation of electronic governance?

1) Yes [ ] 2) No [ ]

8. Do you trust putting your details online?

1) Yes [ ] 2) No [ ]

If No, why?

_____

_____

_____

_____

_____

_____

9. Kindly indicate to what extent you agree with the following statements on innovation technology and its influence on the implementation of electronic governance in Elgeyo Marakwet county, Kenya

Using the following scale, please tick the one that best describes your opinion

(1=Strongly Disagree, 2= Disagree, 3=Neutral, 4= Agree, 5=Strongly Agree)

Statements	**5**	**4**	**3**	**2**	**1**
1. There is security in innovation technology in terms of firewalls					
2. There is security in innovation technology in terms of encrypted password					
3. There are policy framework and regulation governing the use of innovation technology					
4. ICT policy emphasizes on privacy of county government documents					
5. Innovation technology secure environment to transact online					

10. In your opinion what are other best practices that the County Government should adopt to enhance privacy?

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……

SECTION C: TECHNOLOGICAL LITERACY

11. Are the staff using electronic devices in their offices for service delivery?

1) Yes [ ] 2) No [ ]

11.1 If yes, what type of devices do they use (Tick where applicable).

1. Desktop Computer [ ]
2. Laptop [ ]
3. Phone [ ]
4. Other

(Specify)_____

12. Do you have a user account as an employee?

1. Yes [ ] 2) No [ ]

13. Are there adequate computers in the County?

1. Yes [ ] 2) No [ ]

14. Have you ever received any form of digital training?

1. Yes [ ] 2) No [ ]

15. Using the following scale, please tick the one that best describes your opinion

(1=Strongly Disagree, 2= Disagree, 3=Neutral , 4= Agree, 5=Strongly Agree)

Statements	**5**	**4**	**3**	**2**	**1**
1. Staffs have ability to use computer to participate effectively in county activities					
2. Digital technology use has improved information creation in order to function in a knowledge society					
3. Communications tools use has improved communication with citizens in order to participate effectively in community					
4. Network's use has improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community					

16. How can the County Government enhance technological literacy of its employees?

……

…..……

…

SECTION D: TECHNICAL INFRASTRUCTURE

17. Does the County Government have in place adequate IT infrastructure to support E-Governance?

1. Yes [ ] 2) No [ ]

18. Does the County have a connection to the Internet?

1. Yes [ ] 2) No [ ]

18.1 If yes, which computer network infrastructure does the County use? (Tick where applicable)

1) Local Area Network [ ]

2) Wide Area Network [ ]

3) Wi-Fi [ ]

4) Other

(Specify)_____

19. What is the speed of the internet?

1) 5 Mps [ ]
2) 10 Mps [ ]
3) 100 Mps [ ]
4) Other (Specify)_____

20. Is there a power backup in the County?

1. Yes [ ] 2) No [ ]

21. Does the County have a server in place?

1. Yes [ ] 2) No [ ]

22. Using the following scale, please tick the one that best describes your opinion

(1= Strongly Disagree, 2 = Disagree , 3= Neutral, 4= Agree, 5=Strongly Agree)

Statements	**5**	**4**	**3**	**2**	**1**
1. County have reliable internet connectivity to allow for implementation of electronic governance					
2. The innovation technology adopted by the county government has data processing capacity					

3. There is reliable power supply for implementation of electronic governance					
4. There are adequate computer technologies for implementation of electronic governance					
5. The technology infrastructure in the county ensures there is backups system of documents					

23. How is the technical infrastructure in the county?

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SECTION F: E-GOVERNANCE IMPLEMENTATION

24. How do you collect revenue in the County?

1. Cash [ ]

2. Mobile Application [ ]

3. County Government Application [ ]

4. Other

(Specify)_____

25. Does the County have an E-Procurement system?

1. Yes [ ] 2) No [ ]

26. How do you get inquiries from the Citizens, businesses and other E-Government users?

1. E-Mail [ ]
2. Phone Call [ ]
3. SMS [ ]
4. Social Media [ ]
5. Others (Specify)_____

27. Do you collect usage statistics of E-Government services?

1. Yes [ ] 2) No [ ]

27.1 If yes, what percentage of the users were satisfied with their last experience of online public service?_____

28. Using the following scale, please tick the one that best describes your opinion

(1= Strongly Disagree, 2 = Disagree , 3= Neutral, 4= Agree, 5=Strongly Agree)

Statements	5	4	3	2	1
1. E-governance implementation has improved tax collection services in the county					
2. There are improved procurement systems in the county government					
3. Citizens are satisfied with implementation of E-governance					
4. There is cost reduction in service delivery in the county					
5. There is efficient and effective communication in the county					

29. How else can the County Government enhance E-Governance?

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APPENDIX II: QUESTIONNAIRE FOR THE CITIZENS

SECTION A: DEMOGRAPHIC INFORMATION

1. Gender (Tick where applicable)
1) Male [ ] (2) Female [ ] (3) Other [ ]

2. What is your age bracket (Tick where applicable)

Between 21-30 years [ ]

Between 31-40 years [ ]

Between 41-50 years [ ]

Above 50 years [ ]

3. What is your level of education? (Tick where applicable)

Certificate [ ]

Diploma [ ]

Degree [ ]

Masters [ ]

PhD [ ]

Other (Specify)_____

SECTION B: PRIVACY

6. Are there rules and regulations in electronic services?

1. Yes [ ] 2) No [ ]

If yes, please name them.

_____

_____

7. Do you trust putting your details online?

1) Yes [ ] 2) No [ ]

If no, why?_____

8. You prefer travelling to the County Government Offices to get face to face services than online?

1) Strongly agree [ ]

2) Agree [ ]

3) Disagree [ ]

4) Strongly Disagree [ ]

9. Influence of privacy on innovation technology and its influence on the implementation of electronic governance in Elgeyo Marakwet county, Kenya

Using the following scale, please tick the one that best describes your opinion

(1= Strongly Disagree, 2 = Disagree , 3= Neutral, 4= Agree, 5=Strongly Agree)

Statements	**5**	**4**	**3**	**2**	**1**
1. There is security in innovation technology in terms of firewalls					
2. There is security in innovation technology in terms of encrypted password					
3. There are policy framework and regulation governing the use of innovation technology					
4. ICT policy emphasizes on privacy of county government documents					
5. Innovation technology secure environment to transact online					

SECTION C: TECHNOLOGICAL LITERACY

6. Which type of electronic devices do you own? (Tick where applicable)

a. Computer [ ]

b. Laptop [ ]

c. Phone [ ]

d. Others(Specify)_____

7. What is your level of technological literacy? (Pick only one option)

a. Very low [ ]

b. Low [ ]

c. Moderate [ ]

d. High [ ]

e. Very high [ ]

8. Are the staff able to use computer to solve problems concerning implementation of electronic governance?

1) Yes [ ] 2) No [ ]

9. Are you conversant with internet surfing?

1.) Yes [ ] 2) No [ ]

10. Using the following scale, please tick the one that best describes your opinion

(1= Strongly Disagree, 2 = Disagree , 3= Neutral, 4= Agree, 5=Strongly Agree)

Statements	**5**	**4**	**3**	**2**	**1**
1. Staffs have ability to use computer to participate effectively in county activities					
2. Digital technology use has improved information creation in order to function in a knowledge society					
3. Communications tools use has improved communication with citizens in order to participate effectively in community.					
4. Network's use has improved access, manage, integrate, evaluate, and create information in order to function in a knowledge community					

10. Are there adequate computer in the county?

……

……

11. How has the information literacy influence implementation of electronic governance?

……

…….

SECTION D: TECHNICAL INFRASTRUCTURE

12. Is the county having a reliable internet connectivity?

1. Yes [ ] 2. No [ ]

13. How do you access Internet?

1. Cyber Café [ ]

2. Laptop [ ]

3. Personal Phone [ ]

4. Other

(Specify)_____

14. Is there reliable power supply in the County?

Yes [ ] No [ ]

Using the following scale, please tick the one that best describes your opinion

(1= Strongly Disagree, 2 = Disagree , 3= Neutral, 4= Agree, 5=Strongly Agree)

Statements	**5**	**4**	**3**	**2**	**1**
1. County have reliable internet connectivity to allow for implementation of electronic governance					
2. The innovation technology adopted by the county government has data processing capacity					
3. There is reliable power supply for implementation of electronic governance					
4. There are adequate computer technologies for implementation of electronic governance					

5. The technology infrastructure in the county ensures there is backups system of documents					

15. How is the technical infrastructure in the county?

……

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SECTION E: E-GOVERNANCE IMPLEMENTATION

16. Have you ever heard or utilized online County Government services?

1. Yes [ ] 2. No [ ]

17. Is this service offered online?

1. Yes [ ] 2. No [ ]

18. Where do you access online support services?

1. Cyber Café [ ]

2. Laptop [ ]

3. Personal Phone [ ]

4. Other (Specify)_____

19. Do you think that E-Government services can reduce the cost of delivering services in the County?

1. Yes [ ] 2. No [ ]

Using the following scale, please tick the one that best describes your opinion

(1= Strongly Disagree, 2 = Disagree , 3= Neutral, 4= Agree, 5=Strongly Agree)

Statements	5	4	3	2	1
1. E-governance implementation has improved tax collection services in the county					
2. There are improved procurement systems in the county government					
3. Citizens are satisfied with implementation of E-governance					
4. There is cost reduction in service delivery in the county					
5. There is efficient and effective communication in the county					

20. In your opinion, what can be used in order to improve County Government e-services utilization?

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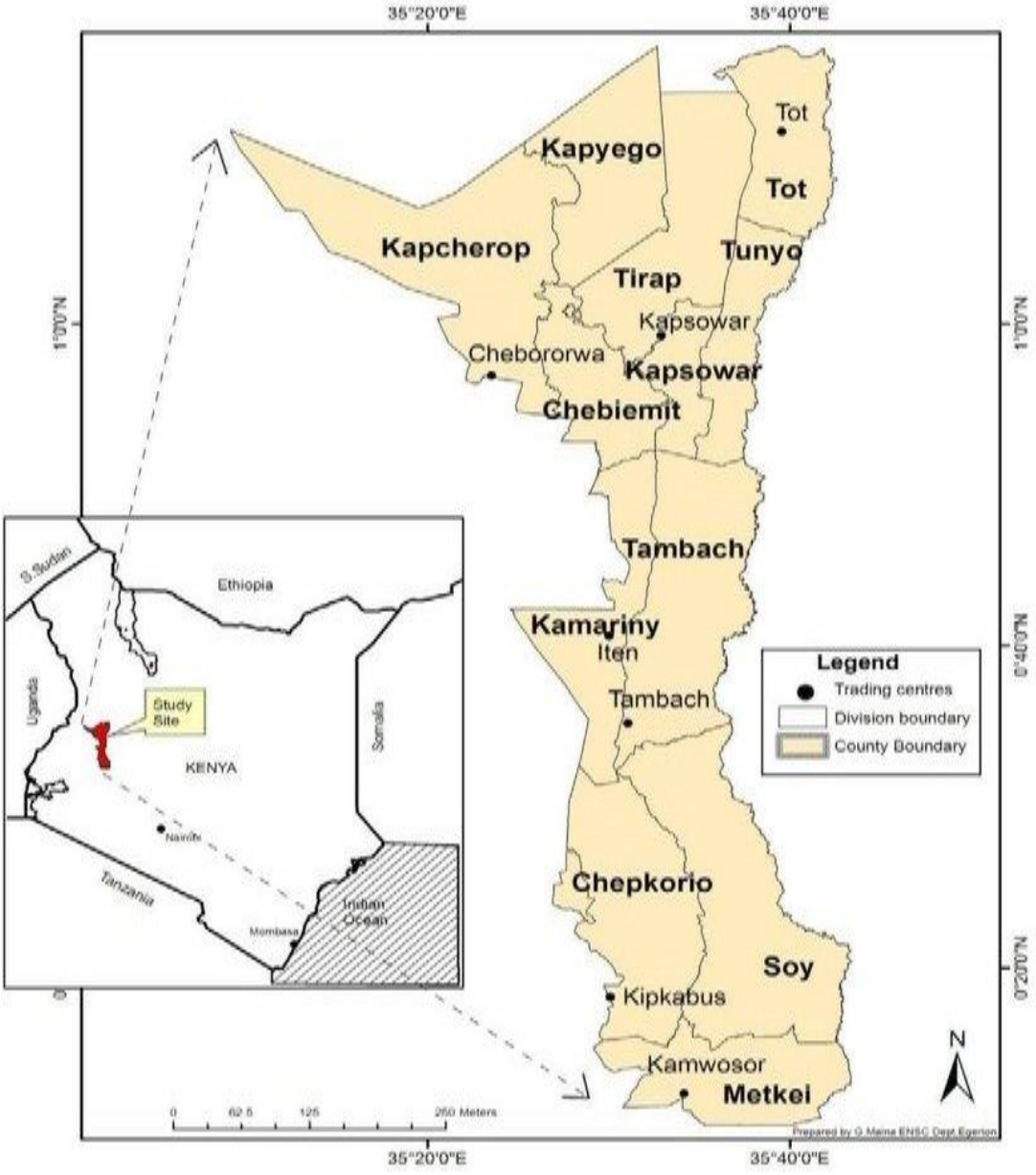
APPENDIX III: BUDGET

ACTIVITIES	**ITEMS/PARTICIPANTS**	**COST (KSHS)**
Proposal development	Library search and Travelling expenditure by the researcher, typing, photocopying and binding of the proposals.	20,000
Research permit	Transport and accommodation of the researcher	15,000
Pilot Survey	Transport for researcher and research assistants	15,000
Main field data collection	Travel and subsistence Printing	12,500
Data processing, analysis and thesis writing	Researcher's subsistence, transport, typing, Photocopying and binding	30, 000
Miscellaneous		10,000
Total		**105,500**

APPENDIX IV: MAP OF ELGEYO MARAKWET COUNTY



APPENDIX V: RESEARCH AUTHORIZATION LETTER

THE PRESIDENCY
MINISTRY OF INTERIOR & COORDINATION OF NATIONAL GOVERNMENT

COUNTY COMMISSIONER'S OFFICE,
ELGEYO-MARAKWET COUNTY,
P.O. BOX 200-30700
ITEN

Telephone: (053) 42007
Fax : (053) 42289
E-mail: ccelgeyomarakwet@yahoo.com
ccelgeyomarakwet@gmail.com
When replying please quote

PUB.CC.24/2 VOL.III/131 **3rd October, 2022**

Ref..... Date.....

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION

MR.DANIEL KIPTANUI KIMUTAI

This is to confirm that the above named has been authorized to carry out a research on "INFLUENCE OF INNOVATION TECHNOLOGY ON THE IMPLEMENTATION OF ELECTRONIC GOVERNANCE IN ELGEYO MARAKWET COUNTY, KENYA" for a period ending 23rd September 2023.

Please accord him the necessary assistance.

JOHN KORIR
COUNTY COMMISSIONER
ELGEYO MARAKWET COUNTY

c.c. All Deputy County Commissioners
Elgeyo Marakwet.

JKM/bjc

REPUBLIC OF KENYA
MINISTRY OF EDUCATION
STATE DEPARTMENT FOR EARLY LEARNING AND BASIC EDUCATION

TELEGRAM:.....
TELEPHONE NO: 0534142207
WHEN REPYLING PLEASE QUOTE OUR REFERENCE
EMAIL: cdeelgeyomarakwet@gmail.com

COUNTY DIRECTOR OF EDUCATION
ELGEYO MARAKWET COUNTY
P.O. BOX 214-30700
ITEN

DATE: 3rd October, 2022

REF No: *CDE/EMC/R/26/VOL.III/ (69)*

MR DANIEL KIPTANUI KIMUTAI

RE: RESEARCH AUTHORIZATION

Following the authorization by the National Commission for Science, Technology and Innovation **(NACOSTI)** to carry out research in **Elgeyo Marakwet County** Vide Authority letter **Ref. No. NACOSTI/P/ 22/P/22/20589** dated **23rd September 2022,** you are hereby formally granted authority by this office to proceed with your study on ***"Influence of innovation technology on the implementation of electronic governance in Elgeyo Marakwet County, Kenya for*** a period ending: **23rd September, 2023.**

You are further required to report to the Sub-County Directors of Education.

Masibo J. Kituyi
County Director of Education
ELGEYO MARAKWET

Copy to:
1. The Director General/CEO -NACOSTI
2. All Sub-County Directors of Education – ELGEYO MARAKWET

APPENDIX VI: NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 598166

Date of Issue: 23/September/2022

RESEARCH LICENSE

This is to Certify that Mr.. Daniel Kiptanui Kimutai of Kenyatta University, has been licensed to conduct research in Elgeyo-Marakwet on the topic: INFLUENCE OF INNOVATION TECHNOLOGY ON THE IMPLEMENTATION OF ELECTRONIC GOVERNANCE IN ELGEYO MARAKWET COUNTY, KENYA for the period ending : 23/September/2023.

License No: NACOSTI/P/22/20589

598166

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY &
INNOVATION

Verification QR Code

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