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FACTORS INFLUENCING THE IMPLEMENTATION OF E-GOVERNMENT POLICIES IN NAKURU COUNTY, KENYA

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Abstract

Purpose*:* The purpose of the study was to assess factors influencing the implementation of e-government policies in Nakuru County, Kenya**.**

Methodology*:* The study employed a descriptive research design in the form of survey. The study population was all government employees in four government sectors; Education sector, agricultural sector, financial sector and public administration sector. A sample of 80 public officers working in the four sectors and in Nakuru County was targeted. The instruments of data collection were questionnaires.

Results*:* Regression results indicate that there is a positive and significant relationship between Supporting Infrastructure (SI) and e government use. Regression results also indicate that there is a positive and significant relationship between Perceived Ease of Use (PEU) and e government use. There is a positive and significant relationship between Risk and Privacy (RP) and e government use. Regression results indicate that there is a positive and significant relationship between Perceived Usefulness (PU) and e government use.

Unique contribution to theory, practice and policy: The study recommends that the government should invest in training and awareness for e government users. This would ensure that the users find government applications easy to use. In addition, the government should invest in support infrastructure such as investing in fast internet connections. The government may also review taxes on the acquisition of personal computers. The government should also address privacy and risk concerns. For instance, the government should put in place security mechanisms such as firewalls and passwords.

Keywords: *implementation, e-government policies, Nakuru County*

1.0 INTRODUCTION

1.1 Background of the Study

Government services are being transformed using information and communication technologies by many governments in developed and developing countries through developing, implementing and improving their strategies. This transformation of services is referred to as e-government, digital government, on-line government, or transformational government (Gupta *et al.*, 2008). Public administration since last decade has greatly been reshaped with the arrival of new information and communication technologies (ICT) with e-government being one of the important innovations. This is caused by the belief that ICT can significantly improve the efficiency and effectiveness of public services.

"E-Government has been classified in terms of activities and delivering models in five categories: The Government-to-Business (G2B) which involve automating procurement procedures, the major motivating factor being from the business side which has automated virtually everything; Government-to-Employees (G2E); Government-to-Government (G2G) which include intra and inter government connectivity and sharing of information to ensure efficiency and increased speed of service delivery to citizens; Government to citizens or Government to Customer (G2C) with the major initiative towards ensuring that transactions are less time consuming and this is driven by demand from the citizens and especially young people; and Citizen-to-Citizen (C2C)," Lee *et al.*, (2005); Carter and Belanger, (2003).

Kenya has more than 100 licensed Internet service providers and over 3 million internet users which has led to an increase in the population of Kenyans accessing the internet. The approval of the first national ICT policy in 2006 has its objective aimed at making the government focus more on the citizens and be result oriented. Kenya's constitution and the economic blue print vision 2030 (Republic of Kenya, 2007) redefines the relationship between the government and its citizens and empowers the citizens to access better government services.

In Kenya, websites from all government ministries provide links to other government ministries and parastatals and also provide general information on the mandates of the government ministries. Download-able forms are provided by most of these websites which citizens can use to access government services without having to travel long distances to access the services or even queue in government offices which saves time and money to the citizens. Transparency has also been enhanced by the government through improving its internal capacity and fighting corruption activities in the delivery of services. Support to pension administration, driver license registration, land information and land registration system, high court registrar, public servant wealth declaration, company registration and improvement in procurement process are the major areas targeted by e-government program application.

Technical assistance is being provided to the Ministry of Information and Communications, the Communication Commission of Kenya, the e-Government directorate in the Office of the President, the Kenya Education Network Trust and the Public Procurement Oversight authority to pursue sector reforms. There is an effort aimed at accelerating the establishment of the necessary legal and regulatory framework to ensure that issues of data protection, privacy and security of the transaction and intellectual property rights are safeguarded

through the public private partnership. Smooth intra-government communications and sharing of data and information over the network as opposed to paper format will be achieved when all online e-government applications will be linked through establishment of government information portal. Local Area Networks (LAN's) are present in most of government offices in the country and others can access Wide Area Network and email services. All civil servants are assigned email addresses in their respective ministries. E-government directorate at the office of the president has been mandated with the monitoring and evaluation of the e-government system which will ensure that the systems in place are operating at peak efficiency and policies on ICT are spread to all government departments.

In 2010, the Kenyan Judiciary launched a telepresence system which allows justice system to conduct and run its business without the need of traveling long distances. The project will enable the court of appeal to sit in Nairobi and dispense justice in Mombasa. The Judiciary has also begun the Judiciary Case management information system which is a short message service (SMS) platform. The project has begun with digitization of over 30 million records in the registries. The company registry digitization has been completed, this will ensure that customers will have speedier searches and the process of registering companies and name search will be shortened.

Nakuru County is located 160 km North West of Nairobi and is the fourth largest urban centre in Kenya after Nairobi, Mombassa and Kisumu and also hosts the Rift Valley Province Administration Headquarters. Nakuru County is one of the main agricultural centres of Kenya with a strong manufacturing and service industry focused on the agriculture sector which the economy of the county depends on. Nakuru County has a tourist potential due to the presence of natural features such as Lake Nakuru, Menengai Crater and archaeological sites such as Sirikwa holes and Hyrax hill. Municipality has four locations, five sub-locations and 80,000 households. The estimated population density of Nakuru County is 974/km2 with rural-urban migration and boundary extensions influencing its rapid growth.

1.2 Problem Statement

E-government has led to interaction between the government and its citizens, government and its employees, government and business and government and other government agencies. There have been various developments through which the government communicates and receives information from all stakeholders. This is through obtaining services from the government offices such as National examinations results for Kenya Certificate of Primary Education (K.C.P.E) and Kenya Certificate of Secondary Education (K.C.S.E), checking the status of national identity card, passport, filling tax returns and business registration. Despite the many efforts to provide electronic services, there are a number of challenges which include the connectivity and the ability of a large population to utilize these services and the capacity of the government departments to meet the demand and provide quality, timely services.

The main challenges of any e-government program in a country are; improving services to citizens, improving the productivity and efficiency of government agencies, promoting priority economic sectors, improving the quality of life for disadvantaged communities and strengthening good governance and broadening public participation. These multiple challenges need to be addressed with a view to coming up with logical solutions that can guarantee effective and efficient public service delivery. This study is therefore aimed at

assessing the factors influencing the implementation of e-government program in Nakuru County.

1.3 Objectives of the Research

To assess the extent to which support infrastructure influences the implementation of e-government.

To assess the extent to which perceived ease of use influence the implementation of e-government program in Nakuru County.

To assess how the perceived risk and privacy influence the implementation of e-government.

To assess how the perceived usefulness, influence the implementation of e-government programs.

To make policy suggestion for the improvement of implementation of e-government policy

2.0 LITERATURE REVIEW

2.1 Theoretical Framework

Government stakeholders decide whether it is worthwhile to implement these e-government policies in their day to day work. They associate e-government with benefits and losses that come as costs either directly such as costs of buying computers and internet access installation or indirectly as an opportunity cost associated with lower resources available for a stakeholder satisfaction. The choice may also be made based on the level of literacy in ICT by their workers, quality of the services offered, poor infrastructure and insufficient legal and regulation framework.

The stakeholders' choice of implementation was put in terms of utility functions. It was assumed that each stakeholder has a utility function defined over **b** and **c** where **b** denotes the benefits associated with implementation of e-government policies and **c** is the stockholder's satisfaction. Accordingly, stockholder's utility conditional on e-government implementation (denoted by subscript 1) is given as;

$$\mu_1 = \mu\ (b, c_1) \qquad (3.1)$$

The associated budget constraint is;

$$Y = C_1 + P \qquad (3.2)$$

Where **Y** is the stockholder's income and **P** represents the total cost associated with e-government implementation.

In a similar way, the utility associated with not implementing e-government policies may be defined by;

$$\mu_O = \mu\ (C_o) \qquad (3.3)$$

The budget constraint is;

$$Y = C_o$$

Given the utility associated with both options, stakeholders choose the option that yield the highest return. The solution to the problem of maximizing unconditional utility is;

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$$\mu^* = \text{Max}\ (\mu_1, \mu_2) \qquad (3.4)$$

Where $\mathbf{U}^*$ is the maximum utility μ_1 and μ_O in (3.1) and (3.3) are, the conditional utility given the constraint in (3.2).

Alternatively, e-government implementation may be defined in terms of dichotomous variable, where **a=1** if e-government policies are implementation and 0 if the e-government policies are not implemented; that is **a=1** if $\mu_1 > \mu_O$. The assumption so far is that there is no choice of quality of e-government policies. Thus all e-government provide same quality of ICT services.

Given the objective of determining the factors that influence the implementation of e-government policies in Nakuru County, there is need to specify linear forms of the conditional utility function.

For the e-government implementation option

$$\mu_1 = \beta_1 b + \beta_2 c_1 + e_1 \qquad (3.5)$$

Where β's are coefficients estimates and e_1 is a normal distributed error term.

Since $C_1 = y - p$, equation (3.5) becomes;

$$\mu_1 = \beta_1 b + \beta_2 (y - p) + e_1 \qquad (3.6)$$

The utility function for the non-implementation options of e-government is;

$$\mu_0 = \beta_2 y + e_0 \qquad (3.7)$$

Thus, stakeholders implement e-government policies, if $\mu_1 - \mu_0 > 0$

That is, $a=1$ if $\beta_1 b - \beta_2 p + e_1 - e_0 > 0$

Hence the probability of implementing e-government policies may be written as;

$$\Pr(a=1) = \text{pr}(\beta_1 b - \beta_2 p + e_a) \qquad (3.8)$$

3.0 RESEARCH METHODOLOGY

The study employed a descriptive research design in the form of survey. The study population was all government employees in four government sectors; Education sector, agricultural sector, financial sector and public administration sector. A sample of 80 public officers working in the four sectors and in Nakuru County was targeted. The instruments of data collection were questionnaires. The study adopted stratified random sampling approach to collect unbiased data from the target population. A simple random sample of 20 public officers was selected from each stratum. Primary data was collected using a self-administered questionnaire which was issued to the respondents directly. The document analysis involved analysis of reports on ICT and e-governance in the last one year. The data set relied primarily on data that was collected using a self-administered questionnaire to public officers in

Nakuru County. This study used the OLS model in running the regression The coding of categorized data was done according to various guiding statements stipulated by the question items. Frequency tables, percentages and means were used to present the findings. Responses in the questionnaire were tabulated, coded and processed by use of STATA programme to analyze the data.

4.0 RESULTS AND DISCUSSIONS

4. 1 Demographic Information

4.1.1 Gender of the Respondents

The study sought to establish the gender distribution of the respondents. The findings were presented in figure 1. From the study findings, majority 60% of the respondents were male while only 40% of the respondents were female.

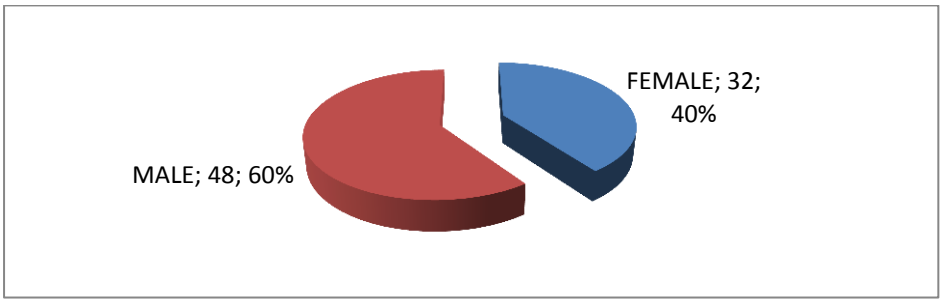

Figure 1: Gender of the Respondents

4.1.2 Age of the Respondents

The study sought to establish the age bracket of the respondents. The findings were presented in figure 2. From the study findings, majority of the respondents (45%) were between 36 to 50 years old while 35% were aged between 26 to 35 years. Thirteen percent (13%) of the respondent were aged above 51 years old and finally 7% of the respondents were aged between 18 to25 years old.

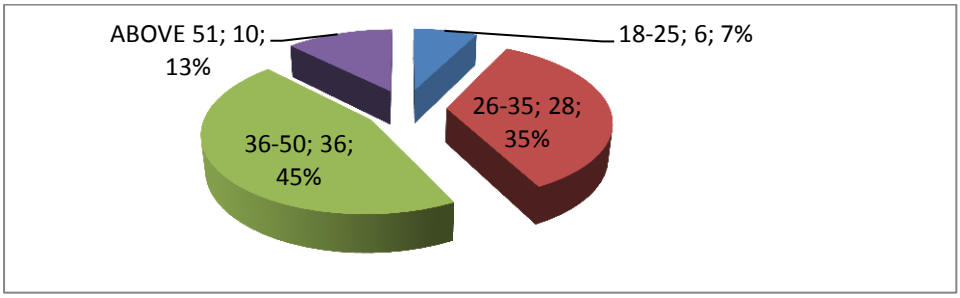

Figure 2: Age of the Respondents

4.1.3 Sector of the Respondents

The study sought to establish the sector of the respondents. The findings were presented in figure 4. From the study findings, majority of the respondents an equal share of 25% was shared among finance, education, public administration and agriculture sectors respectively.

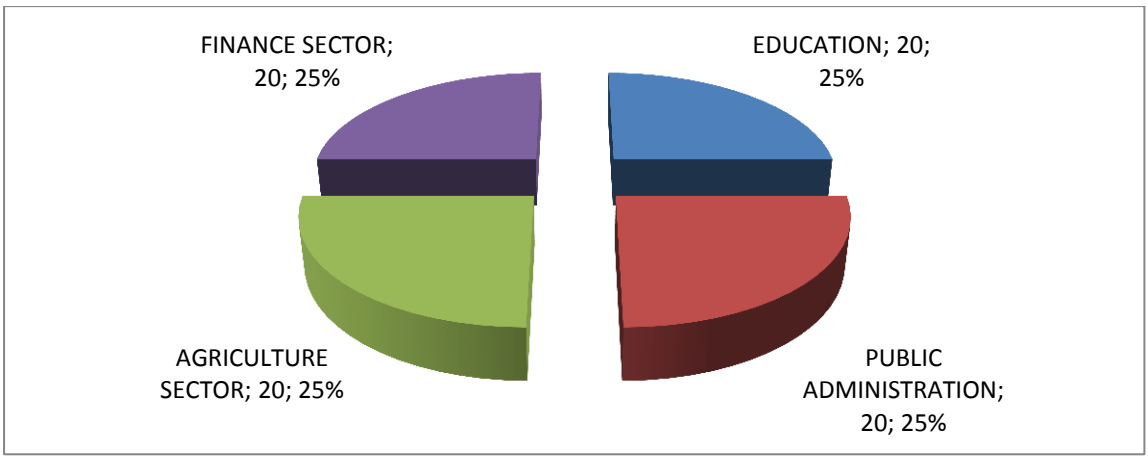

Figure 3: Sector of the Respondents

4.1.4 Level of Education

The study sought to establish the level of education of the respondents. The findings were presented in figure 4. From the study findings, majority of the respondents (36%) were university graduates while 33% of the respondents had gone up to tertiary level and finally 31% of the respondents had gone up to secondary level.

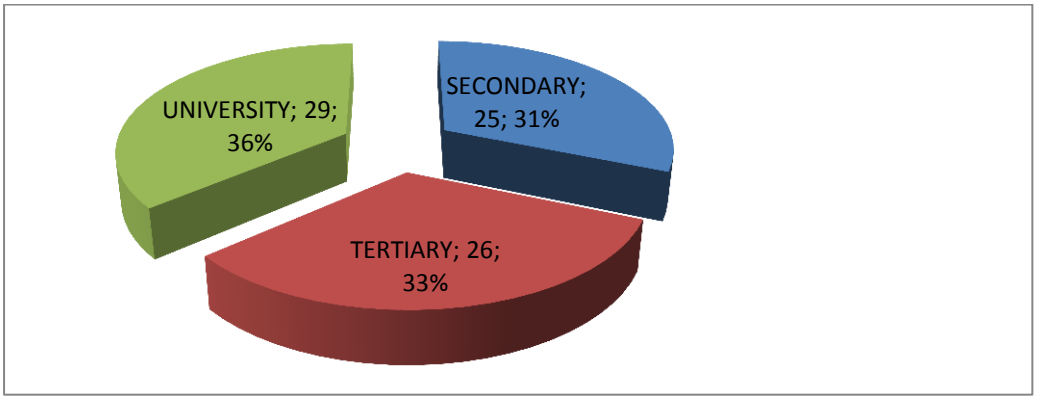

Figure 4: Level of Education

4.1.5 Area of Residence

The study sought to establish the residence area of the respondents. The findings were presented in figure 5. From the study findings, a very large majority of 95% of the respondents lived in the urban while only 5% of the respondents lived in the rural area.

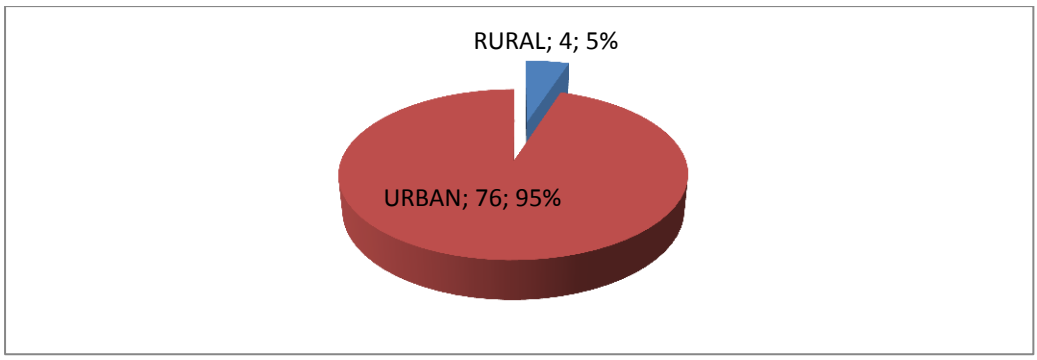

Figure 5: Area of Residence

4.1.6 Training on Computer Packages

The study sought to establish whether the respondents possess training on computer packages. The findings were presented in figure 6. From the study findings, majority (68%) of the respondents indicated that they possess training on computer packages while 32% of the respondents indicated that they do not have any computer training.

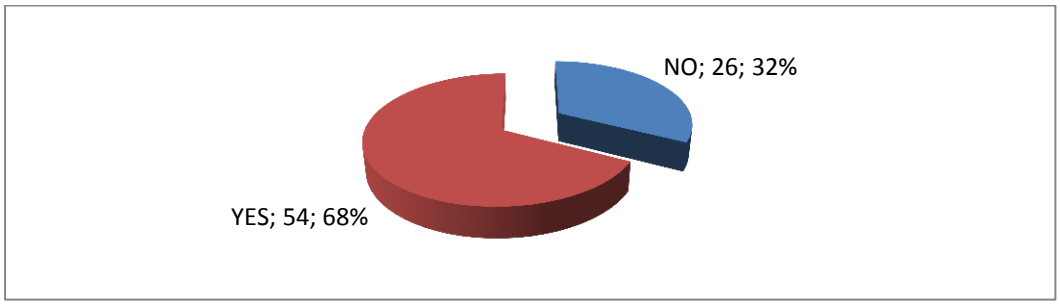

Figure 6: Training on Computer Packages

4.1.6 Knowledge on Various Computer Packages

The study sought to establish the knowledge of the respondents on various computer packages. The findings were presented in figure 7. From the study findings, majority (44%) of the respondents indicated that they possess a good knowledge of MS Word. A majority of 38% of the respondents indicated that they possess a good knowledge of MS Excel. Majority of 36% of the respondents indicated that they fairly understand MS PowerPoint. Thirty four percent (34%) of the respondents indicated that they possess a fair knowledge of MS Access. Finally a majority of 39% of the respondents indicated that they possess a good knowledge of internet and email. The findings seem to indicate low computer knowledge.

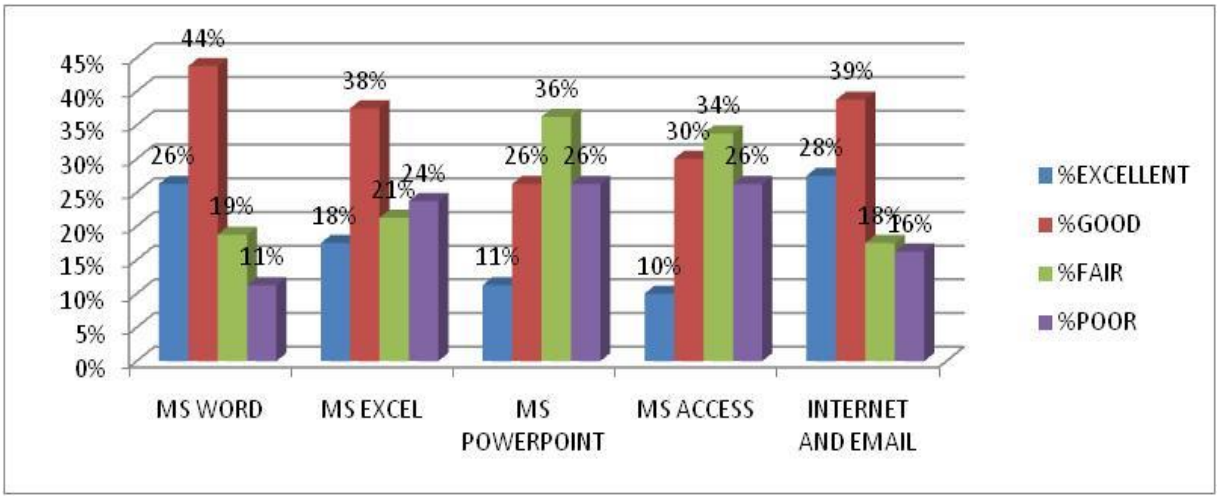

Figure 7: Knowledge of Various Computer Packages

4.2 Implementation of e-government policies

4.2.1 Use of e government services

The respondents were asked whether they had ever used e government services. A majority (57%) indicated that they had not while 43% indicated that they had.

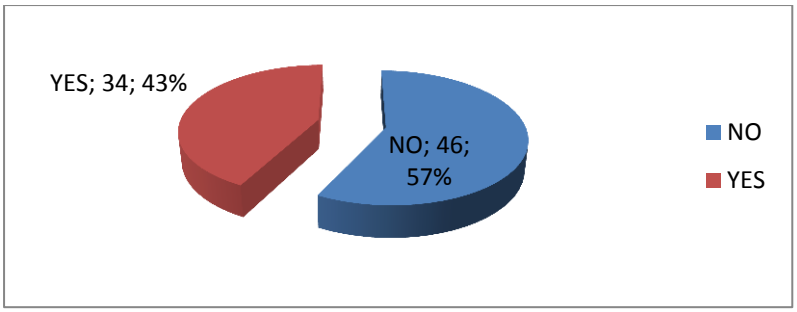

Figure 8: Use of e government services

4.2.2 Services Accessed Online from the Government

The study sought to establish services accessed online from the government by the respondents. The findings were presented in figure 9. The respondents were asked if they were using online services/e-government to submit their tax returns. 60% of the respondents indicated that they had not while 40% indicated that they had submitted tax returns online. 11% indicated that they registered their businesses using the online services offered by the government/e-government. A majority of 83% of the respondents indicated that they did not use online services from the government/e-government to check their national examination results while 17% indicated that they used the online services offered by the government to check their national examination results. Another eighty three percent (83%) of the respondents indicated that they were not using online services from the government while applying jobs; however, 17% indicated that they were using online services from the government while applying jobs. Ninety percent 90% of the respondents indicated that they did not use online services from the government to check status of their Identity cards. However, 10% of the respondents indicated that they used online services/e-government to

check the status of their Identity cards. A very large majority of 98% of the respondents indicated that they were not using online services from the government to get updates on scholarships; however, 2% of the respondents indicated that they were using online services from the government to get updates on scholarships. A majority of 84% of the respondents indicated that they were not using online services from the government/e-government to take training courses online while 16% indicated that they were using online services to receive training courses online.

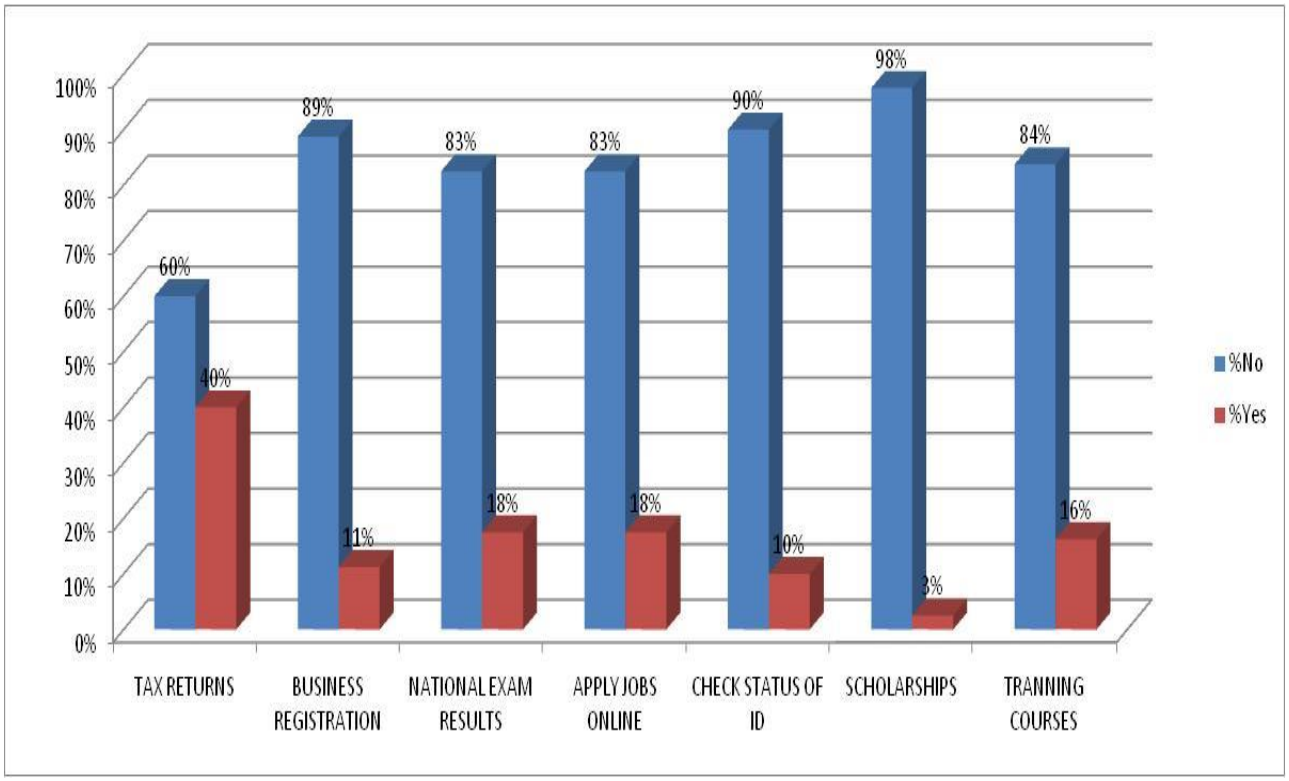

Figure 9: Services Accessed Online from the Government

4.3 To assess the extent to which ease of use of E-government applications influence the implementation of e-government

4.3.1 Opinion on Skills and IT Experience

The study sought to establish the respondents' opinion on their skills and IT experience. The findings were presented in figure 10. From the study findings, majority (55%) of the respondents strongly agreed that they possess general skills and IT experience while 36% simply agreed with the statement. However, an equal share of 4% neither agreed nor disagreed with the statement while the other disagreed respectively. One percent (1%) of the respondents strongly disagreed that they possess general skills and IT experience. Forty nine percent (49%) of the respondents strongly agreed that they have no download problems while 26% simply agreed with the statement. However, 11% neither agreed nor disagreed with the statement while 10% disagreed. Four percent (4%) of the respondents strongly disagreed with the statement that they have no download problems. A majority of 49% of the respondents strongly agreed that they can fill an application form online with ease while 24% simply agreed with the statement. However, 15% disagreed with the statement while 10% neither

agreed nor disagreed with the statement. Three percent (3%) of the respondents strongly disagreed with the statement. Fifty percent (50%) of the respondents strongly agreed that they have no difficulty in receiving and sending emails while 31% simply agreed with the statement. However, 10% neither agreed nor disagreed with the statement while 6% disagreed. Three percent (3%) of the respondents strongly disagreed with the statement. Forty three percent (43%) of the respondents strongly agreed that they find it easy to surf on the internet while 35% simply agreed with the statement. However, 15% disagreed with the statement while 8% neither agreed nor disagreed.

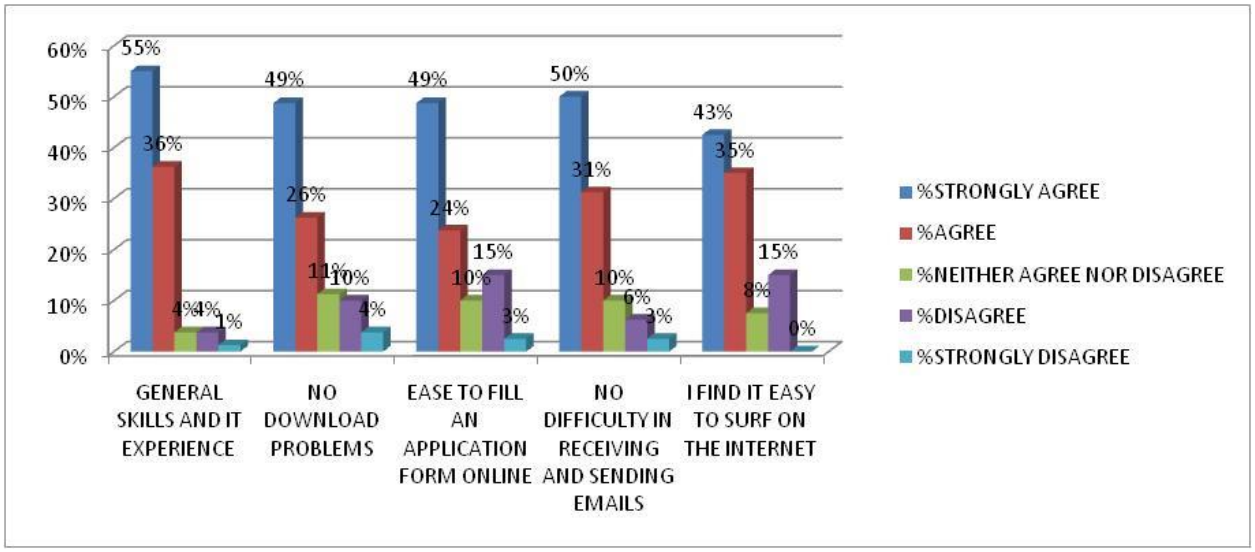

Figure 108: Opinion on Skills and IT Experience

4.4 To assess the extent to which availability of support infrastructure influence the implementation of e-government program in Nakuru County

4.4.1 Availability of support Infrastructure

The study sought to establish the availability of support infrastructure among the respondents. The findings were presented in figure 11. Majority (94%) of the respondents indicated that they own a personal email however, 6% of the respondents indicated that they do not have a personal email. A majority of 64% of the respondents indicated that they own a ministry email while 36% indicated that they do not have such an email. Eighty one percent (81%) of the respondents indicated that they do have a computer in their work place however, 19% indicated that they have no computers in their work place. Fifty one percent 51% of the respondents indicated that they do not own any personal computer while 49% of the respondents indicated that they do own personal computers. A majority of 69% of those who indicated that they own personal computers indicated that they do not have internet connections at their homes while 31% indicated that they do have internet connection at their homes.

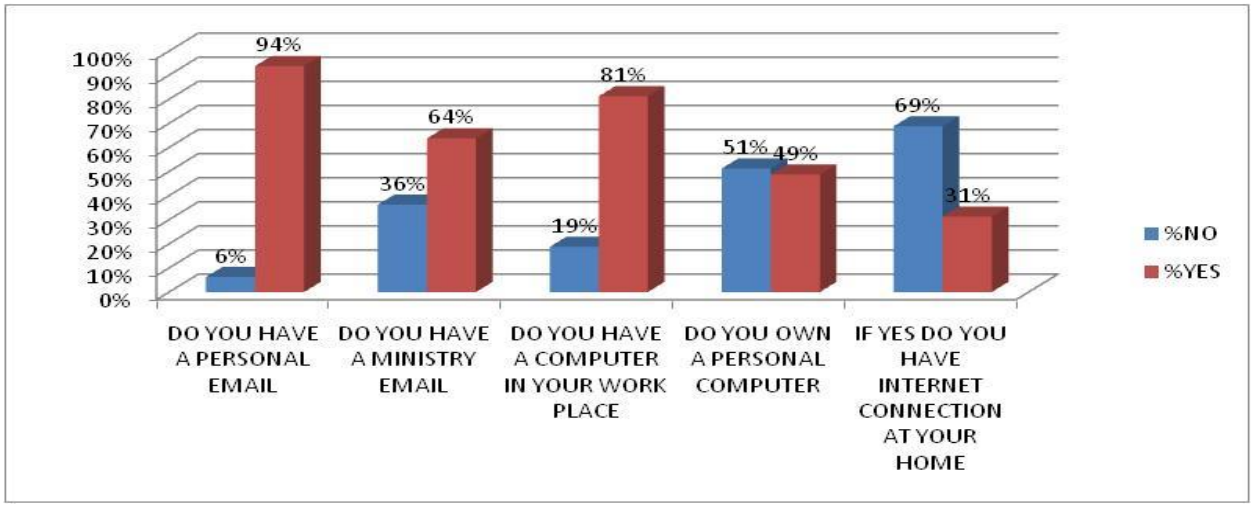

Figure 11: Availability of Support Infrastructure

4.5 To assess how the perceived risk and privacy influence the implementation of e-government programs

4.5.1 Opinion on the Risk and Privacy Concerns

The study sought to establish opinion on risk and privacy concerns. The findings were presented in figure 12. From the study findings, majority (47%) of the respondents agreed with the statement that e-government provides secure environment to transact online while 31% neither agreed nor disagreed with the statement. However, 17% strongly agreed with the statement while 3% disagreed and 2% of the respondents strongly disagreed with the statement. A majority of 31% of the respondents agreed that they prefer getting services in government offices than online while 28% disagreed with the statement. However 24% neither agreed nor disagreed with the statement while an equal share of 9% strongly agreed and strongly disagreed with the statement respectively. Twenty nine percent (29%) of the respondents agreed that they find it secure to transact with human personnel than online while 28% disagreed with the statement. However 22% neither agreed nor disagreed with the statement while 14% strongly agreed with statement and 7% strongly disagreed with the statement. Forty seven percent (47%) of the respondents agreed that they find e-government services friendly while 22% neither agreed nor disagreed with the statement. However 19% strongly agreed with the statement while 9% disagreed with the statement and 2% strongly disagreed with the statement. Forty three percent (43%) of the respondents agreed with the statement that adequate information and help is provided in websites while 29% neither agreed nor disagreed with the statement. However 16% strongly agreed with the statement while 9% disagreed with the statement and 3% strongly disagreed with the statement.

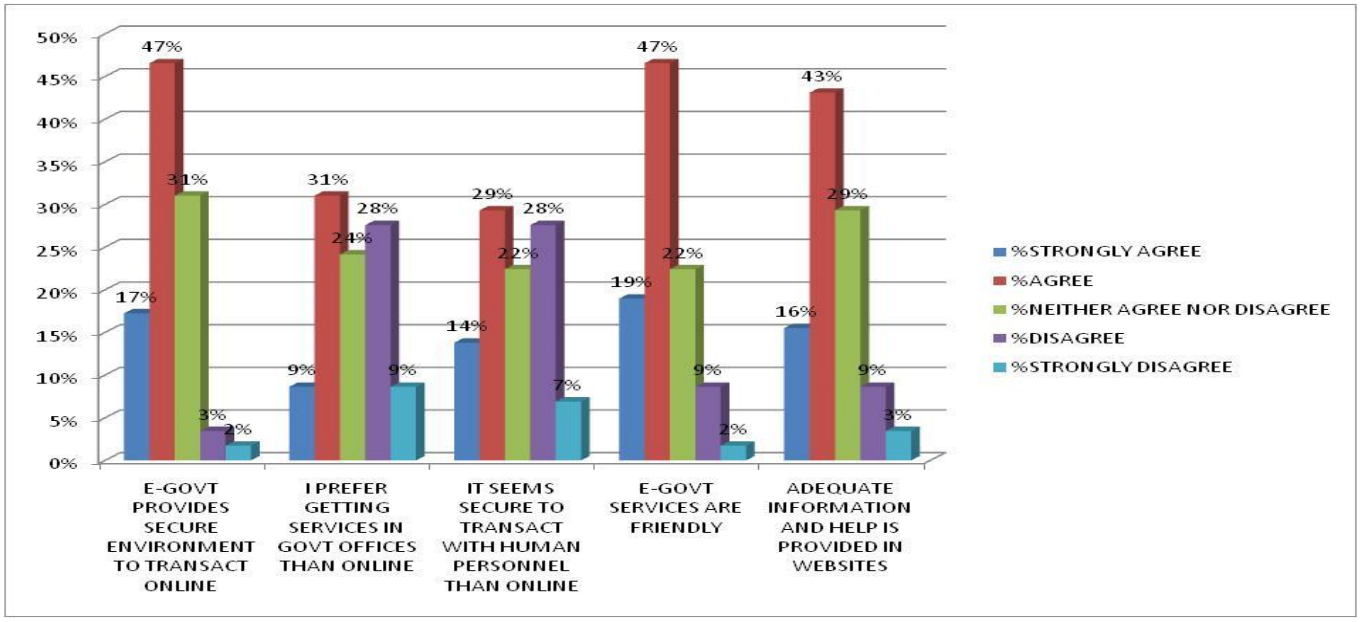

Figure 12: Opinion on the Risk and Privacy Concerns

4.6 To assess the extent to which perceived usefulness of E-government applications influence the implementation of e-government

4.6.1 Opinion on the Usefulness of E-Government

The study sought to establish opinion on the usefulness of e-government. The findings were presented in figure 13. From the study findings, majority (71%) of the respondents agreed with the statement that e-government improves how public services are delivered; 22% strongly agreed with the same statement. However, 3% of the respondents strongly disagreed with the statement while an equal share of 2% each neither agreed nor disagreed and strongly disagreed respectively. A majority of 34% of the respondents agreed with the statement that government website are updated regularly while 31% neither agreed nor disagreed with the statement. However 29% disagreed with the statement while 5% strongly agreed with the statement. Fifty seven percent (57%) of the respondents agreed with the statement that there is greater flexibility in transacting services online while 17% neither agreed nor disagreed with the statement. However 16% strongly agreed with the statement while 9% disagreed with statement and 2% strongly disagreed with the statement. Sixty six percent (66%) of the respondents agreed with the statement that e-government reduces the time used in provision of services online; 22% strongly agreed with the statement. However, 7% of the respondents neither agreed nor disagreed with the statement while 5% disagreed with the statement. A majority of 62% of the respondents agreed with the statement that e-government increases customer satisfaction while 16% strongly agreed with the statement. However 14% neither agreed nor disagreed with the statement while 9% disagreed with the statement. Majority (50%) of the respondents agreed with the statement that e-government increases feedback mechanisms while 16% strongly agreed with the statement. However, 14% neither agreed nor disagreed with the statement while 9% disagreed with the statement.

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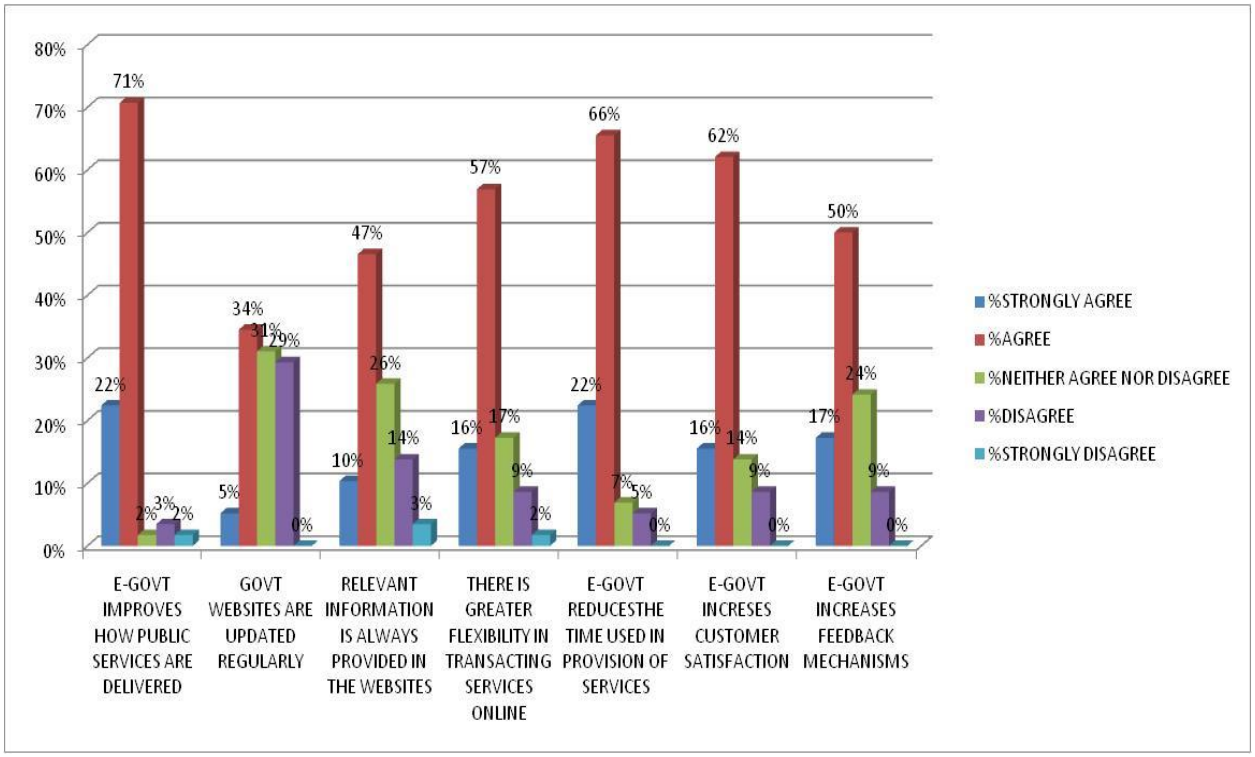

Figure 13: Opinion on the Usefulness of e-government

4.7 Challenges to the Smooth Implementation of E-Government

The study sought to establish the challenges to the smooth implementation of e-government. The findings were presented in figure 14. From the study findings, majority of the respondents indicated that they found low level of internet use among citizens as an important challenge to the smooth implementation of e-government. Respondents too found both ICT skills among the citizens and ICT skill among government officials to be an important challenge to the smooth implementation of e-government whereby an equal percentage of 48% of the respondents indicated that both are important challenges. However, 31% found ICT skills among the citizens as a very important challenge 12% found it to be a minor challenge and 7% found it as not being a challenge at all. On the other hand, 26% of the respondents found ICT skills among the government officials as a very important challenge while 24% found it to be a minor a challenge and 2% found it not to be a challenge at all. Majority of the respondents also found both perception on risk and privacy and lack of motivation to use e-government as important challenges.

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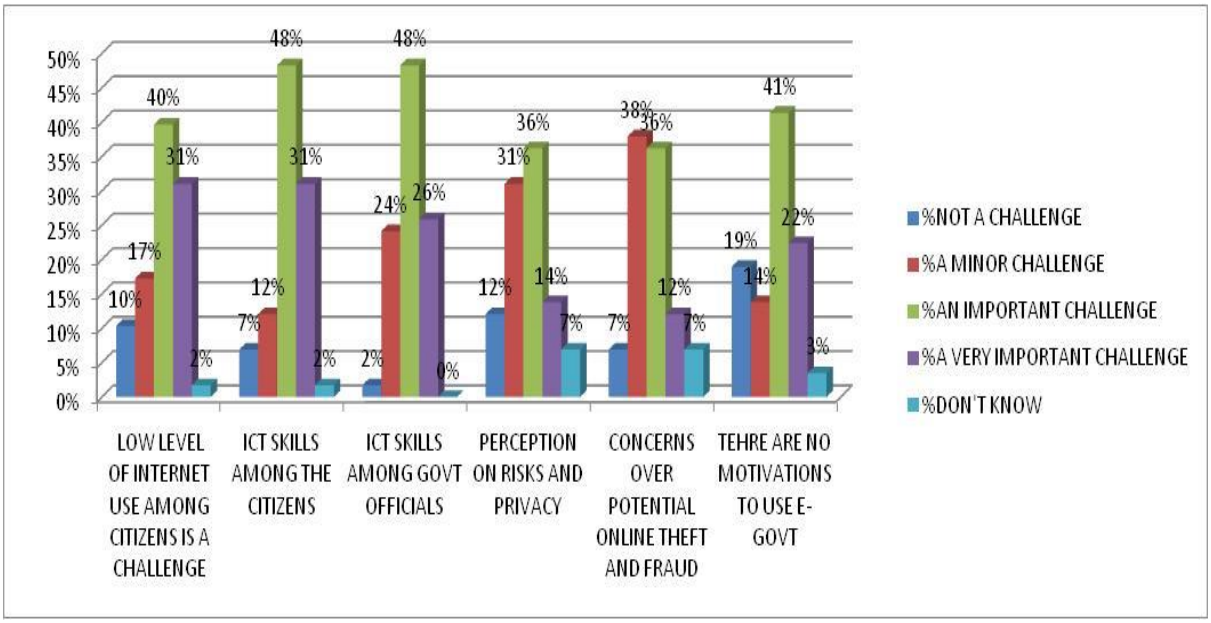

Figure 14: challenges to the Smooth Implementation of e-government

4.7.1 Other Challenges Experienced in Accessing Government Services Online

The respondents were asked whether there were any other challenges affecting access of e-government. The most prominent response was that online services were not acted upon fat enough. The response that attracted the least mention was slow internet.

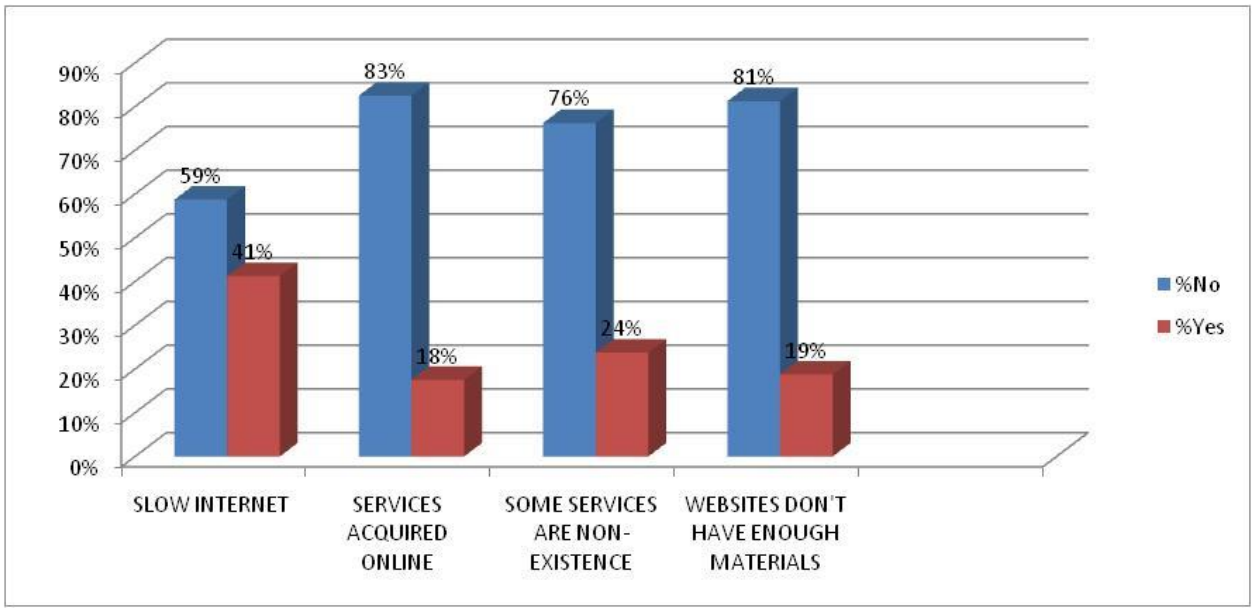

Figure 15: Challenges Experienced in accessing government services online

4.9 Regression Model

The study sought to establish the effect of various factors on the use of e government services. A regression analysis conducted in stata 11 indicated that the coefficient of

determination (R squared) of 0.6913 was achieved. An R squared of 0.6913 indicated that 69.13% of the variances in government use were explained by the independent variables (support infrastructure, perceived ease of use, risk and privacy and perceived usefulness. The High R square implied that the goodness of fit of the model was satisfactory. The R squared also implied that approximately 30.87% of the variations in e government use were explained by factors not included in model.

Regression results indicate that there is a positive and significant relationship between Supporting Infrastructure (SI) and e government use. A regression coefficient of 0.850 indicated that an increase in supporting infrastructure by 1 unit leads to an increase in government use by 0.850 Units.

Regression results indicate that there is a positive and significant relationship between Perceived Ease of Use (PEU) and e government use. A regression coefficient of 0.165 indicated that an increase in perceived ease of Use by 1 unit leads to an increase in government use by 0.165 Units.

Regression results indicate that there is a positive and significant relationship between Risk and Privacy (RP) and e government use. A regression coefficient of 0.058 indicated that an improvement in risk and privacy by 1 unit leads to an increase in government use by 0.058 Units.

Regression results indicate that there is a positive and significant relationship between Perceived Usefulness (PU) and e government use. A regression coefficient of 0.065 indicated that an increase in risk and privacy by 1 unit leads to an increase in government use by 0.065 Units.

E-Government Use = -0.588+0.850*SI*+0.165*PEU*+0.058*RP*+0.065*PU*

Table 4. 1: Regression Model

Source	SS	df	MS	Number of obs =	80
				F(4, 75) =	41.98
Model	13.5142784	4	3.3785696	Prob > F =	0.0000
Residual	6.03572159	75	.080476288	R-squared =	0.6913
				Adj R-squared =	0.6748
Total	19.55	79	.247468354	Root MSE =	.28368

Egovernmen~e	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
SI	.8506931	.2331787	3.65	0.000	.3861773	1.315209
PEU	.1657354	.0653086	2.54	0.013	.0356341	.2958367
RP	.0586149	.028334	2.07	0.042	.0021706	.1150592
PU	.0659931	.0322039	2.05	0.044	.0018397	.1301466
_cons	-.5887108	.0884233	-6.66	0.000	-.7648591	-.4125625

5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion

The study was an assessment of the factors influencing the implementation of e-government policies in Nakuru County, Kenya**.** Government services are being transformed using information and communication technologies by many governments in developed and developing countries through developing, implementing and improving their strategies.

Chapter one presented the background of the study. The chapter also presented the statement of the problems and the objectives. The objectives of the study were; to assess the extent to which support infrastructure influences the implementation of e-government.; to assess the extent to which perceived ease of use influence the implementation of e-government program in Nakuru County; to assess how the perceived risk and privacy influence the implementation of e-government; to assess how the perceived usefulness influence the implementation of e-government programs. The study also sought to make policy suggestion for the improvement of implementation of e-government policy.

Chapter Two discussed the theoretical framework that informs the study of factors affecting implementation of government programs. The chapter also presented the empirical literature. It was from this empirical literature review that gaps were identified.

Chapter three discussed the research methodology. Specifically, the chapter identified the descriptive research as the research design. The population and sample size as well as the data collection instrument were also discussed in this chapter.

Chapter four presented the results. Results indicated that the coefficient of determination (R squared) was 0.6913. An R squared of 0.6913 indicated that 69.13% of the variances in government use were explained by the independent variables (support infrastructure, perceived ease of use, risk and privacy and perceived usefulness. The High R square implied that the goodness of fit of the model was satisfactory. The R squared also implied that approximately 30.87% of the variations in e government use were explained by factors not included in model.

Regression results indicate that there is a positive and significant relationship between Supporting Infrastructure (SI) and e government use. A regression coefficient of 0.850 indicated that an increase in supporting infrastructure by 1 unit leads to an increase in government use by 0.850 Units.

Regression results indicate that there is a positive and significant relationship between Perceived Ease of Use (PEU) and e government use. A regression coefficient of 0.165 indicated that an increase in perceived ease of Use by 1 unit leads to an increase in government use by 0.165 Units.

Regression results indicate that there is a positive and significant relationship between Risk and Privacy (RP) and e government use. A regression coefficient of 0.058 indicated that an improvement in risk and privacy by 1 unit leads to an increase in government use by 0.058 Units.

Regression results indicate that there is a positive and significant relationship between Perceived Usefulness (PU) and e government use. A regression coefficient of 0.065 indicated

that an increase in risk and privacy by 1 unit leads to an increase in government use by 0.065 Units.

5.2 Conclusions

The study made several conclusions. First, the study concluded that the use of egovernment applications was low. Specifically, services such as submission of online tax returns, business registration, online checking of national exam results, online application of jobs, online checking of ID status, online application of scholarships and online training courses.

The study also concluded that the government officers found it easy to use e government services. The study also concluded that the support infrastructure (work computers and ministry email) was adequate and available. However, the officers did not have personal computers at home. The study also concluded that the perceived benefits of egovernment programs were high. Furthermore, the study concluded that the officers found egovernment applications as not risky and providing adequate privacy.

The study also concluded that there is a positive and significant relationship between egovernment use and support infrastructure. In addition, there was a positive relationship between perceived ease of use and government use. Furthermore, it was possible to conclude that the relationship between perceived risk and privacy was positively related to egovernment use. There was also a positive and significant relationship between perceived usefulness and egoverenment use.

The study concluded that low level of internet use among citizens as an important challenge to the smooth implementation of e-government. The study also concluded that low ICT skills among the citizens and low ICT skill among government officials was an important challenge to the smooth implementation of e-government programs.

Study also concluded that both perception on risk and privacy and lack of motivation to use e-government were important challenges of egovernment programs implementation.

5.3 Recommendations

The study recommends that the government should invest in training and awareness for e government users especially the citizens as well as government officials. This would ensure that the users find government applications easy to use. In addition, the government should invest in support infrastructure such as investing in fast internet connections. The government may also review taxes on the acquisition of personal computers. The government should also address privacy and risk concerns. For instance, the government should put in place security mechanisms such as firewalls and passwords to safeguard the security and privacy of data submitted by online users. The government should also extensively advertise the e-goverment programs in an effort to show the users the benefits they would attain from using e-government services.

5.4 Areas for Further Research

The study suggests that further areas of study should be to establish the factors affecting the use of e-government services from a citizen point of view. Such a study would seek to investigate the perceived ease of use, perceived usefulness, supporting infrastructure and risk and privacy concerns of the citizens.

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