

# **ASSESSMENT OF E-GOVERNMENT SERVICES AND CUSTOMER SATISFACTION IN PUBLIC SECTOR: CASE OF HUDUMA CENTER COUNTY GOVERNMENT OF NAKURU**

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## **ABSTRACT**

The term e-government refers to the use of new Information and Communication Technologies (ICTs) by governments in carrying out government functions through the application of networking potential offered by the internet and related technologies that can transform the structures and operations of government. In Kenya, the government has adopted initiatives to enhance e-government. These include the Huduma center, where services are provided by different departments jointly from a one-stop-shop and e-citizen, e-visa and e-business portals where citizens can access government services at the comfort of their homes. The purpose of this study was to establish the effect of e-government services on customer satisfaction in the public sector Huduma center in County government of Nakuru. The study was guided by the following objective; to determine the effect of e-citizen services on customer satisfaction in the public sector Huduma center in County government of Nakuru, Kenya. The study was guided by the theory of technology acceptance and theory of planned behavior. The study employed a case study research design. The target population

were the citizens receiving the services at the Huduma center in county government of Nakuru. A sample of 190 respondents were sampled using simple random sampling technique. Data was collected through a structured questionnaire and was analyzed using a statistical package for social sciences (SPSS) version 20. Pilot testing was carried out at Ol Kalou huduma center to test reliability of the research instrument. The research findings concluded that there exists a positive and significant relationship between E citizen and customer satisfaction on service delivery in public sector in county government of Nakuru with  $r=0.533$  and  $p=0.000$ . The overall results showed that E-government services has a positive and significant relationship with customer satisfaction on service delivery in public sector in county government of Nakuru with  $r=0.613$  and  $p=0.000$ . Therefore, the findings imply that E government enhances customer satisfaction on service delivery in public sector in county government of Nakuru, Kenya. The researcher suggested that another study should be conducted on the other e-government services not covered in this study.

## **INTRODUCTION**

### **Background to the Study**

Awadhi (2019) defined e-government as the use of information and communication technologies in the public sector to improve service delivery and improve government operations. Arora and Gupta (2017) considered Information and Communication Technology (ICT) to play a dominant role in all business undertaken by the government. Curtin et al. (2018) consider e-government as making the information available to citizens through the web. Tolbert and Mossberger (2016) considered that e-government could increase trust with the government and its citizens. All government functions can be conducted or done in a single counter, without lines at the leisure of the house that will be highly convenient to all citizens.

European states have also embraced e-government under the guideline of the EU, Estonia being the role model with 99% online public services. Developing countries are also catching up with digitalization. Countries like Ghana, Tunisia, South Africa, and Mauritius have a high e-government development. Meaning the public services available by the year 2018 were more than in other African countries. In east Africa, Rwanda was the first to engage in government initiatives in 2010, becoming a pacesetter for East Africa. The other countries have followed Kenya, developing one-stop shops for the citizens. There is a digital divide between Arab countries and leading developed countries. Qatar, Bahrain, and the United Arab Emirates have a single entry point national e-government portal and provide payment transaction capabilities to users of e-government services.

Sharp (2016) highlighted no evidence that any of the Kenyan e-governments objectives, enhancing delivery of public services, improving information flow to citizens, promoting productivity among public servants and encouraging citizens participation has been achieved. E-business is the conduction of automated business transactions utilizing end-to-end electronic communications networks. Governments have realized the importance of information sharing this enabled e-government to be implemented by many developing nations, regulations, legislations, cultural and social factors were found to be related to the success of e-government. Business operations systems are usually more complex than the traditional operations systems as it involves an operation on 24 hours and seven days a week and opening up new markets for customer segments to which traditional methods were unattractive (Sharp, 2016). Digitalized governance was introduced in Kenya as early as 2003 though they did not fill the gaps on delivery well. In the year 2014, the government introduced a citizen to government and business to government model of service delivery. The services introduction was to Streamline the complex processes the government and citizens undertook to achieve delivery. It was highly supported by the mobile money existence, opening up of the Huduma centres, internet access, and opening up government policies. In Kenya, citizens can access e-Visa, e-Citizen, and e-Business services

### **Statement of the Problem**

In Kenya, the government is increasingly adopted e-government since 2013. The notable e-government initiatives include e-citizen, e-business and e-visa. To enhance access to online public services, the government has also developed one-stop public service delivery centers in every county, the Huduma centers. While some improvement has been reported in public service delivery as a result of e-government, there have also been complaints of poor service delivery, especially with respect to accessibility. While the government started adoption of e-government in 2013, limited studies have been done on e-government, especially relating e-citizen, e-business and e-visa with service delivery. This research attempts to fill this research gap by determining the effect of e-government on service delivery by looking at the determinants of service delivery; quality, cost, time, and convenience and reliability.

### **Purpose of the Study**

The purpose of the study was to assess e-government services on customer satisfaction in the public sector a case of Huduma center in county government of Nakuru, Kenya.

### **Objectives of the study**

To assess how e-citizen enhance customer satisfaction in the public sector a case of Huduma center in Nakuru County

### **Research hypothesis**

**H01:** There is no significant between e-citizen and customer satisfaction in the public sector a case of Huduma center in County government of Nakuru

## **LITERATURE REVIEW**

### **Introduction**

#### **E-Government Services Strategies**

Boyer and Lewis (2015) studies showed that the strategy processes provide an outlay of the path to be taken by the firm in the determination of its objectives. It was also applied by these firms to drive up performance through the selection of the most appropriate strategy that can sustain the firm's activities in the environment. The strategy was also linked to the choices of the most appropriate basis for competition within the marketplace. This conclusion raised a fundamental question of how strategic manufacturing configuration mediated or moderated the operational strategies financial performance relationship. E-government has been researched extensively; most studies have indicated that e-government services are practiced not only by government organizations but also in the private sector (Imbamba & Kimile, 2017). A review of e-government status in Kenya, the findings implied that Kenya had made significant progress in e-government

implementation. The study also discovered that e-participation, accountability, planning, information sharing, and monitoring are the benefits derived from the strategy.

For efficient and successful service delivery, public engagement in decision-making processes is essential (WB, 2015). Public engagement, openness, and accountability are strongly emphasized in both the Kenyan Constitution and the County Governments Act of 2012 as ways to increase the effectiveness, equity, and inclusivity of government and service delivery. Citizens who participate in public decision-making have the chance to influence decisions that have an impact on them. Various scholarly studies have been written about how public engagement affects service delivery. According to Azfar, et al. (2015) and Robinson (2017), public involvement fosters information exchange and raises public awareness of governmental operations, which enhances service delivery. Robinson (2017), however, claims that there are insufficient data to determine.

On the other hand, Muriu (2019) posits that it is difficult to solely attribute effective service delivery to public participation. This is because there are other influential factors that can Political, social, historical, and economic issues all work against the successful delivery of services (Cheema and Rondinelli, 2017). According to Robinson (2017), for public engagement to be successful, it has to be combined with political, institutional, financial, and technological elements. John (2019) makes a similar observation, noting that citizens' networks and educational attainment are crucial components in ensuring that engagement affects service delivery. Devas & Grant (2018) make a similar observation, noting that information quality, accuracy, and accessibility are crucial factors in ensuring that public engagement has a beneficial impact on service delivery.

### **E-citizen services**

E-citizen, as a component of e-government, has not been researched much. Still, few local studies that have been done on this area suggest that challenges have flawed its implementation; the studies indicate that the government needs to create more awareness about the e-citizen portal. The stakeholder needs to be included during the entire life of the project and campaigns to create awareness about the e-citizen portal to be increased (Cakar et al., 2018).

Ondego and Moturi (2016) conducted a study on an assessment of the implementation of the Kenya e-citizen Information Communication Technology project. He argued that Information communication technology could make a valuable contribution towards the operation of and services offered to citizens by the government. The study proposed the Delone and McLean of information systems success model be adopted and hence used to assess the implementation of the e-citizen . Kenya information communication technology project, stakeholder engagement model which consists of six dimensions. Systems quality, information quality, service quality, intention to use, user satisfaction and net benefits, the research proposed that stakeholder engagement be incorporated in the Delone and Mclean model, the study also revealed that stakeholder issue needs

to be addressed through public awareness, which is an attribute that determines stakeholder engagement.

Wasunna (2018) assessed the impact of mobile payments on the adoption of e-government services in Kenya. The study's findings revealed that the platform has over 4 million unique registered citizens making nine in every ten payments through mobile money, which has nearly eight times as many registered accounts. The study also established that citizens do not look to mobile money payments as a reason to register onto e-citizen and use it to get government services digitally.

However, mobile money was perceived to provide a positive user experience compared to other payment methods as its speed, efficiency influence this, and affordability with the further positive impact created by aggressive marketing by mobile payment provides for a service that was already mandated by the government. The study further found out that mobile money plays an essential part in enhancing users' experience while using the e-Citizen platform. It provides convenience and ease of access when making payments remotely compared to other channels of payment. Finally, the study found a weak statistically significant correlation between access to mobile payments and the adoption and continuous usage of citizens for government services. Although mobile money is widely used for the majority of the cash on the e-citizen platform, it is not the key driver for citizens to register on e-citizen to get personal accounts which subsequently use to access government services directly.

Komer (2017) study on the perception of customers towards e-citizen in city square Huduma centre Nairobi was guided by the following research objectives; To determine how service quality affect customer's perception towards e-citizen, to assess the effect of culture on customer's perception towards e-citizen, to assess the effect of privacy and security towards customer's perception on e-citizen. The findings revealed that most of the respondents agree that e-citizen provided services as promised and appealing in appearance and visual design. Similarly, e-citizen was found to focus on meeting users' needs. In addition, it was also revealed that the government website is easy to navigate. On analysis of the effects of culture on customers' perception towards e-citizen, the majority of respondents preferred face-to-face interaction over online though they agree that access to government service is a good idea; despite this, the study also reveals that the majority use e-citizen to access government services. On issues of geographical location, people in rural areas have knowledge and skills of accessing E -citizen, although English and location posed a challenge to rural customers. On analysis of the effects of privacy and security on customers towards e-citizen, the findings reveal that the e-citizen platform can be trusted as it is very secure.

## **Theoretical Framework:**

### **Theory of planned behavior**

This model explains the behaviors of people exerting self-control. It comprises six constructs that attribute to an individual's control of reactions. They include attitude, behavioral intention, subjective norms, social norms, perceived power, and perceived behavioral control. In the study, it was used to establish how citizens accessed the services from a one-stop-shop. The theory also helped in the formulation of research items such as perception lead, service dependability and reliability, perception of cost, perceived flexibility, and price of the services. While the theory of planned behaviours has been widely used in research involving human behavior, it has been criticised because it does not incorporate behavioral intention and motivation. The theory does not consider emotional imbalance and past experience. Similarly, the theory does not consider emotional factors such as fear and threat. These limitations make the theory not as effective in explaining behavior in an environment of innovation adoption. The relevance of the theory in this study is its explanation of how the application of e-government has enhanced access to services from the one-stop-shop, huduma number. Since the introduction of huduma centres, there has been perceived improvement in service delivery in the public sector. The theory has relevance in the understanding of a variety of behavior; users at the Huduma centres have no control of the activities or operations of service delivery; the theory proponents of this theory are (Ajzen, 2018). Lastly, the theory explains how citizens were able to access services in the government through huduma centres.

### **Theory of Technology Acceptance Theory**

It is based on the perception of its usefulness and ease of use and the ways they combine to influence the attitude of the technology. In the study to assess the degree of service delivery in the Huduma Centers in Kenya, it plays a vital role. In the context of this study's focus on the Huduma Center, the staff's use of technology becomes possible when they perceive its usefulness. Since its introduction, TAM has been used significantly to evaluate several technologies like e-mail, voice mail. The attributes assessed in most studies revolve around perceived usefulness, ease of use, user satisfaction, and usability of the technology and also suitability for extending it to another area in education. One of the theoretical utilizations is exploring the adoption of technology with a group of users in an organization and individual users. With this study model, the staff's use of technology becomes possible when they perceive its usefulness.

### Conceptual Framework

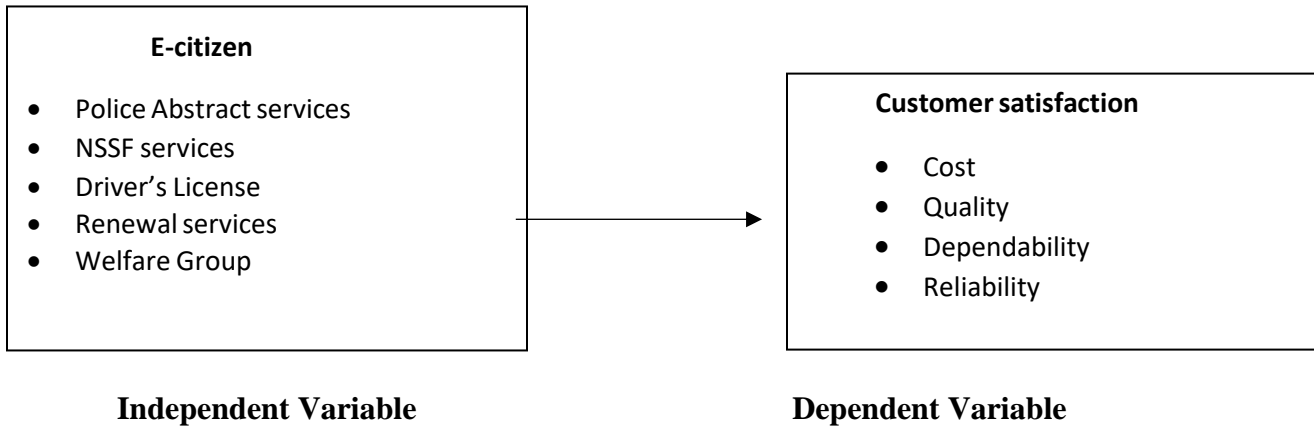


Figure 1: Conceptual Framework (Source researcher, 2023)

E-Citizen is an official digital platform which enables Kenyan citizens, residents and visitors to access government services online. The applications are made online by filling an application form in PDF format. Notifications on the applications are sent via email and SMS.

### RESEARCH METHODOLOGY.

#### Research design

This study adopted a case study design. Case study design uses one unit of analysis to make inferences to other members of the population (Mugenda & Mugenda, 2018).

#### Target Population

The target population in this study were customers who access services at the Huduma Center Nakuru County. The study was restricted to a period of one month. To establish the target population size, the researcher conducted pre-visits to the Huduma center and established the average number of customers served in the target e government services for a period of one week. According to Huduma Center database approximately 1200(rounded off to the nearest hundreds) customers visit per day hence, this study targeted 1200 customers from Nakuru city, Huduma Center. The population distribution is summarized as follows.



**Table 1: Target Population**

<b>Category</b>	<b>Population</b>
Police Abstract	200
HELB	200
NHIF	100
NSSF	100
Driving license	200
Welfare group registration	100
Land search	100
E business	200
E visa	400
Total	1200

*Source: Huduma Center Database (2023)*

### **Sampling technique and sample size**

The study adopted a simple random sampling technique. The formula that was used to determine the sample size is as follows. Where n is the desired sample size, the degree of variability of the population is not known. An assumption on the maximum variability was made, which is equal to 30% ( $p=0.3$ ).

Table 2: Sample Size Distribution

Category	Population (Frequency)	Percentage(30%)
Police Abstract	100	30
HELB	100	30
NHIF/NSSF	200	60
Driving license	100	30
Welfare group registration	100	30
Land search	200	60
E business	400	120
E visa	<b>1200</b>	<b>190</b>

### Data Collection

The center manager was contacted to authorize collection of data from the Huduma center for the one-month. Data was collected using a structured questionnaire with five points Likert scale. The service providers were requested to assist in the administration of the questionnaires. To ensure random sampling selection, an equal number of questionnaires were issued per day during the study period of one month. A few customers were requested to be left with the questionnaires, given time to fill the questionnaires and the filled questionnaires to be collected later. In such cases, the researcher requested customer contacts to ensure ease of follow-ups.

### Validity and Reliability Analysis

Validity is when an instrument measures what it's supposed to measure; data need not only to be reliable but also true and accurate.

### Pilot

Mugenda and Mugenda (2018) indicated that a pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample. According to Mugenda and Mugenda (2018), a pilot study is conducted when a questionnaire is given to just a few people with an intention of pre-testing the questions. Pilot test is an activity that assists the research in determining if there are flaws, limitations, or other weaknesses within the interview

design and allows him or her to make necessary revisions prior to the implementation of the study. A pilot study was undertaken on at least (20) respondents of Olkalou huduma center in Nyandarua County to test the reliability and validity of the questionnaire. The purpose of a pilot test was to test the reliability and validity of the 24 questionnaire and enabled the researcher to amend the questionnaire as appropriate so as to capture data accurately.

### **Validity Analysis**

Validity analysis assesses the ability of a research instrument to measure what it is intended to measure (Riege, 2018). The researcher ensured both internal and external validity thresholds were met. Internal validity is the extent to which research findings are a result of actual interaction of research variables and not extraneous variables (Kothari, 2018). External validity, on the other hand, is the extent to which research findings can be applied in a realistic environment (Kassu, 2019). For a study to achieve internal and external validity, it must have achieved construct and content validity thresholds. Construct validity ensures the researcher adheres to existing theory and knowledge when measuring research concepts. Content validity.

On the other hand, ensures measurement adopted covers all aspects of a research variable (Williamson & Johanson, 2017). In this study, the researcher ensured content validity by relying on empirically available conceptual constructs when developing research items.

### **Reliability Analysis**

Williamson and Johanson (2017) relate reliability to the consistency of a measure; when an instrument measures what it's supposed to measure, then it is said to be reliable. Reliability analysis establishes the extent to which a research instrument is able to replicate results if the analysis was repeated (Kothari, 2018).

The choice to visit the Ol kalou Huduma center was based on two assumptions. The first assumption was that customer visits to the center are random. Secondly, the sample was around 1.5 percent of the population. Therefore, the likelihood of a customer involved in the pilot study being involved in the actual study was very minimal. The researcher issued 20 questionnaires, 10 percent of the sample to citizens at the Huduma centre, for purposes of reliability analysis. From the data collected, Cronbach alpha was computed for all research variables. Values that were greater than 0.71 indicated that the research instrument was reliable (Tavakol & Dennick, 2017).

### **Data Analysis and Presentation**

Research variables were measured based on research items identified through the e-government services as presented in the questionnaire. Research data collected was analyzed by the use of descriptive statistics and inferential statistics. Descriptive statistics mean, and standard deviation was used to describe the research variables. Data was analyzed using SPSS version 22 and presented using tables. Regression analysis was conducted to establish the effect of e- government services and customer satisfaction in the public sector. T-test at 0.05 level of significance was used

to test the research hypotheses on effects of individual e-government services on customer satisfaction. In contrast, multiple regression and ANOVA was used to test the combined effect of e-government services on customer satisfaction in the public sector. The regression model presented below guided the study.

$Y = \beta_0 + \beta_1 X_1 + \epsilon$  Where; Y=Customer satisfaction

$X_1$  = E- citizen  $\beta_0$  = Constant

$\beta_1$ , = Beta coefficient  $\epsilon$  = Error term

### **Ethical Considerations**

The researcher indicated that for the respondents, it was a voluntary exercise for them to participate, and no one would be penalized or victimized for failing to participate. They were at liberty either to choose to participate or not. The researcher safeguarded the respondent's privacy at all costs so that they would not worry since their privacy was considered utmost and their identity withheld. The researcher sought permit from the National Commission for Science, Technology and Innovation. The researcher sought formal permission from the Huduma center manager Nakuru branch so as to collect data from the target population. All respondents were required to append signature upon agreement to participate in giving response and anyone not willing to give his/her opinion did not do so.

## **RESEARCH FINDINGS AND DISCUSSIONS**

### **Introduction**

The purpose of the study was to assess e-government services and customer satisfaction in the public sector a case of Huduma center in county government of Nakuru, Kenya. This chapter presents and discusses the research findings of the respondents profile followed by both the descriptive and inferential analyses of the study objectives. The chapter also discusses the findings and their implications to the study.

### **Response Rate**

The study targeted a sample size of 190 respondents out of which 189 were filled and returned the questionnaires giving a response rate of 99 % .

### **Demographic Information**

From the findings 35% of the respondents were male while 65% were female. This implies that majority of the respondents sought e -government services were females.

## Descriptive statistics

### E-Citizen services on customer satisfaction

The findings of the study is shown in Table 3

Table 3: E- citizen services on customer satisfaction

	SA	A	N	D	SD	N	Mean	Std
Application of police abstract	46 %	44 %	4 %	6%	0 %	189	4.64	0.876
HELB application	43 %	52 %	2 %	3%	0 %	189	4.82	0.765
NSSF Application	41 %	52 %	2 %	5%	0 %	189	4.46	0.567
NHIF Application	47 %	33 %	7 %	10 %	0 %	189	44.17	0.641
Driving license	52 %	33 %	6 %	9%	0 %	189	4.23	0.643
Welfare group registration	56 %	34 %	3 %	7%	0 %	189	4.46	0.321
Land search	47 %	34 %	13 %	7%	0 %	18 9	4.20	0.432

(Source, field data ,2024)

From the findings, majority of the respondents agreed at 90 % that with a (mean = 4.64; std dev = 0.876) that they sought application for police abstract through e- citizen. In addition majority of respondents agreed at 95% with a (mean =4.82; std dev = 0.765) that they sought HELB application through e-citizen. Further majority of the respondents agreed at 93% with a (mean = 4.46; std dev = 0.567) that they applied for NSSF through e- citizen .

It was also noted that majority of the respondents agreed at 80% (mean = 4.17; std dev = 0.641) that they applied for NHIF through e government. In addition majority of respondents at 85% (mean = 4.23; std dev = 0.643) applied for driving license through e citizen. In addition the research findings showed that majority of the respondents agreed at 90% with a (mean = 4.46; std dev = 0.321) that they applied welfare registration through e- citizen . It was also noted that majority of the respondents agreed at 81% (mean = 4.20; std dev = 0.432) carried out the land search through e citizen. These results implied that majority of the respondents were satisfied with e citizen services.

These results agree with Komer (2017) study on the perception of customers towards e-citizen in city square Huduma centre Nairobi. The findings revealed that most of the respondents agree that e-citizen provided services as promised and appealing in appearance and visual design. Similarly, e-citizen was found to focus on meeting users’ needs. In addition, it was also revealed that the government website is easy to navigate. On analysis of the effects of culture on customers’ perception towards e-citizen, the majority of respondents preferred face-to-face interaction over online though they agree that access to government service is a good idea; despite this, the study also reveals that the majority use e-citizen to access government services.

### Inferential Statistics

#### Correlation Analysis

Table 4 Correlation between E citizen and customer satisfaction

		Group Size
<b>E-citizen on customer satisfaction</b>	Pearson Correlation	.533**
	Sig. (2-tailed)	.000
	N	189

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

The study conducted a correlation analysis between E citizen and customer satisfaction huduma center in Nakuru County. The findings indicated that  $r=0.533$  and  $p=0.000$ . This indicated that there exists a moderate positive and significant relationship between E citizen and customer satisfaction at Huduma center in Nakuru County. Therefore the findings imply that E citizen enhances customer satisfaction in the public sector at Huduma center in Nakuru County. This agrees with Komer (2017) study on the perception of customers towards e-citizen in city square Huduma centre Nairobi. The findings revealed that most of the respondents agree that e-citizen provided services as promised and appealing in appearance and visual design. Similarly, e-citizen was found to focus on meeting users’ needs.

#### 4.6.2 Multiple Regression Coefficients

Table 5: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	.203	.147		4.035	.000
E-citizen	.188	.040	.125	2.482	.001

$$Y = \beta_0 + \beta_1 X_1$$

. Thus,

$$Y = 0.203 + 0.188X_1 + \varepsilon$$

The value of customer satisfaction in public sector in county government in Nakuru without the influence of the predictor variables is 0.203. This explains that, at any given time, customer satisfaction in public sector in county government of Nakuru would be 0.203 holding other factors constant at 0. The results also illustrate, a unit change in E citizen would result to 0.188 times change in customer satisfaction in public sector in county government of Nakuru

## **Hypothesis Testing**

The study sought to test the hypothesis that:  $H_{01}$ : There is no significant between e-citizen and customer satisfaction in the public sector Huduma center in county government of Nakuru. From the findings the p-value was 0.001 which was less the 0.001 significant level. Therefore, based on the rule of significance, the study rejects the null hypothesis ( $H_{01}$ ) and concluded e citizen has statistical significant effect on customer satisfaction in county government of Nakuru County

## **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **Introduction**

This chapter provides a detailed summary of the major findings of the actual study; it then draws conclusions and discusses implications emanating from these findings. Finally, it makes some recommendations and suggestions on areas of further study. The main aim of this study was to assess e-government services and customer satisfaction in the public sector a case of Huduma center in county government of Nakuru, Kenya.

### **Effect of E citizen on customer satisfaction on service delivery**

From the analysis the study findings revealed that the E citizen provided the following services; application of police abstract, HELB application; NSSF application; NHIF application; Driving license; Welfare group registration and Land search. The study revealed that E citizen services provided has an positive effect on customer satisfaction in the public sector a case of Huduma center in county government of Nakuru, Kenya.

### **Conclusions of the Study**

From the findings the study concluded that there exists a positive and significant relationship between E citizen and customer satisfaction on service delivery in public sector in county government of Nakuru

## **Recommendations of the Study**

From the conclusion the study recommended that, public sector should embrace and continuously improve E citizen in order to make application of police abstract, HELB, NSSF, NHIF, Driving license, Welfare group registration and Land search more reliable and dependable thus enhancing customer satisfaction .

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