

**INFLUENCE OF EMERGING TECHNOLOGIES ON SERVICE DELIVERY IN
GOVERNMENT INSTITUTIONS IN KENYA: A CASE OF NAIROBI COUNTY'S EJIJI
PAY**

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**A research proposal submitted to the School of Management and Leadership in partial
fulfillment of the requirement for the award of the Diploma of Business information and
technology of The Management University of Africa.**

DECLARATION

This proposal/project is my original work and has not been presented for the award in any other University or institution. No part of this research should be reproduced without the author's consent or that of the Management University of Africa.

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DECLARATION BY THE SUPERVISOR

This proposal/project has been submitted for examination with my approval as University Supervisor

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DEDICATION

This study is whole heartedly dedicated to my parents who have been my source of inspiration and gave me strength when I thought of giving up, who continue to provide their moral, spiritual, emotional and financial support.

To my brothers, sisters, relatives, mentors, friends and classmates who have shared their words of advice and encouragement to finish this study.

And lastly, I dedicate this research to the almighty God, thank you for your guidance, strength, power of mind, protection and skills and for giving me a healthy life.

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ABSTRACT

Currently there are many organizations and businesses that are embracing technology as a means of offering quality service. Many government institutions and also the public service are not left behind in adopting technology in order to offer various services to its citizens. The Nairobi county government started using an e-payment service called e-jiji pay to improve on its service delivery where the users can directly interact with the system. The purpose of this study was to evaluate the influence of emerging technologies on service delivery in government institutions. The study utilized four specific objectives which included: assessing the influence of technological infrastructure, ascertaining the influence of training capacity, finding out the influence of policy framework and determining the influence of resource allocation on the delivery of Nairobi County's e-jiji pay. The study was guided by two theories: Technology Acceptance Model (TAM) and Unified Theory of Acceptance. The study used a descriptive survey design to look into the relationship between the independent variables and also the dependent variables. The design helps the researcher to obtain information concerning the current status of the problem under study and describe it with respect to its variables. The target population was 1445 employees of Nairobi County and these comprised of administrators, accountants, revenue collectors, car park attendants as well as market and licensing officers. The study adopted stratified random sampling procedure to identify specific groups from which data was collected. Simple random sampling procedure was then used to select respondents for data collection from the various strata. A sample size of 212 respondents was utilized for this study in data collection. Quantitative data collected was analyzed using descriptive statistics. Correlation examination, regression analysis were applied to reveal the relationship between the independent and the dependent variable. The study recommended that institutions should invest more in emerging technologies to improve existing service delivery; there should continuous creation of training capacities and workshops for enhancement of skills. Policies of technology adoption should be improved to attract adoption of the everyday changing technology and Nairobi County in conjunction with the national government and other counties must ensure that there is increased funding on resource acquisition which enables acquisition and use of emerging technologies in Nairobi county.

Key words: Technological infrastructure, Training capacity, Policy framework, Resource allocation, Service delivery.

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CHAPTER ONE

INTRODUCTION

1.0 INTRODUCTION

This chapter will deal the general introduction of the study. This includes the background of the study, statement of the problem, objectives of the study, the specific objective, research questions, and also the significance of the study and the scope of the study.

1.1 BACKGROUND OF THE STUDY

Every business views service delivery as an effectiveness of an organization to provide their customers with the needs with timely and speed they may require. Effectiveness in customer service means doing the right things and measures and measure indicators like customer satisfaction via speed, service quality, timing and human interaction. Emerging technologies help to build new and better service delivery through rising transparency and efficiency, enhancing the coordination of public sector procedures and management in general.

Technological revolution brings with it many benefits such as easy communication across geographies while also reducing expenses and environmental damage. Open source soft wares, search engines and online services enable us to summon the tools and information we need to produce. Emerging technology should be improved rather than being ignored and repressed so as to maximize the benefits.

The world has witnessed great consideration to the establishment of new technologies in various fields of everyday life. Advances in technology have led to changes in workplace causing the collapse of traditional system and creating a widespread use of artificial realities replacing humans in performing certain functions through these new technologies. It is true to say that these recent technological advancements in both hardware and software has dramatically disrupted the way organizations operate especially in public and private sectors. Repetitious tasks which include factory work and other back office duties and complex decisions have become quick and more accurate due to new technology.

Internet penetration in Africa has included the expectation of digital shares to a continent marked by digital divides. Penetration has broken the barrier of 15% thanks to the shift of low cost submarines from satellites. These new undersea fibers have led to a remarkable increase in data

transmission capacity that has also reduced costs. Sixteen submarine cables connect Africa to America, Europe and Asia ending isolation in Africa. Emerging technologies in Africa will care for digital connectivity for productive communication, association and integration of people systems and machines. According to Ndegwa and Achoki (2017) emerging technologies require establishment of comprehensive and reliable internet infrastructure which enforces strict criteria on communication which must be reliable.

Kenya is ranked top and is position 52 out of 194 globally in government readiness to adopt AI in public service. As emerging technologies become a serious part of the economy, most organizations applied computers and internet for economic purpose providing consumers with a more diversified and customized services, quality goods and services according to Kinuthia and Akkinusi (2014). Collaboration and partnerships between different technological developments already existing in the country are such a way to achieve growth. The main thing that makes Kenya an attractive prospect to tech-based environment region wide and globally is its population of young people who are the majority and are easy adopters. Thus technologies which include artificial intelligence are proactive tools and applications being used to improve economic growth. According to the economic survey report (2019) by the Kenya bureau of statistics, The value of information technology expansion is driven by growth in digital economic which includes, the value of information technology expansion is driven by growth in digital economic which includes, mobile telephony and uptake of e-commerce and penetration of the internet in government institutions.

It is noted that investing and promoting technological solutions enhance socio-economic transformation acceleration and employment creation and economic growth. (Economic survey report 2019).

Nairobi County is Kenya's most populated urban area among other towns in Kenya and its citizens demand different attentions in terms of service delivery depending on their needs. This includes job creation, safe clean environment and water, ease of movement and ease of doing business. In order to counter and mitigate the negative impacts that arise from such growth there is need for strategies such as information management through the use of technology.

For this city to improve and sustain its services delivery, efforts must be put in place to ensure digital to ensure digital ecosystem remains strong replacing the legacy systems. According to

institution of economic affairs (2017) controller of budget reports show that many people from other counties were using broken ICT systems in revenue accumulation and management. This report puts Nairobi on top of other counties in terms of automation and electronic payment platforms, where in early 2016, 31% of all payments among them parking. Land rates, licenses, market levies and many more were in electronic system under e-jiji pay platform powered by Jambo pay. It was expected that by the end of 2016 approximately 50% or more were to be automated through this system.

This high level of technology penetration in revenue department has so far impacted impressive revenue growth and reshaped other service delivery. The results have been positive whereby in 2013/14 collected 10 billion with an increase to 11.5 billion in 2014/15 representing a further a 14.7% a further 11.7 billion in 2015/16 financial year (ICT Authority strategic plan 2013-2018). However this figures are not impressive compared to other institutions such as banks and other online service providers such as Safaricom and Kenya revenue authority and this has been associated with poor investment in innovative structures especially in application of modern systems. This and many other factors make up the purpose of this study in Nairobi County's financedepartment.

1.2 STATEMENT OF THE PROBLEM

Kenya and Africa ranks lowly in embracing information technologies especially on matters of new emerging technologies in service delivery. The country ranks 122 out of 193 countries globally and 11th in Africa in the e-government development index report (2018) by United Nations, which measures how much a country is using information technology to promote access and inclusion of its citizens. Despite emerging technologies giving institutions a reason to hold high their aspirations for their digital economy, inhibition of several setbacks among them inadequate and poor infrastructure halt this development in many areas.

Technology depends greatly on the state of infrastructure whereby many underdeveloped and developing countries and cities score as per the global standards. Lack of proper infrastructure development slows emerging technological growth leading to underdevelopment. Infrastructure brings up a wide array of critical issues such as information systems, venture capital, standards, norms, innovations and support systems.

Unreliable infrastructure is the lead cause to poor technological physical control, access control, communication control and application control which results to inaccessibility, interference and interception which according to the study slows the implementation of e-jiji pay system in Nairobi County. Poor infrastructure is a reason for poor connectivity and networking resulting to slow pace of development and expansion of this new change in technology across the city. This is supported by CIDP report (2019) which reports that Nairobi had automated only fourteen out of a hundred and thirty six revenues streams which not even a quarter due to poor infrastructure.

Huge gaps in terms of literacy exist as many people are not aware of just how powerful technology is in regard to giving them access they can use to generate and distribute valuable services. A survey commissioned by bankers' lobby group Kenya Bankers Association in (2018) showed that 80% of the customers still valuing traditional model of customer service despite the rising update of technology to enhance service delivery.

According to East African Digital Business week newspaper (2014), Nairobi County government has not fully transferred its revenue system due to limiting factors as inadequate budget. Cost implications pose as an infrastructural obstacle as technology lacks consistence as it keeps changing posing cost implications. The cost incurred is exorbitant and out of reach for this

county considering the speed of change in technology. Due to this challenges Nairobi County largely rely on manual systems which are ineffective rather that application of emerging technology. In this interest this research intends to assess the influence of emerging technologies in service delivery in government institutions: a case of Nairobi County's e-jiji pay.

1.3 OBJECTIVE OF THE STUDY

The main aim of the study was to evaluate the impact of emerging technologies on service delivery in government institutions: a case of Nairobi County's e-jiji pay.

1.3.1 SPECIFIC OBJECTIVE.

The study was guided by the following specific objectives;

1. To evaluate the importance of technological infrastructure on the delivery of e-jiji pay
2. To ascertain the influence of training capacity of Nairobi County's finance department employees on service delivery
3. To find out the influence of policy framework on the delivery of e-jiji pay
4. To determine the influence of resource allocation on the delivery of e-jiji pay.

1.4 RESEARCH QUESTIONS

1. What was the influence of technological infrastructure on the delivery of e-jiji pay?
2. To what extent does the training capacity of Nairobi County's finance department employees affect service delivery?
3. What was the influence of policy framework of resource allocation on the delivery of e-jiji pay?
4. How does resource allocation affect the delivery of e-jiji pay?

1.5 SIGNIFICANCE OF THE STUDY

The study demonstrates the scope of service delivery use in Kenya with the intention to get a grip of the relationship between technological advancements and service delivery to the people.

The research offered more information into the already existing knowledge of service delivery in Kenya. The outcome will add to the study will add to the existing knowledge. The studies assisted the policy makers come up with guidelines on how to develop service delivery. They will use the outcomes of the study to convey practical policy documents that will cope with the challenges and hindrances of service delivery in Kenya. The importance of the study will be of use to service providers who can get meaningful feedback that they can use to utilize to improve the solutions they are offering to benefit of both management and the citizen.

1.6 SCOPE OF THE STUDY

This study was staged out in Nairobi and the target population was 1445 employees of Nairobi County and these comprised of administrators, accountants, revenue collectors, car park attendants as well as market and licensing officers. When carrying out the study a limitation that came up was the lack of cooperation from some employees but it was eased by obtaining clearance from relevant administrative center to ensure authenticity of the research. In addition anonymity was assure through an authorized introduction letter for the participating employees.

1.7 CHAPTER SUMMARY

Emerging technologies have a large influence on the services that are delivered by government institutions. This study aims to investigate the influence of those technologies. This chapter provides a groundwork for the study that is to be conducted. The chapter has introduced the problem of the study, mentioning the pertinent issues of the study. It describes the research questions that the research undertaking will aim to address. The next chapter has presented literature review and chapter three will be the methodology that will be implemented. The following chapter will describe the results and findings of the research, while the last chapter offers the discussions, decisions and recommendation of the paper.

CHAPTER 2

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter begins by defining various concepts related to our research. This approach was to cover the topics from a broad spectrum and zero into specific areas. This chapter defined terminologies related to the study in general and in the context in which they were applied in the research.

2.1 THEORETICAL LITERATURE REVIEW

2.1.1 TECHNOLOGY ACCEPTANCE MODEL

This design was created by Davis in the year 1989 and is widely studied and verified by different studies. According to this model, users of this system are influenced directly or indirectly behavior, attitude, usefulness and ease of use. According to Davis (1989) the model aim is to predict and explain causes of potential influence to accept or reject the system use. In this model there are two constructs particularly felt its usefulness and perceived ease of use which play a huge role in predicting attitudes leading to its use. Davis, (1989) argues that perceived usefulness as the degree to which one believes that using a system would influence service delivery while perceived ease of use refers to degree of belief that a particular system would be free from physical and mental effort.

However according to Venkatesh and Bagozzi (2000) TAM has evolved overtime and extended original model to explain perceived usefulness and intentional use of including social influence, cognitive instrumental process and experience. The model explains how the system is determined behavioral pattern intention and behavioral pattern determines the attitude towards system use. The author further adds individual attitude is not only based on factors determining users use of this system but also on its impact in performance. This model helped this study to determine factors influencing acceptance and use of new emerging technologies in county governments.

2.1.2 UNIFIED THEORY OF ACCEPTANCE

This model was developed by Venkatesh (2003) through the review of eight models which explain ICT use. These models are TRA, TAM, motivational model and theory of planned behavior (TPM), a combination of TAM and PTB, model of PC utilization, DOI and social cognitive theory. The intention of UTAUT explains user's intentions to the system and the subsequent user behavior. In this theory four constructs are considered as direct determinant of user acceptance and behavior. These constructs are performance expectancy, effort expectancy, social influence and facilitating conditions (Yu 2012).

In this context performance expectancy is defined as the degree a technology use will offer benefits to clients in certain activities performed; effort expectancy is associated with the degree of simplicity linked with consumer's use of technology; social impact is the level to which consumers perceive that collaboration between different technological developments are already in such a way that it achieves effective and convenient service delivery (Venkatesh, 2003). Such partnership not only grows the foot print of the system but by making it accessible to larger user base, but makes it attractive to consumers. In time where people are constantly on the move and make most of their time, opportunity to still be productive is becoming more important.

2.2 CONCEPTUAL FRAMEWORK

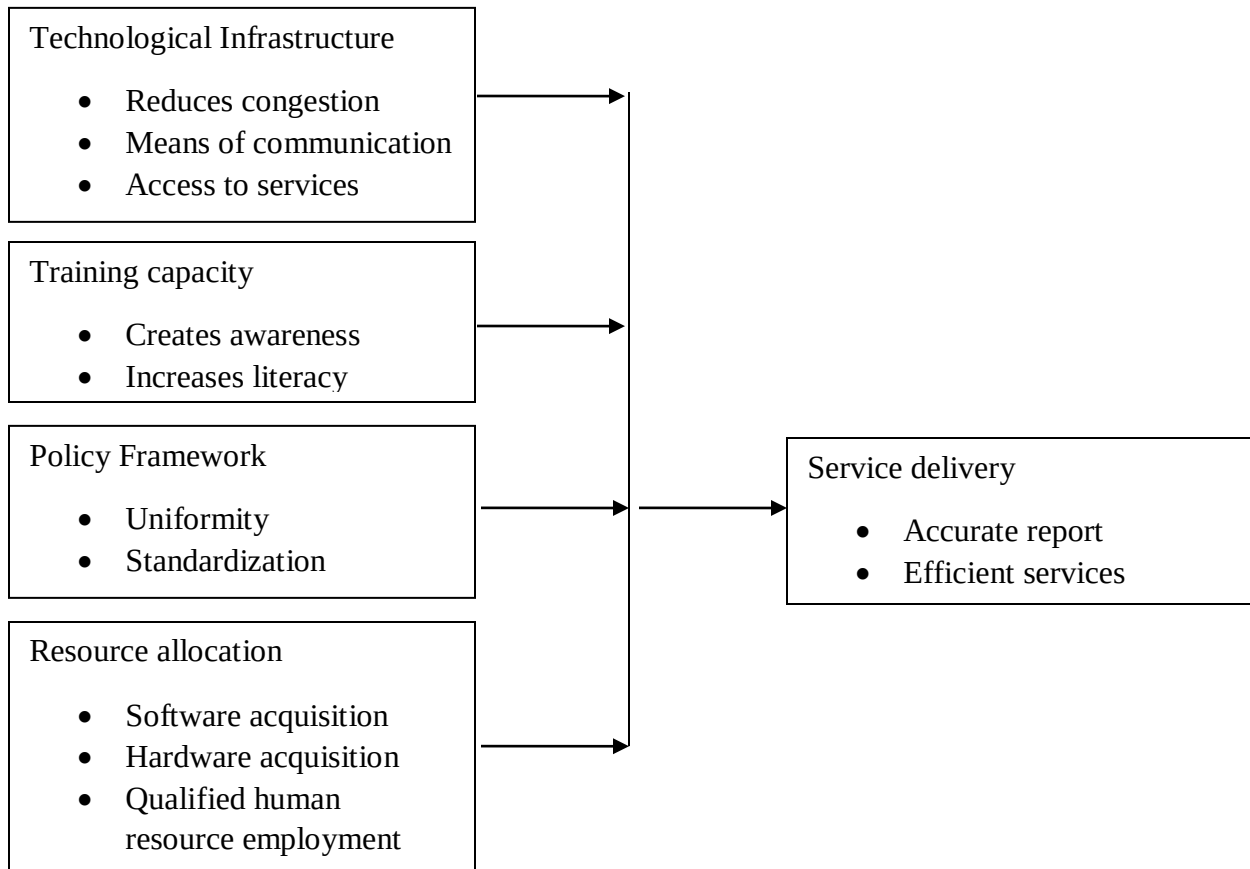


Figure 1 Conceptual Framework

2.3 EMPIRICAL FRAMEWORK

Githinji (2014) opines that information technology replaces inefficient production on revenue collection system. This technological trend taking place around the world is stimulating both private and public sectors to strategize to a more unified system that improve public service. Increased use of emerging technology is gradually leading to the transformation shift of policies, processes and functions. Therefore, to build this institutional strength begins with creating new physical and intellectual spaces that lead to innovation, data analysis, wider use of technology and commercial mindset. Abdelqader, Abu & Al Sakarneh, (2013) notes that, for a business to survive and develop there should be a proactive strategy towards new resources and capabilities for it to achieve and sustain growth. These actions have ignited the boom in technology startup and with its interest from global venture capital.

Emerging technology has drastically cut down the number of human resource and procedures required in delivery of services where a client can create, use, store and retrieve information through this intangible self-service platform. Utilization of emerging technologies has served a variety of ends including better public service delivery, improved interaction, information access and efficient management Githinji (2014). For example, a single computer work-station can eliminate a huge army of secretaries, clerks, sealing many loopholes and gaps resulting to a seamless process. Areas where modernized systems are required include public infrastructure, health care, licensing, revenue collection, communication and permitting among other services.

Developing the quality and effectiveness of services to citizens is what every country seeks to achieve. In 2010 alone the size of technology adoption enabled services in the world was estimated to cost 3.1 billion dollars. Out of this 80% were in developed countries (Rudowski, 2009). This level of technology in the service delivery has not been attained yet in the developing world by most professionals and community users at large. Due to insufficient studies aimed at establishing as to why this has not been achieved. Most of these approaches are still at their new stages of implementation. For effective adoption of emerging technologies presently, training capacity has to be improved by developing nations.

For countries to be capable of meeting their existig and future service delivery, training capacity must be enhanced. Training capacity ensure that what is required for people to acquire the necessary knowledge in terms of technology is availed. Availing training materials and expertise

will ensure that imparting of requisite skills is made possible. Training to all levels of employees and top management aims at transforming the behavioral practices of the employees in a trend which is in line to attain the organizational performance, sustainability and expansion (Argote & Ingram, 2010).

Service delivery scheme is part of a greater effort to revamp public services in all world countries. It demonstrates the priority Governments have placed on the role of technology adoption (Hebda & Czar, 2013). Policy framework strategy attempts to harness and prevail public service delivery enhancement across the public service to deliver productive, equitable and quality services for the accomplishment of a supportable advancement. Development of policy frameworks is important as this will re-engineer public services through technology adoption, application and use to allow better efficiency and usefulness, encourage creativity and advancement in service delivery.

National and county governments need to recognize that service delivery improvement is essential to a productive, high-performing public service. Public sector is the leading provider of service in Kenya. Any growth in public service delivery changes the daily experience of many Kenyan citizens, residents and visitors (Angote, 2016). Innovation is a groundbreaking process. However, it is evident that in order to prevail Public Service delivery enhancements and to regularize and remake them across the public service for improved results and customer contentment, the procedure and products of innovation must be determined and harmonized by a reasonable strategy.

World Bank (2012) contends that devolved systems of government have been practiced in many regions across the world. This system of government is seen as a guarantee against the discretionary use of power and resources by the central government leaders and also as a way of ensuring efficient service provision to the citizens. Several countries have used devolution to address service delivery challenges faced by the citizens at the local level of society. The central governments has attempted to address the challenges and inefficiencies in the design of public policy, service delivery and misallocation of resources by bringing together key actors from within and outside the government in order to support the reforms aimed at improved service delivery (Andrews & Genc, 2017).

In Rwanda, decentralization has been made key policy of the government that seeks to ensure equitable political, economic and social development throughout the country and act as a cornerstone of the fight against poverty by increasing participation in planning and management of development process (Republic of Rwanda, 2010). Service delivery is a key responsibility of the government towards its citizens. The Rwandese constitution has given the regional governments the responsibility of delivering service such as health, water, sanitation, education and road maintenance through allocation of resources.

In Kenya, the Kenyan constitution has given the county governments the responsibility of delivering service such as health, water, sanitation, education and road maintenance. According to the Kenyan constitution 2010, devolution is considered the main mechanism to promote good governance, encourage local development and to bring services closer to the citizens (Republic of Kenya, 2010). The first objective of devolution is to bring services closer to the people. Functions such as health, agriculture trade and development have been devolved, in the process these services have been brought closer to the people.

According to the County Governments' Act 2012, County governments are supposed to develop strategic plans one of which is the County Integrated Development Plan (CIDP) which is the overall strategy for the county. It is anticipated that with successful implementation of strategic plans service delivery would be efficient. However, implementation of CIDP has been a challenge to many counties in Kenya (Abbas & Were, 2017). Many organizations fail to gain the benefits of strategic plans due to lack of adequate resources.

2.4 Operationalization of Variables

SNO	VARIABLE	ATTRIBUTES	DESCRIPTION	FRAMEWORK
1.	Technological infrastructure	Reduces congestion	This study showed that technological infrastructure helps reduce congestion within service delivery.	Githinji (2014)
		Means of communication	This study found that technological improves communication and reduces procedures within service delivery	Githinji (2014)
		Access to services	This study showed that technological infrastructure improves the quality and efficiency of services to citizens	

2.	Training capacity	Creates awareness	This study found that training capacity ensure that what is required for people to acquire necessary knowledge in terms of technology availed.	Argote & Ingram, 2010
		Increases literacy	This study found that service delivery scheme is part of a wider effort to revamp public services in all world nations	

3.	Policy framework	Uniformity	This study found that uniformity seeks to harness and prevail public service delivery improvement across the public service to deliver productive, equitable and quality services for the accomplishment of sustainable advancement.	Hebda & Czar, 2013
		Standardization	This study found that public Service delivery helps to regularize and remake them across the public service for improved results and customer contentment.	

2.5 SUMMARY AND RESEARCH GAP

From the literature review that had been done by other authors in relation to the factors that influence service delivery. In Githinji's research they talk about how service delivery can create a technological infrastructure which can reduce the congestion, can become a means of communication and can provide access to improved quality of services.

In Angote and Ingram's research talks about how training capacity can provide awareness and ensure that people can provide the necessary knowledge in terms of the technology that is being availed within service delivery. In their research they also talk about how training that is being done can increase the literacy of the employees and top management which can improve the service delivery outcomes.

In the research done by Hebda & Czar(2013) found that within policy framework seeks to harness and mainstream public service delivery improvement across the public service to deliver productive, equitable and quality services for the accomplishment of sustainable advancement. In their research they found that public service delivery helps to regularize and remake them across the public service for improved results and customer contentment.

The research done by Kihara (2016) found that for a business to survive and develop they need to have resources either human, software, financial, or any form of equipment should be a proactive strategy for it to achieve and to be able to sustain growth.

All the researchers have tried to elaborate their variables and how it can influence service delivery. The research that I will do will try to link their variables which are technological, training capacity, policy framework and resource allocation and how they can influence the delivery of service in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter covers the methodology that was applied in the study. This covers research design, the population of the study, sampling, data collection procedures and analysis that were relevant in meeting the research objectives.

3.1 RESEARCH DESIGN

Research design is the blueprint for collecting, measuring and analyzing of data according to Kothari (2003). It also refers to the structure of how a study is formed. The study used a descriptive survey design to study the correlation between the independent variables and dependent variables. Descriptive studies require a researcher to precisely define what is to be measured and use adequate methods of measuring including a proper definition of the population under investigation. Descriptive research design is preferred since it's more accurate and precise as it involves an explanation of events in a carefully designed manner (Babbie, 2004).

3.2 TARGET POPULATION

This is the specific population from which information is sought. Some researchers refers to population as all members with information required for the study. The study population was all employees currently working in the finance department at city hall, Nairobi County. According to information from the institution, there were 1445 employees in the department, who were group into five groups that is administration section, accounts section, revenue collection, car park section and market and licensing section.

Respondents	Target population
Top level management	480
Middle level management	480
Lower level management	485
Total	1445

Table 2 Target population

3.3 SAMPLE AND SAMPLING TECHNIQUES

Simple random sampling was used to identify respondents from the five sections of administration, accounts, revenue collection, car park and market and licensing sections.

Respondents	Target population	Sample
Top level management	480	400
Middle level management	480	400
Lower level management	485	400
Total	1445	1200

Table 3 Sampling of Respondents

3.4 INSTRUMENTS

This study used structured and unstructured questionnaire as data collection tool. Questionnaires were used since they are effective data collection tools, allowing respondents to give much of their opinions regarding the research objectives or interests (Cooper & Schindler, 2008).

3.5 RELIABILITY AND VALIDITY

Reliability refers to the consistency of scores obtained from the study (Fraenkel & Wallen, 2009). The questionnaire was subjected to peer reviewers and scrutiny from the study area experts. A pilot study was done to check reliability of the questionnaires and adjustments done as noted.

3.6 DATA COLLECTION PROCEDURE

The study used primary data and the instrument that was used for the collection of data was questionnaires.

3.7 DATA ANALYSIS

Jwan and Ong'ondo, (2011) referred to data analysis as a systematic process of collecting, transcribing, editing, coding and data reporting in a way that makes sense to readers for the purpose of interpretation and study. Descriptive statistics technique was employed to ensure that the masses of numerical data is organized and summarized in such a way that they were

meaningfully understood and communicated. Descriptive analysis used tables, charts, and graphs to show the study results.

3.8 REGRESSION ANALYSIS

This model sought to demonstrate the relationship between dependent variables and independent variables of the research.

3.9 ETHICAL CONSIDERATIONS

During the whole study, the researcher ensured research ethics as well as professionalism was observed. Research participation was on a voluntary basis. Privacy and confidentiality was observed as well. Consent to undertake the study was sought from the right department before commencement of data collection. During data collection, the researcher clearly explained reason and worth of study to respondents.

CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSION

4.0 INTRODUCTION

The segment is concerned with presenting results of the study in a table format. This is in accordance to the study objectives. The research questions were answered through the interpretation of findings. The presentation of the findings was organized around the key variables.

4.1 DESCRIPTIVE RESULTS

The aim of the study was to evaluate the influence of emerging technologies on service delivery in government institutions: A case of Nairobi County's e-jiji pay, Nairobi County, Kenya. The study analyzed descriptive statistics for specific objectives on the influence of technological infrastructure, influence of capacity training, influence of policy framework and the influence of resource allocation on the delivery of e-jiji pay.

4.1.1 Technological infrastructure and service delivery

The study in this part required respondents to determine the influence of technological infrastructure on service delivery. Specifically, the study focused on finding out how the efficiency of city hall's Ejiji Pay in delivering services to the citizens. Respondents were needed to show their level of agreement with statements rating the existing Ejiji Pay services on a five-point Likert scale ranging from 1-5 where 1 = Strongly disagree; 2 = Disagree; 3 = Moderate; 4 = Agree; 5 = Strongly Agree. Results of this section were as presented in Table 4.

Generally, the results in table 1 indicate means of between 1.26 - 2.73 and a standard deviation of 0.437 – 1.483 was registered. Generally, the research findings revealed that majority of the respondents were in agreement with statements on influence of technological infrastructure on service delivery by Ejiji Pay. As shown by means of (2.038) with a standard deviation of (0.8842). Specifically, the findings revealed that technological infrastructure has an influence on delivery of services by Ejiji Pay with a Mean of (M = 1.26), technology is timely with a Mean (M = 1.74), technology reduces congestion with a Mean of (M = 1.74), technology influences communication with a Mean of (M = 2.72), technology improves quality of service with a Mean of (M = 2.73).

These findings concur with literature by Githinji (2014) who argues that emerging technologies have drastically cut down the number of human resources and created procedures required in

delivery of services where a client can create, use, store and retrieve information through this intangible self-service platform. Utilization of emerging technologies has served a variety of ends including better public service delivery, improved interaction, information access and efficient management. From these findings, results of the section were as presented in Table 4.

Table 4: Influence of technological infrastructure and service delivery.

Technological infrastructure and service delivery	Mean	STD Deviation	N
Existing technological infrastructure have enabled services	1.74	1.831	400
Existing technologies have facilitated timely delivery of services.	1.26	0.437	400
Existing technologies have provided effective means of communication within Nairobi counties ejiji pay	2.73	0.843	400
Existing technologies have led to improved quality of service.	2.72	1.483	400
Existing technologies reduces congestion at the finance department	1.74	0.872	400
Mean	2.038	0.8842	400

4.1.2 Influence of training capacity and service delivery

The study in this part required respondents to determine the influence of training capacity and service delivery on service delivery at. Specifically the study focused on finding out the influence of training capacity, influence of increased literacy, loss reduction, harmonization of services and working from home as results of emerging technologies city hall's Ejiji Pay has brought. Respondents in this section were required to state their level of agreement on the influence of training capacity on service delivery of Ejiji Pay at city hall. Items were measured on a five point Likert scale type ranging from 1-5 where 1 = Strongly Disagree; 2 = Disagree, 3 = Moderate; 4 = Agree; 5 = Strongly Agree. Results of this section were as presented in Table 5.

This section was answered by 296 respondents. Results indicate means of between 1.60 - 2.80 and a standard deviation of 0.801 – 1.837 was registered. Generally the research findings found that many of the respondents had agreed with statements on influence of training capacity and service delivery by Ejiji Pay.as shown by means of 2.398. Specifically, the findings revealed that there was an influence on delivery of services by ejiji pay with a Mean of (M = 1.60), technology increases literacy with a Mean (M = 1.98), technology enhances training with a Mean of (M = 2.60), technology enables work from home with a Mean of (M = 2.60), technology harmonizes services with a Mean of (M = 2.80), technology reduces losses with a mean of (M = 2.81).

The findings were in line with a study by Angote and Ingram (2010) who argues that there is a positive relationship between highly skilled personnel and improved service delivery outcomes. Establishing training capacity framework and scheduled, proper enrollment methods and constant training and advancement of employees stays critical for the attainment of immensely skilled man power within public institutions that geared towards attaining the desired outcome. Public institutions need to apply human resource plans like selective hiring, retention, regulating performances to conform to the standards and maintain credentials for them to offer quality services and development.

Table 5: Influence of training capacity and service delivery

Influence of training capacity and service delivery	Mean	STD Deviation	N
Due to IT training capacity in city hall, there is increased awareness	2.60	1.367	400
There is increased literacy on emerging technologies at city hall.	1.98	1.208	400
Training capacity at city hall has seen reduced losses at city hall	2.81	1.837	400
Training capacity at city hall have seen harmonization of services	2.80	1.483	400
Has enabled work from home	2.60	1.327	400
Any other	1.60	0.801	400
Mean	2.398	1.260	400

4.1.3 Influence of policy framework and service delivery

The study in this part required respondents to determine the influence of policy framework on service delivery by Ejiji Pay. Specifically the study focused on finding out the influence of policy framework on good procedures, guidance, direction, rules and regulations and plan of action as results of emerging technologies city hall's Ejiji Pay has brought.

Respondents in this section were required to state their level of agreement on the influence of policy framework on service delivery of Ejij Pay at city hall. Items were measured on a five point Likert scale type ranging from 1-5 where 1 = Strongly Disagree; 2 = Disagree, 3 = Moderate; 4 = Agree; 5 = Strongly Agree. The results indicated means of between 1.90 - 3.10 and a standard deviation of 1.045 – 1.447 was registered. Generally the research findings found that many of the respondents had agreed with statements on influence of policy framework on service delivery by Ejiji Pay by means of 2.342. Specifically, the findings revealed that policies reflect good procedures at city hall with a Mean of (M = 1.90), provides guidance with a Mean

(M = 1.90), provides laid down rules with a Mean of (M = 2.20), provides plan of action with a Mean of (M = 3.10).

These findings were in line with that of Hebda and Czar (2013) who posit that policy framework strategies seeks to harness and prevail public service delivery improvement across the public service to deliver productive, equitable and quality services for the accomplishment of sustainable advancement.

Table 6: Influence of policy framework and service delivery

Influence of policy framework and service delivery	Mean	STD Deviation	N
Policies frameworks at Nairobi county are reflective of good procedures	1.90	1.221	400
Available policies provide guidance	1.90	1.045	400
Available policies provide direction	2.61	1.112	400
Policies at city hall follow laid down rules	2.20	1.327	400
Policies at city reflect plan of action	3.10	1.447	400
Mean	2.342	1.232	400

4.1.4 Influence of resource allocation and service delivery

The study in this part required respondents to determine the influence of resource allocation on service delivery by Ejiji Pay. The study concentrated on discovering the influence of resource allocation on communication system, technology hardware, technological software, skilled labour and taxation as results of emerging technologies city hall's Ejiji Pay.

Respondents were required to state their level of agreement on the influence of resource allocation. Items were measured on a five point Likert scale type ranging from 1-5 where 1 =

Strongly Disagree; 2 = Disagree, 3 = Moderate; 4 = Agree; 5 = Strongly Agree. The results indicated means of between 1.50 - 2.99 and a standard deviation of 0.764 – 1.532. Generally the research findings found that many of the respondents were in agreement with statements on influence of resource allocation on service delivery by Ejiji Pay as shown by means of 2.331. Specifically, the findings revealed that technology has influenced good communication with a Mean of (M = 1.50), technology brought in reliable software's with a Mean (M = 1.83), technology lead to efficiency with a Mean of (M = 2.50), technology has lowered taxation with a Mean of (M = 2.84), technology has created skilled labour with a Mean of (M = 2.99).

These findings were in line with that of Kihara (2016), who argued that resources whether they are human, financial or in form of equipment are a needed for successful implementation of the strategic plan. A lack of any of the resources acts as a hindrance to strategy implementation efforts and that the failure of the county governments to adopt the use of technology slows down the effective services and this is especially through the use of technology and in particular computers which makes the work in the counties easier.

Table 7: Influence of Resource Allocation and Service Delivery

Influence of Resource Allocation and Service Delivery	Mean	STD Deviation	N
Nairobi county has good communication system	1.50	0.764	400
There are enough computers for service delivery in Nairobi county	2.33	1.375	400
There is a software for emerging technologies at Nairobi county	1.83	0.899	400
There is a efficiency through emerging technologies at Nairobi county	2.50	0.928	400
There is availability of skilled labour	2.99	1.532	400
There is Manageable taxation	2.84	1.464	400
Mean	2.331	1.160	400

4.2 REGRESSION ANALYSIS

The coefficients of determination (R^2) and correlation coefficient(R) showed the degree of association between emerging technologies and service delivery. The research findings showed that there was a good relationship ($R=0.752$) between the variables. The study also revealed that 56.5% of Ejiji Pay's service delivery in Nairobi County could be explained by the influence of emerging technologies. From the study, it was clear that at 95% confidence level, the variables presented statistically major values and can be trusted to explain service delivery.

CHAPTER 5

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.0 INTRODUCTION

This chapter outlines the conclusions, recommendations and suggestions for further research.

5.1 CONCLUSION.

The study concluded that emerging technologies has a significant positive influence on service delivery due to lower transaction costs for instance in the information for developing infrastructure which allows for effective delivery of services. Evidently, adopting emerging technologies influences service delivery especially in City County's E-Jiji Pay. Considering the fastness the world is currently moving at, procumbent of emerging technologies is essential to human kind as well as business. Therefore, emerging technologies adoption is the best choice in helping E-Jiji Pay stay on the track in terms of service delivery. The degree to which emerging technologies can improve training capacity systems especially at Nairobi County's E-Jiji pay may be difficult to measure reliably. How emerging technology equipment are used within the structure of current organizational environments relies more on the determination of managers and decision-makers than on institutions administrative traditions. This is the case of Nairobi County's management. It seemed that the advent of emerging technologies had brought about new opportunities to enhance governance. This was to ensure acceptance, taking part, accountability, efficiency and coherence, straightforwardness, structure for consultation and participation and efficient services are existent throughout the literature of service delivery institutions. This therefore called for enhanced resource allocation so as to ensure an effective service delivery system. The study concluded that, unless literacy is improved through enhancing training capacity with the institutional employees, the quality of service delivery remains low even if all emerging technology facilities are procured by the institutions. Skills and knowledge on application of emerging technologies still has a long way to go before being fully integrated into service delivery institutions in most developing countries.

5.2 RECOMMENDATIONS

The study recommended that the institutions invest more in emerging technologies so as to improve on the current ICT situation in the service delivery institutions to increase the nation's competitiveness, productiveness and expansion through funding in information technology. The quality of the system used is responsible for dictating the level of service delivery that transforms to customer satisfaction.

Create more trainings capacities and workshops should be set for workers in the institution to enhance their knowledge and skills on E-Jiji Pay system. Still, killed employees with past experience in E-Jiji Pay system should be incorporated into the institutions to run the systems.

Nairobi county plus other counties should boost funding on resource acquisition and training of its workers since the study found that inadequate ICT staff training and development as the main problem discovered by the institution under study in implementation of E-Jiji Pay system service delivery and this has a large influence affecting the quality of service delivery through use of E-Jiji Pay system.

The institutional management should train its employees in the management of consumers' grievances and the importance of having positive attitude towards its consumers. The institution should further find out ways of motivating its employees as the demotivated employees do not perform.

5.3 SUGGESTIONS FOR FURTHER RESEARCH

The study was only focused on evaluating the influence of emerging technologies on service delivery in government institutions: a case of Nairobi County's e-jiji pay. The effectiveness of ICT adoption in the study was looked from improvement in service delivery which was again measured by its effectiveness in county government's E-Jiji Pay. However, other major objectives other than influence of technological infrastructure, influence of training capacity influence of policy framework and influence of resource allocation on the delivery of e-jiji pay if studied in future research, would add more value to the effectiveness of service delivery institutions.

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APPENDICES

APPENDIX I: Introduction Letter

Dear respondent,

I am a student at a Management University of Africa in partial fulfilment of the requirement for the award of diploma in business information and technology. My research study INFLUENCE OF EMERGING TECHNOLOGIES ON SERVICE DELIVERY IN GOVERNMENT INSTITUTIONS IN KENYA: A CASE OF NAIROBI COUNTY'S E-JIJI PAY. Therefore, I humbly request you to enabling this research to be a success. I will be honored if you will set aside time to fill the attached questionnaire to the best of your knowledge. All the information you will provide will strictly be for academic purposes and not for any other purpose. We will treat your information with the utmost confidentiality. Your assistance will play a huge factor in enabling me to complete this research.

Yours faithfully,

MOHAMED AWAL ADEN

DBIT/6/00021/1/20

THE MANAGEMENT UNIVERSITY OF AFRICA

APPENDIX II: Questionnaire

Kindly mark with a **tick** (✓) to indicate your response

Section 1: Technological infrastructure and service delivery

In a scale of 1 – 5 Please indicate the extent to which you think has technological infrastructure influenced service delivery.

Item	Strongly disagree	Disagree	Moderate	Agree	Strongly agree
a) Existing technological infrastructure have enabled services					
b) Existing technologies have facilitated timely delivery of services.					
c) Existing technologies have provided effective means of communication within Nairobi counties ejiji pay					
d) Existing technologies have led to improved quality of service.					
e) Existing technologies reduces congestion at the finance department					

Section 2: Training capacity and service delivery

In a scale of 1 – 5 Please indicate the extent to which you think has training capacity influenced service delivery.

Item	Strongly disagree	Disagree	Moderate	Agree	Strongly agree
a) Due to IT training capacity in city hall, there is increased awareness					
b) There is increased literacy on emerging technologies at city hall.					
c) Training capacity at city hall has seen reduced losses at city hall					
d) Training capacity at city hall have seen harmonization of services					
e) Has enabled work from home					

Section 3: Policy framework and service delivery

In a scale of 1 – 5 Please indicate the extent to which you think has policy framework influenced service delivery.

Item	Strongly disagree	Disagree	Moderate	Agree	Strongly agree
a) Policies frameworks at Nairobi county are reflective of good procedures					
b) There is increased literacy on emerging technologies at city hall.					
c) Available policies provide guidance					
d) Available policies provide direction					
e) Policies at city hall follow laid down rules					
f) Policies at city reflect plan of action					

Section 4: Resource allocation and service delivery

In a scale of 1 – 5 Please indicate the extent to which you think has resource allocation influenced service delivery.

Item	Strongly disagree	Disagree	Moderate	Agree	Strongly agree
a) Nairobi county has good communication system					
b) There are enough computers for service delivery in Nairobi county					
c) There is a software for emerging technologies at Nairobi county					
d) There is a efficiency through emerging technologies at Nairobi county					
e) There is availability of skilled labour					
f) There is Manageable taxation					

APPENDIX III: Time Schedule

Activity	Dec	Feb 25	Mar 15	Apr 20	May 10
Research Title Submission					
Introduction					
Literature review					
Data collection					
Data analysis					
Test Research outcome					
Presentation of results					
Writing report					
Final presentation					

APPENDIX IV: Budget

a) Collection of data	3,000.00/-
b) Books and reading material	5,000.00/-
c) Printing pages 46 @ shs 30/-	1,380.00/-
d) Binding 1 copy @ shs1000/-	1,000.00/-
e) Travelling	3,000.00/-
f) Miscellaneous expenses	3,000.00/-