# INFLUENCE OF STRATEGIC TECHNOLOGY ON SERVICE DELIVERY IN PUBLIC SERVICE: A CASE STUDY OF DIRECTORATE OF IMMIGRATION AND REGISTRATION OF PERSONS

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**A Research Project Presented to the Institute of Post Graduate Studies of Kabarak University in Partial Fulfilment of the Requirements for the Award of the Master of Business Administration Degree (Strategic Management Option)**

**KABARAK UNIVERSITY**

**NOVEMBER, 2019**

## DECLARATION

This research project is my original work and to the best of my knowledge has not been presented for academic award in any other University or College.

Signature..... Date……

Thomas Ondora Omboti

**GMB/NE/0749/05/14**

## RECOMMENDATION

**To the institute of Postgraduate Studies:**

The research project Evaluation of **"Influence of Strategic Technology on Service Delivery in Public Service: A Case Study Of DIRP"** and written by **Thomas Ondora Omboti** is presented to the Institute of Postgraduate Studies of Kabarak University. We have reviewed the research proposal and recommend it be accepted in partial fulfilment of the requirement for award of the degree of Master of Business Administration (Strategic Management Option), of Kabarak University.

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## DEDICATION

This work is dedicated to my spouse Mrs. Getrude Chebet; my children Bravine Omboti, Blessings Breanna Moraa and Bryce Emmanuel Omboti; my parents Ezekiel Omboti and Rael Rono; and my siblings Albert Osiemo and Bathlomew Nyabengi. Thank you for the moral and financial support!

## ABSTRACT

Service delivery is the main mandate of the public sector and efficiency is critical to service delivery. However, the public sector has experienced several challenges in service delivery provision that impact the quality, timeliness and costs of these services. In the Directorate of Immigration and Registration of Persons (DIRP),consequences for poor service delivery includes lack of adequate access to documents such as national identity cards, birth and death certificates. Consequently, the public sector in Kenya has been making substantial investment in strategic technology to improve its service delivery capability. However, how this strategic technology improves service delivery function remains a key question given the challenges the DIRP. This study, therefore, sought to examine the influence of application of strategic technology on service delivery at DIRP. Amongst the aspects of strategic technology that were examined include the influences of records management aspects, proficiency of technology usage, ease of use of strategic technology, and one-stop model aspects of strategic technology on service delivery. This study used correlation research design and targeted the DIRP in Nairobi National Headquarters. The accessible population comprised all the 1059 employees of the directorate working at the head office distributed amongst diverse service departments. From these, Nassiuma's formula was applied to obtain a sample size of 91 respondents. This study used proportionate stratified sampling method. They used copies of a pre-tested structured questionnaire to collect data. Data was analyzed using t-test, f-test, chi squares, correlations and multiple linear regressions. Through the findings, the study established that proficiency of strategic technology usage ($\beta = 0.161$, $p < 0.05$), ease of use of strategic technology ($\beta = 0.407$, $p < 0.05$) and the one-stop-model ($\beta = 0.279$, $p < 0.05$) significantly affected service delivery in the Directorate of Immigration. The ease of use of strategic technology was the most influential variable while proficiency was the least influential variable influencing service delivery at the Directorate. However, the application of strategic technology to records management was not found to significantly influence service delivery in the Directorate ($\beta = -0.055$, $p > 0.522$). The study, therefore, recommends that the protocols for retrieval of information through the use of digital record management systems should be made easy for the staffs in the Directorate. The management of the Directorate should also put more emphasis on skills upgrading through trainings and workshops to ensure that skills transfer happen rapidly and that emerging issues and challenges are broadly addressed at this point. The study further recommends that the Directorate should make provisions for the users to remark on the system through frequently asked questions (FAQ) appendage. Finally, it is recommended that the Directorate and other line government agencies should emphasize the fast tracking of digitalization of personal records and information so as to reduce the levels of paperwork needed for immigration purposes and make the one-stop model a better customer service reality.



***KEY WORDS**: Ease of Use of Strategic Technology, Proficiency of Application of Strategic Technology, Records Management, Service Delivery, and Strategic Technology*

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## ABREVIATIONS AND ACRONYMS

| | | |
|---|---|---|
| **CSRP** | : | Civil Service Reform Programme |
| **LGRP** | : | Local Government Reform Programme |
| **ICT** | : | Information and Communication Technology |
| **LGRP** | : | Local Government Reform Programme |
| **NACOSTI** | : | National Commission of Science, Technology and Innovation |
| **PSRP** | : | Public Service Reform Programme |
| **RBM** | : | Results Based Management |
| **UAE** | : | United Arabs Emirates |

## OPERATIONAL DEFINITION OF TERMS

**Ease of Use** **:** This is how easy or difficult it is to use the technologies available (Mensah, 2017). In this study, the ease of use is evaluated in terms of; Attitudes, Challenges in Use and Comfort in using the software for the DIRP' employees

**One-Stop Model Strategic Technology:** This the provision of diverse services available using a single portal platform (Joshi & Islam, 2018). In the present study, the one stop model is measured in terms of; Convenience, Time-saving and Cost reduction at the DIRP.

**Proficiency of Strategic Technology:** This know-how in the use of diverse technologies (Storey & Kahn, 2014). In the present study, the proficiency was measured in terms of; employees responsiveness, in-service training and innovativeness at the DIRP'

**Records Management:** This is the process and procedures used in the maintenance of the records (Colesca & Dobrica, 2008). In the present study, records management was measured in terms of; Information Security, Information Retrieval and Compliance to record keeping policies at the DIRP

**Service Delivery** **:** The act of providing various services to the public (Bel, Brown, & Warner, 2014). In the present study, service delivery is measured in terms of; Customer Satisfaction and Speed of service delivery by the DIRP

**Strategic Technology :** This refers to technology meant to solve long terms service delivery problems in an organization (Din, Xue, Ali, Shah, & Ilyas, 2017).Technology used by the DIRP in achieving strategic objectives.

# CHAPTER ONE
# INTRODUCTION

## 1.1 Introduction

The first chapter of this work contains the introduction of the study. The chapter thus examines the background of the study from a global, regional and local perspective; statement of the problem; objectives of the study; research hypotheses; significance of the study; scope of the study; limitations of the study and assumptions of the study.

## 1.2 Background to the Study

Service delivery remains a challenge to State agencies across the world. In this context, Lopes, Soares, Nielsen and Tavares (2017) note that poor service delivery is often characterized by unresponsiveness to the citizens' needs, delay in service delivery and inability to access diverse services provided by government agencies. Other aspects that have been noted to be a challenge in service delivery by the state agencies include lack of transparency and accountability in service delivery, quality of services offered, and speed of service delivery (Bel, Brown, & Warner, 2014; Blair, 2018; Mansoor & Williams, 2018). The challenge of service delivery by government agencies has been associated with diverse aspects including government service culture, poor attitudes by service providers in government entities, and organizational culture amongst other factors (Ajibade, Ibietan, & Ayelabola, 2017). Other factors associated with poor service delivery include lowly paid, unmotivated government employees, poor training on service delivery, inadequate resources and low accountability levels (Ali, 2017).

Service delivery within state agencies is an important aspect which is critical to the government service delivery as a whole and in fulfilling its governing mandate. The service delivery is critical in state agencies since these corporations are created to perform specific functions such as regulatory aspects, improve on execution of government mandate, reduce government bureaucracy in service provision, improve of efficiency in service delivery as well as focus on a specific areas of interest to the government (Chepkonga, Nzioki, & Kiprop, 2018). Therefore, poor service delivery of state agencies negates the functions for which the state agencies were created for. Service delivery within the government and the state agencies are important to diverse stakeholders and in diverse ways. According to Urvikis (2014) service delivery by

state agencies and other government agencies enables meeting of the citizens' needs and general economic competitiveness aspects.

Service delivery has been conceptualized in diverse ways by different scholars. Alornyeku, (2013) conceptualizes service delivery as the provision of an activity that meet users' needs. In conceptualization of service delivery similar to Alornyeku (2013), Onono (2012) indicates that service delivery refers to achievement of organizational goals and objectives leading to customer satisfaction. In both of Alornyeku (2013) and Onono (2012) conceptualization of service delivery, there is achievement of customer needs and hence satisfaction aspects. Maina (2016) further note that service delivery refers to the delivery of specialized skills and knowledge (in contrast to the physical resources) to the citizens. Chone (2015) seems to combine portion of Alornyeku (2013), Onono (2012) and Maina (2016) conceptualizations of service delivery. In this context, Chone (2015) note that service delivery relates to that component of an organization that defines the interaction between providers and clients where the provider offers a service, whether that information or a task, and the client either finds value or loses value as a result.

In respect to state agencies, Mwangi (2015) focusing on the case of National Health Insurance Fund (NHIF) noted that good service delivery in state agencies include aspects such as responsiveness to customer needs, flexibility aspects on changing customer needs, sustainability and dependability aspects on customer needs. The views of Mwangi (2015) on indicators of service delivery are consistent with those of Chone (2015). Diverse factors influence service delivery in state agencies across the world. Amongst these factors include application of strategic technology aspects such as records management, proficiency of application of strategic technology, ease of use of strategic technology, and the one-stop model of strategic technology aspects.

### 1.2.1 Global Perspectives of Strategic Technology in Public Sector Function

In Malaysia, Othman and Yasin (2015) notes that there has been use of technology in enhancing service delivery amongst government bodies. In this context, the government of Malaysia introduced electronic government aspects in order to ensure that government services are convenient, holistic, consistent, faster, reliable, and transparent in nature (Othman & Yasin, 2015). The e-government services are available across diverse government bodies in Malaysia.

Strategic technology has been used to improve service delivery amongst government bodies in Pakistan (Din, Xue, Ali, Shah, & Ilyas, 2017). Din et al., (2017) noted that Information and Communication Technology (ICT) has been used to improve efficiency, transparency, responsiveness, and effectiveness of the public sector service delivery in the country. The Pakistan government started utilizing the ICT technology in service delivery in 2002 through the initiation of Electronic Government Directorate (EGD). Still in Pakistan, Shaikh, Shah and Wijekuruppu (2016) note that technology has been used to improve diverse service delivery components. These components include transparency, accountability, and efficiency in service delivery.

In Estonia, Lember (2017) noted that technology is being used in public bodies with a view of improving service delivery in that country. In this context, Lember (2017) indicates that use of strategic technology in service delivery shapes the kind of services that can be delivered and the manner in which these services can be delivered. Amongst the objectives that the strategic technology is meant to assist in service delivery include shortening of service delivery timelines, and improvement of trust in government service delivery (Lember, 2017).India has also embraced strategic technology in order to improve public service delivery aspects in government bodies. Sharma (2014) note that in India, technology is being used by government to meet the increasing demands of service delivery in the country. In this context, technology has been used to improve on convenience of service delivery, responsiveness aspects in service delivery, and timelines aspects in service delivery.

### 1.2.2 Regional Perspectives of Strategic Technology in Public Sector Function

In Ethiopia, Pathak et al., (2008) documents challenges prevalent in service delivery amongst government entities. Amongst these challenges include time taken in processing of citizens requests in government agencies. Pathak et al., (2008) noted that to address those challenges the government of Ethiopia was adopting e government technologies as a strategic technology for service delivery. The concerns of service delivery in government agencies are also prevalent in Nigerian government agencies. In this context, (Olatona & Olomola, 2015) note that service delivery to Nigerians from government agencies is faced by diverse challenges. Amongst these challenges include service providers not reporting to work, and lack of adequate service delivery equipment. Still in Nigeria, Igbokwe-Ibeto and Nkomah (2016) noted that the challenges that public service delivery face include ineffective and inefficient

service delivery as well as non-response service delivery to the citizen's needs. Igbokwe-Ibeto and Nkomah (2016) further documented lack of accountability, and transparency as challenges of service delivery in the country. Nigerian public institutions had adopted technology for the purposes of improving service delivery.

Noting challenges in public service delivery in Tanzania, Lufunyo (2013) indicates that the Tanzanian government has adopted and implemented diverse reforms including use of strategic technology in seeking to improve service delivery. Lufunyo (2013) noted that amongst the challenges that were present in service delivery amongst the Tanzanian government agencies include need for responsiveness to citizens' needs, improvement of accountability levels, promotion of efficiency and effectiveness, and adoption of customer focused practices. Citing the various reforms that have been undertaken in public service delivery in Tanzania as evidence of public service delivery challenges, Bwemelo & Mohammed (2016) noted that amongst the notable service delivery reforms included Civil Service Reform Programme (CSRP), Public Service Reform Programme (PSRP), and Local Government Reform Programme (LGRP) amongst others. Ali (2017) further cites service delivery in public institutions being faced with unmotivated staff, poor accountability mechanisms, and poor transparency levels in service delivery. Uganda faces similar public service delivery challenges to other African countries. Similar to the challenges that Lufunyo (2013), Bwemelo and Mohammed (2016), and Ali (2017) found in Tanzania, Wandera (2017) notes that public services delivery challenges in Uganda include lack of transparency and accountability in service delivery.

### 1.2.3 Local Perspectives of Strategic Technology in Public Sector Function

In Kenya several initiatives have been undertaken to improve service delivery amongst the state agencies and Government in general which underlies the importance of service delivery to the Government. Amongst these efforts include Results Based Management (RBM), Rapid Results Initiatives, Performance Contracting, and Citizen Service Charters amongst others (Caxton, 2015; Jela, 2015; Kibe, 2014).Jela (2015) in examination of service delivery in state agencies in Kenya noted that amongst service challenges in state agencies include non-responsive attitude towards citizens seeking services and lack of accountability in service delivery. Other noted challenges of service delivery in state agencies included need for responsive and flexible to evolving user needs, and ensure sustainability,

availability, timeliness, dependability and reliability (Mwangi, 2015). Other aspects include access to public services and goods and ease of service delivery.

The service provision is important to all the state agencies including the Directorate of Immigration and Registration of Persons (DIRP). According to DIRP (2019), the functions of the directorate include Registration of persons, births and deaths; Providing immigration services; Management of refugees; Border management and Maintenance of the Integrated Population Registration System. The concept of service delivery at the DIRP has been examined by diverse scholars. Oyaro (2013) noted that records management at the Department of Immigration and Registration of Persons is a key aspect of service delivery.

The technologies used at the DIRP include the Integrated Population Registration System (IPRS). The Integrate Population Registration Service was established in 2008 with the mandate of fully implementing and managing the Integrated Population Registration System (IPRS). This system seeks to consolidate the data of Kenyans into a single place and enhance the provision of electronic Government services. The IPRS is an initiative aimed at consolidating population registration information into a single database for ease of verification by both Government and private bodies. The project concept is composed of two major parts with the first one being the establishment of a National Population Register (NPR) with data on all Kenyan citizens and foreign residents. The second component is a unique identifier (PIN) that is assigned to every person's record at birth, which then acts as a reference in all transactions regarding that person. The NPR works with two sets of agencies — primary registration agencies that include Civil Registration Department, National Registration Bureau, Immigration Department and Department of Refugees' Affairs. It also works with another set of agencies referred to as secondary registration agencies that use the date and also update the register. The secondary registration agencies include NSSF, KRA and NHIF. The NPR is currently linked to all the primary registration agencies. The Directorate also operates the electronic Foreign Nationals Services (eFNS) portal for the Department of Immigration Services under the Ministry of Interior and Coordination of National Government. The system is used for the application of Passes, Permit, and Alien card, Permanent Residence or Kenya Citizenship by foreigners (DIRP, 2019).

### 1.3 Statement of the Problem

Service delivery within state agencies is an important aspect which is critical to the government service delivery as a whole and in fulfilling its governing mandate. The service delivery is critical in state agencies since these corporations are created to perform specific functions such as regulatory aspects, improve on execution of government mandate, reduce government bureaucracy in service provision, improve of efficiency in service delivery as well as focus on a specific areas of interest to government (Chepkonga et al., 2018). However, service delivery in state agencies remain challenged in diverse ways including unresponsiveness to citizens' needs, delay in service delivery and inability to access diverse services provided by government agencies. Other aspects that have been noted to be a challenge in service delivery by the state agencies include lack of transparency and accountability in service delivery, quality of services offered, and speed of service delivery (Bel, Brown, & Warner, 2014; Blair, 2018; Mansoor & Williams, 2018).

Similar to other state agencies, service delivery for DIRP is important. According to DIRP, the functions of directorate include Registration of persons, births and deaths; Providing immigration services; Management of refugees; Border management and Maintenance of the integrated population registration system. The consequences for poor service delivery by DIRP include lack of adequate access to documents such as national identity cards, birth and death certificates. Other challenges could include issuance of these documents to the wrong persons leading to security breaches. Diverse scholars both local and international, such as;Oyaro (2013); Mwangi (2015); Jela (2015); Igbokwe-Ibeto and Nkomah (2016);and Lember (2017) have examined and underscored the importance of technology in service delivery amongst public bodies. However, the value of strategic technology in the delivery of services was not explored in their studies. The present study, therefore, sought to examine the role of application of strategic technology on service delivery aspects at DIRP. Amongst the aspects of strategic technology that were examined included the influences of records management aspects, proficiency of technology usage, ease of use of strategic technology, and one-stop model aspects of strategic technology on service delivery.

### 1.4 Purpose of Study

The purpose of the study was to examine the impact of strategic technology on service delivery in public service state agencies with reference to DIRP in Nairobi Headquarters.

### 1.5 Objectives of the Study

The study was guided by the following specific objectives;

i. To determine the influence of records management strategic technology on service delivery at the DIRP
ii. To establish the influence of proficiency of strategic technology on service delivery at the DIRP
iii. To analyse the ease of use of strategic technology on service delivery at the DIRP
iv. To assess use of one-stop model strategic technology on service delivery at the DIRP

### 1.6 Research Hypotheses

The following research hypotheses guided the study;

**$H_{01}$**: There is no statistically significant influence of records management of strategic technology on service delivery at the DIRP.

**$H_{02}$**: There is no statistically significant influence of proficiency of strategic technology of strategic technology on service delivery at the DIRP.

**$H_{03}$**: There is no statistically significant influence of ease of use of strategic technology on service delivery at the DIRP.

**$H_{04}$**: There is no statistically significant influence of one-stop model strategic technology on service delivery at the DIRP.

### 1.7 Significance of the Study

The study is intended to be of great value in shedding more light on the influence records management application of strategic technology, proficiency of application of strategic technology, ease of use of strategic technology and use of one-stop model strategic technology on service delivery at DIRP. Findings on records management application of strategic technology is hoped to help the DIRP in addressing security

concerns for clients' data, data retrieval aspects as well as ensuring compliance to record keeping policies and procedures. The study recommendations on proficiency and ease of use of strategic technology will help the DIRP to improve the performance of their employees in regard to skill set. Findings of this study in regard to the influence use of one-stop model strategic technology on service delivery may be of help to the DIRP to understand the benefits of integration of technology in service delivery. The findings of this study are also meant to be useful for policy making aimed at improving service delivery at the DIRP. Future researchers and academicians in area of strategy management will may able to gather knowledge for the proposed study that will form basis for their further studies and teaching respectively.

### 1.8 Scope of the Study

The study focused on records management application of strategic technology, proficiency of application of strategic technology, ease of use of strategic technology and use of one-stop model strategic technology as independent variables and service delivery at DIRP as the dependent variable. The study was carried out in DIRP. From the DIRP the study sample 79 employees from Immigration Services, National Registration Bureau, Civil Registration Services, Integrated Population Services, Border Control, and Refugee Affairs Secretariat. The study was undertaken over a period of six months, that is, from March to September 2019andutilized a budget of Kshs. 136,325.20.

### 1.9 Limitations and Delimitations of the Study

The study expected to meet the following limitations; due to the busy working schedule of employees at the DIRP, the study expects to have low response rate to the research questionnaires. To overcome this challenge, the study issued the research questionnaires to the respondents and allowed them a one-week period to respond to the questionnaires.

### 1.10 Assumptions of the Study

The study makes the following assumptions; first, the study assumed that the respondents were willing to fill the questionnaire. Second, the study assumes that the respondents were honest in answering the questions.

# CHAPTER TWO
# LITERATURE REVIEW

## 2.1 Introduction

This chapter presents the literature review for the study. It specifically covers the theoretical framework, literature review of related studies and concludes with conceptualization of the study variables.

## 2.2 Theoretical Review

This study was guided by Technology Acceptance Theory, Human Capital Theory and Systems Theory.

### 2.2.1 Technology Acceptance Theory

Technology Acceptance Theory was developed by Venkatesh and Davis in the year 2000 to explain how people come to accept technology and use it. The theory states that when new users of technology are presented with the technology, there are two factors that they consider in making decision to accept and use it. These two factors are perceived usefulness of the technology and perceived ease of use if the technology. Perceived usability of the technology refers to how the intended user of the technology perceives the technology to be useful in enhancing the user's performance. In regard to this, if the user perceives the technology to be less useful in enhancing the performance of the user, the intended user may fail to adopt the technology. Therefore, for a new technology to be fully acceptable and adopted for use in an organization, the technology must be able to enhance the performance of the organization.

Perceived ease of the use refers to the extent in which the one perceives the use of a technology to be free from challenges or high learning curve. In respect to this, a technology that presents a lot of challenges in its use may result to rejection of the technology. In addition, a technology that requires a lot of changes as well as learning before the use may face rejection. This theory has faced criticism based on its assumption that usability of technology is based on perceptions of people on usability and ease of use rather than focusing on the tested advantages of the technology. However, the theory has been widely used up to 80% of studies in technology acceptance and usability. In this study, Technology Acceptance Theory was be used

to guide the current study in regard to influence of the ease of use of strategic technology specifically the one-stop model on service delivery in the DIRP.

### 2.2.2 Human Capital Theory

Human Capital Theory was developed by Robert Gibbon and Cornell in the year 2004 to explain the need for proper human resource management in ensuring productivity of employees I an organization. According to the human capital theory, human capital is the stock of knowledge or personality attributes that explains for creativity and ability an employee has in performing the assigned tasks and create economic or social value. Human capital is closely associated with human resources of an organization, with an emphasis on human resource productivity and not the number. More specifically, the Human Capital Theory is concerned with the nature of the task in terms of the availability of the required skills, skills and expertise to perform such tasks. The skill-set is the basis for wage dynamics and promotion dynamics inside firms.

Human theory states that the relevance of knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom by an employee in organization determines the productivity of such an employee. However, the theory asserts the greatest impact of human capital is conceptualized in four aspects. The first aspect on the skill set of an individual. The second aspect is on collaborative aspects whereby the individual employee collaborates with other employees to produces output. The third aspect is on processes which emphasizes on collaboration between individuals and activities of the organization structure. The fourth aspect is on absence that addresses the strategies that are used to ensure proper productivity in cases where some employees are absent due to annual leave, sick leave and holiday amount other reasons. All these aspects ensure that there is proficiency in the tasks undertaken by employees in an organization.

This theory has faced some criticism due to its assumption that salary remuneration and promotions among other bonus are based on individual skill set or expertise. The critics argue that skill endowment may not necessarily translate to good performance by an employee. Intangibility of knowledge and social connection possess a challenge is measuring proficiency of skills in the work force of an organization. However, the theory was relevant in explaining the influence of proficiency of application of

strategic technology on service delivery since the proficiency was measured in terms of knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom by an employee in using strategic technology on service delivery. The Human capital theory was used to guide the study in respect to the influence of proficiency of application of strategic technology on service delivery in the DIRP.

### 2.2.3 The Systems Theory

This study was also guided by the Systems Theory developed by Ludwig von Bertalanffy (1968) Ludwing defines a system as a set of objects or entities that interrelate with one another to form a whole. The System's theory is basically concerned with problems of relationships, of structures, and of interdependence, rather than with the constant attributes of objects. The systems theory views an organization as a social system consisting of individuals who cooperate within a formal framework, drawing resources, people, and finances from the services they offer. This theory is based on the view that managers should focus on the role played by each part of an organization; rather than dealing separately with the parts (Hannagan, 2002).

The system theory maintains that an organization does not exist in a vacuum. It does not only depend on its environment but it is also part of a large system such as the society or the economic system to which it belongs. The approaches are concerned with both interpersonal and group behavioral aspects leading to a system of cooperation. Plomp and Pelgrum (1993) noted that a devolved public system is a complex system comprising of sub-systems at different levels; these are macro, meso and micro. The systems theory emphasizes unity and integrity of the organization and focuses on the interaction between its component parts and the interactions with the environment. It suggests that organizations must be studied as a whole taking into consideration the interrelationships among its parts and its relationship with the external environment. The Systems Theory was used to guide the study in respect to the influence of overall application of strategic technology on service delivery in the DIRP.

## 2.3 Empirical Literature Review

This section presents literature review related to concepts under investigation in this study. Empirical literature review refers to a directed search of information in support

of variables in study. Its aim is to compare the available literature and identify research gaps for the current study to fill.

### 2.3.1 The Concept of Strategy

A strategy is a plan of action designed to achieve a specific goal. Strategy is all about gaining or at least attempting to gain, a position of advantage over adversaries or competitors (Mainardes, Ferreira & Raposo, 2014). Strategy is about differentiating the organization from competitor enterprises (Porth, 2012). It is about being different in the choice of a different mix of activities to provide a product or service. Strategy is about choosing what not to do, as much as it is choosing what things to do. According to a definition supplied by Tseng (2010), a strategy is a decision which will make a substantial difference to the long term performance of an organization. Inevitably, therefore, only a very senior member of management can determine it. Moreover, because it takes effect over a long time horizon, a statement as to its risk to an organization is an essential concomitant.

The origin of strategy sprung from the need to defeat one's enemies. The first treaties that discussed strategies can be traced back to as early as 400-200BC by Sun Tzu's writing on the Art of War, also described as the best military strategy (Guralnik,1986). The term strategy is derived indirectly from the classic Greek Byzantines of 330AD, which gave the term strategy the meaning of 'general' (Guralnik, 1986). Roman historians introduced the term "*strategia"* to refer to territory under control of a "*strategus"* military commander in ancient Athens and a member of the counsel of war (Guralnik, 1986). The word retained the new geographic meaning until 1799 when the term strategy was introduced, which is the same as it is understood today (Wall & Wall, 2005). Strategy, according to Nicole Machiavelli, is the basis and lines of communication and contribution within a given organization or system (Mainardes et al., 2014).

In the military, the strategy for a battle refers to a general plan of attack or defense. Typically, this involves arrangements made before actually engaging the enemy and intended to disadvantage that enemy. In this context, strategy is concerned with the deployment of resources (Grattan, 2016). In civilian terms, this amounts to the "allocation" of resources. Tactics is the companion term and it refers to actions formulated and executed after the enemy has been engaged — "in the heat of battle,"

as it were. Tactics, then, is concerned with the employment of resources already deployed. In the civilian sector, this equates to operations in the broad sense of that term. Generally speaking, tactical maneuvers are expected to occur in the context of strategy so as to ensure the attainment of strategic intent.

However, strategy can fail and, when it does, tactics dominate the action (Obembe, 2010). Execution becomes strategy. Thus it is that, whether on the battlefield or in business, the realized strategy is always one part intended (the plan as conceived beforehand) and one part emergent (an adaptation to the conditions encountered). As a consequence, there are always two versions of a given strategy: strategy as contemplated or intended and strategy as realized (Kraus, Kauranen & Reschke, 2010).

Strategic Planning determined the winners of World War two. Tactics (short term strategy) was an important factor in individual battles but Germany - the country that often used better tactics - was ultimately the loser of World War Two. Germany lost the Second World War because of strategic planning errors and the fact that the allies came up with a better strategic planning - "Germany first" &" unconditional surrender" - strategy factors which focused the allies' minds on the desired goals of the war (Bracker, 2010). Grattan (2016) explains that the circumstances of World War II introduced major changes to the way in which societies operated all over the world and much of the trappings of normal life had to be sacrificed to the war effort.

However, it was only after World War II that strategy fully entered into the business world, which has since grown significantly and needed guidance, lines and paths to be followed by their entire structures (Bracker, 2010). This growth increased organizational complexity and, together with the accelerated pace of environmental changes began requiring enterprises deploy greater capacity to create and manage strategies enabling them to meet the challenges of the market, reaching their objectives in the short, medium and long term (Dess, Lumpkin & Eisner, 2007).

The use of the term strategy outside the Military and political sphere can be traced back to as early as 1920s, Harvard Business School policy model on strategic planning for private business. The model aimed at formulating policies, defining the organizational purpose and business (Poter, 2003). Through the late 1980s, strategic

planning focus shifted from organizational policy and structures towards the management of risk, industry growth and market share model which was then called the portfolio model (Elton, Gruber, Brown, & Goetzmann, 2009).

The next evolution led to the industrial economics model where strategic decisions were derived from analysis of competitive power relationships (Dess et al., 2007). Until 1980 the use of a strategic plan as a tool for managing work related behaviour which leads to better performance remained mostly a private sector undertaking, because it was assumed public organizations did not need growth, competition as well as market share and risk management. However, the forces of change and reform demanded accountability from management of public resources and wanted the public sector to be run efficiently, just like the private business firms (Porter, 2001).

### 2.3.2 Strategic Technology in Records Management and Service Delivery

Record management is seen as the process of ensuring that there is accountability, security, integrity and comprehensiveness in the storage of information. Record management aspects of strategic technologies have been seen to influence the level of service delivery in diverse ways. Focusing of management of medical records in public hospitals in South Africa, Luthuli and Kalusopa (2018) sought to examine the influence of records management technology and infrastructure on service delivery. Using structured questionnaires and semi-structured interviews, the study found out that records management technology and infrastructure influenced service delivery in diverse ways. In respect to this, the study established that records management technology and infrastructure was useful in speeding up service delivery, easy retrieval of information and also enhancement of compliance to record keeping policies and procedures. The study further established that the application of technology in service delivery improved the level of transparency and accountability in health service delivery. Luthuli and Kalusopa (2018) recommended training for record managers on use of modern technologies in information management. The study by Luthuli and Kalusopa (2018) was carried out in South Africa which is more developed in terms of ICT infrastructure than Kenya and therefore the study findings cannot be generalizable to Kenyan context. These presents a research gap for the current study to be carried in Kenyan context.

Electronic record keeping practices have been observed to improve the quality of service delivery in diverse ways. Still in the context of South Africa, Marutha and Ngulube (2012), carried out a study that investigated the influence of electronic record keeping on the service delivery in public health sector of Limpopo Province. The study sampled 210 employees from document management and information management units. The study revealed that there was poor use of electronic document and records management system in public health sector. As a result of this, the study revealed that there was long patient waiting times and patients being treated without medical history. The resulted to poor service delivery in hospitals and dispensaries in the public sector. The study recommended the use of modern electronic document and records management systems with capacity to capture full patient details as well as track information movement including paper record movement. Though on Kenyan context, reviewed study was carried out in hospitals which create, store, retrieve and dispose different types of information from those by the DIRP. This therefore presents a contextual research gap which the current study seeks to fill.

Records-keeping processes have further been associated with service delivery outcomes by several scholars. For example, focusing on electronic record management systems in Nigeria, Obotu, Uganneya and Ogezi (2018) established that the electronic record management systems reduced medication errors and improved quality of health care services. It was noted that availability of electronic record management systems in hospitals in Nigeria led to improved security of patients data. This was through its capacity to put control measures to data access such as passwords. Obotu, Uganneya and Ogezi (2018) recommended to formulation of policies and guidelines on the usage and implementation of digital record management systems in order to improve the level of service delivery. Similar to Marutha and Ngulube's (2012) study, this study presents a contextual research gap for it was carried out in hospitals while the current study was conducted in the Directorate of Immigration and Registration of Persons.

Creation, receipt, maintenance, use and disposal of record using modern Strategic Technologies in record management has been seen as a determinant of service delivery in various institutions. Using a case study of Kisii Teaching and Referral Hospital, Ondieki (2017) investigated the influence record management on health

service delivery. Ondieki (2017) established that the hospital kept private and confidential records of patients that need proper management. In respect to this, the study established that there was low level of integration of technology in record management and this slowed the speed of service delivery. It was noted that patients had to wait for long period of time for their information to be retrieved from the hospital records. Poor record management practices were found to explain for slow decision making by the management team of the hospital. The study recommended that the use of ICT in information management in order to speed up the creation, receipt, maintenance, use and disposal of records in the hospital. The reviewed study was carried out in hospital that keeps different records from the Directorate of Immigration and Registration and therefore a research gap.

### 2.3.3 Proficiency of Application of Strategic Technology and Service Delivery

Proficiency of application of strategic technology refers to the ability of a person to show high degree of competency in the use of the strategic technology. The degree of skills one has about the usage of strategic technology that is used to serve customers or other service recipients may affect the level of service delivery as shown by different scholars. Kairu (2013) carried out a study to examine the influence of proficiency in ICT on service delivery of Kenya Revenue Authority. The study adopted a descriptive survey design. It was established that to a large extent, Kenya Revenue Authority has well-knowledgeable employees on the use of management information system. As a result of employees' proficiency in the use of ICT, the study observed that Kenya Revenue Authority delivered innovative customer services. It was also noted that from time to time, the Kenya Revenue Authority offered in-service training to employees on the use of ICT based programs in order to improve their productivity and performance in regard to service delivery. The study concluded that there was a positive relationship between the level of proficiency in application of strategic technology and quality of service delivery. The study by Kairu (2013) used only descriptive statistics and therefore showed to statistically link proficiency of application of strategic technology and service delivery. The current study used inferential statistics to show the relationship between the dependent and independent variable of the study and therefore a methodological research gap.

Service innovation has also been linked to task knowledge of service providers in diverse contexts. In respect to this, knowledge on a task is able to generate a sustainable competitive advantage as shown by different scholars. In the context of service industry, Storey and Kahn (2014) sought to find out whether knowledge on use of ICT innovations in 385 UK-based service businesses has influence on the quality of service delivery. The study revealed that there was a positive and significant relationship between proficiency in the use of ICT innovations and service delivery. In respect to this, the study noted that knowledgeable personnel on ICT innovations were able to deliver services on time, meet customer needs as well as offering more services related to the service a customer sought. Proficiency in ICT innovations was also related to productivity and speed in service delivery and therefore serving a larger number of customers, and hence improved service delivery. The reviewed study by Storey and Kahn (2014) was done in United Kingdom, a first world country with more developed ICT infrastructure than Kenya. For this reason, the findings obtained by Storey and Kahn (2014) cannot be generalized to Kenyan context.

Information Technology has been used as a transformative agent in human resource functions. For example, Long (2013) carried out a study to establish how information technology improves the performance and proficiency of employees. The study used critical literature review method to gather data for the study. The study established that employees' proficiency in the use of technology improved the level of service delivery to customers. In respect to this, the study established that an increase in the level proficiency in using technological innovations among the employees resulted to an increase in service delivery. This was due to faster service delivery and improved customer satisfaction because of proficiency in using technological innovations among the employees. The study recommended proper training for ICT users in an organization in order to improve productivity of the employees. By using critical literature review method, a study by Long (2013) may be biased towards the findings of other researchers. The current study used descriptive research survey design and therefore collect data directly from the respondents.

The performance of ICT innovation strategies can be measured by their capability in service delivery. However, the performance of ICT innovation strategies cannot be

separated from its users. Tran (2013) sought to examine the performance of IT services as a balanced scorecard for service delivery in business enterprises. He used qualitative research method to meet its objectives. The study revealed that employee skills in the use of ICT positively affected the quality of service delivery. It was on this note established that expertise in IT services in business enterprises improved customer satisfaction as well as service resolution and responsiveness. The study recommended improvement of employee training in IT aspects in order for the ICT software investment to translate to business development. The study by Tran (2013) presents a methodological research gap for it adopted qualitative research design and therefore failing to quantitatively measure the impact of ICT innovation strategies on service delivery. The current study seeks to fill this research gap by using both qualitative and quantitative research designs.

### 2.3.4 Ease of Use of Strategic Technology and Service Delivery

The perceived ease of use of strategic technology has been seen to affect the rate of adoption of the technology and hence level of service delivery. Ease of use can be defined as the extent to which the use of the application is free from challenges. Mensah (2017) carried out a study to examine the predictors of adoption of e-government services by Russian students in China. The study gathered data from 500 students through the use of structured questionnaires. The study established that e-government services posed a challenge to most students due to lack of proper training in technology. Due to these difficulties, the study established that the students developed negative attitudes towards the use of e-government services and therefore low adoption of the technology. The study concluded that perceived ease of use of e-government services has a significant influence on the adoption rates of e-government services among Russian students in China. The study recommended students to be trained on how to use e-government services in order to reduce the perceived difficulties in the use of the network. The proposed study was broader than the reviewed study by Mensah (2017) for it used both questionnsires and interviews. By incorporating interviews in the study, the proposed study was able gather more information.

Ease of use of technological strategies has been seen to influence the quality of service delivery by different scholars. In the context of United Arabs Emirates (UAE),

Chiravuri and Al-Ahmed (2016) carried out a study to examine the determinate quality of service delivery through the use of e-government services. Using both quantitative and qualitative research methods, the study established that ease of use of e-government services influenced the level of usability and reliability of the services and therefore improving the service delivery aspects such as responsiveness, assurance and customer satisfaction. However, a study by Alrashidi (2012) among employees in United Arabs Emirates (UAE) established that there was no significant effect of ease of use of e-government services and service delivery. In respect to this, the study revealed that both beginners and experienced users of e-government services had similar perception of the quality of service delivery through e-government. A study by Alrashidi (2012) in United Arabs Emirates could not be generalizable to Kenyan context due to significant differences in technological advancement. The current study endeavored to fill this contextual research gap.

The easiness of navigation around an e-Government website, access for persons with disabilities and ability to provide assistance sought for in e-government website can also determine the quality of service delivery through e-government strategic intervention. In respect to this, Colesca and Dobrica (2018) carried out a study in Romania that sought to establish the effect of perceived ease of use of e-government services on service delivery through e-government platform. Using descriptive survey research design, the study established that significant relationship between perceived ease of use of e-government services and service delivery by the government of Romania. In regard to these findings, it was noted that residents who were able to comfortably and with ease browse around e-government website were satisfied with the service delivery of the Romanian Government. The study recommended awareness creation of the ease of obtaining government services using e-government platform. The reviewed study by Colesca and Dobrica (2018) focused on perceived the ease of use of technology by the users while the current study focused on actual technicalities and experienced challenges in using the technological strategies.

In the public sector, the rate of adoption of new technologies may be influenced by the ease of use of the new technologies. Focusing on public sector, Asiligwa (2016) carried out a study to examine the adoption rates of e-government services in the county government of Nairobi. The study specifically focused on effort expectancy of

the e-government services and its adoption rates. Using structured questionnaires, the study established that adoption of e-government services depended on perceived ease of use as well as skill endowment of the users. In respect to this, users who were well knowledgeable in information technology found it easy to use e-government services and it was very convenient for them. Users with the required ICT skills in e-government services were unlikely to find challenges in using the services and also found the e-government services helpful. The study concluded that ease of use of e-government services was a significant predictor of service delivery at the county government of Nairobi. The study recommended establishment of digital kiosks for train residents on various aspects of e-government services and how to access the services.

### 2.3.5 One-Stop Model Strategic Technology and Service Delivery

One-Stop Model Strategic Technology refers to provision of many services using one model as opposed to different models for different services. It implies that with One-Stop Model Strategic Technology, users of the model can access full-services of an institution or Government from the same model. The ability of Strategic Technology model to provide many services has been seen to enhance service delivery. In a study on e-government services in Zambia, Chipeta (2018) sought to establish benefits of provision of government services using one online platform. Using descriptive research design, the study established that Zambian students were able to access a range of government services using one model. The services included information on taxes, driver's licenses and registers, fines, fees and all kinds of bills. The service also included business registration and licensing, customs and taxes rules among others. Chipeta (2018) concluded that use of one-stop model strategic technology improved the service delivery in Zambia. Chipeta (2018) focused on students who have different uses for e-government services from the uses of e-government services by Directorate of Immigration and Registration and therefore a research gap.

Use of One-Stop Model Strategic Technology also indicates maturity of e-government services. For example, Joshi and Islam (2018) focused on sustainability of e-government services in developing countries of the world. Based on meta-analysis, the study found out that counties such as Japan, Netherlands, Costa Rica, Jordan, South Africa, Indonesia, Senegal, Kyrgyzstan and Zambia offered government

services through one-stop online model. The study established that one-stop model for e-government services resulted to cost reduction and improved convenience and efficiency in assessing government services. Joshi and Islam (2018) observed that the models generally improved the level of service delivery in the respective countries resulting to satisfaction of its citizens. The study recommended introduction of more services via online platforms as well as integration several online service providers into one platform under different categories. This study did not articulate particular models for each of the country studied and therefore the findings obtained could not be used to make decisions by any particular county. The proposed study focused on in-depth information on One-Stop Model Strategic Technologies for easier decision making.

In transforming public administration using information and communication technologies with an aim to achieve a better government service delivery, development of one-stop model strategic technology has been on the focus. As'ad, Khazaei, and Akhgar (2016) carried out a study to examine service integration in electronic government implementations in United Arab Emirates. Based on literature review, the study established that the government used internet as a primary tool of information and communication technology to support electronic government activities. In respect to this, all paper work procedures were computerized and integrated in one-stop portal. The study revealed that by using one-stop portal for all government activities and communication, citizens were able to receive information and services from the government at any place and in the most convenient manner. Another advantage of integrating all government services to one online platform was reduction of time and cost in accessing Government services, enhancement of good relationship between the citizens and the government, improvement of accountability, transparency and citizen participation in Government activities. These aspects were seen to improve the level of service delivery by the government. Similar with a study by Alrashidi (2012) in United Arabs Emirates, there exists a contextual research gap due to significant differences in technological advancement.

Technology has been associated with improvement of service delivery by national governments in different contexts by joining up all activities of different agencies of the government. Focusing on National- Level Service Governance in Abu Dhabi in

UAE, Al-khouri (2013) sought to find out how modern information and communication technology (ICT) affects government service availability and delivery. Al-khouri (2013) found out that technology played a major role of joining up different government agencies into one model where the citizens and businesses could obtain government services. The study observed that, by joining up government services in an online platform, citizens and businesses were able to receive government services in 24 hours a day and also increased citizen participation in government activities including policy making. The study concluded that one-stop Model Strategic Technology significantly affected the level of service delivery by government agencies in Abu Dhabi.

### 2.4 Conceptual Framework

In establishing the influence of application of strategic technology on service delivery in the DIRP, the study used records management application of strategic technology, proficiency of application of strategic technology, ease of use of strategic technology and use of one-stop model strategic technology as dependent variable and service delivery at DIRP as the independent variable. Figure 2.1 shows the conceptualization of study variables.

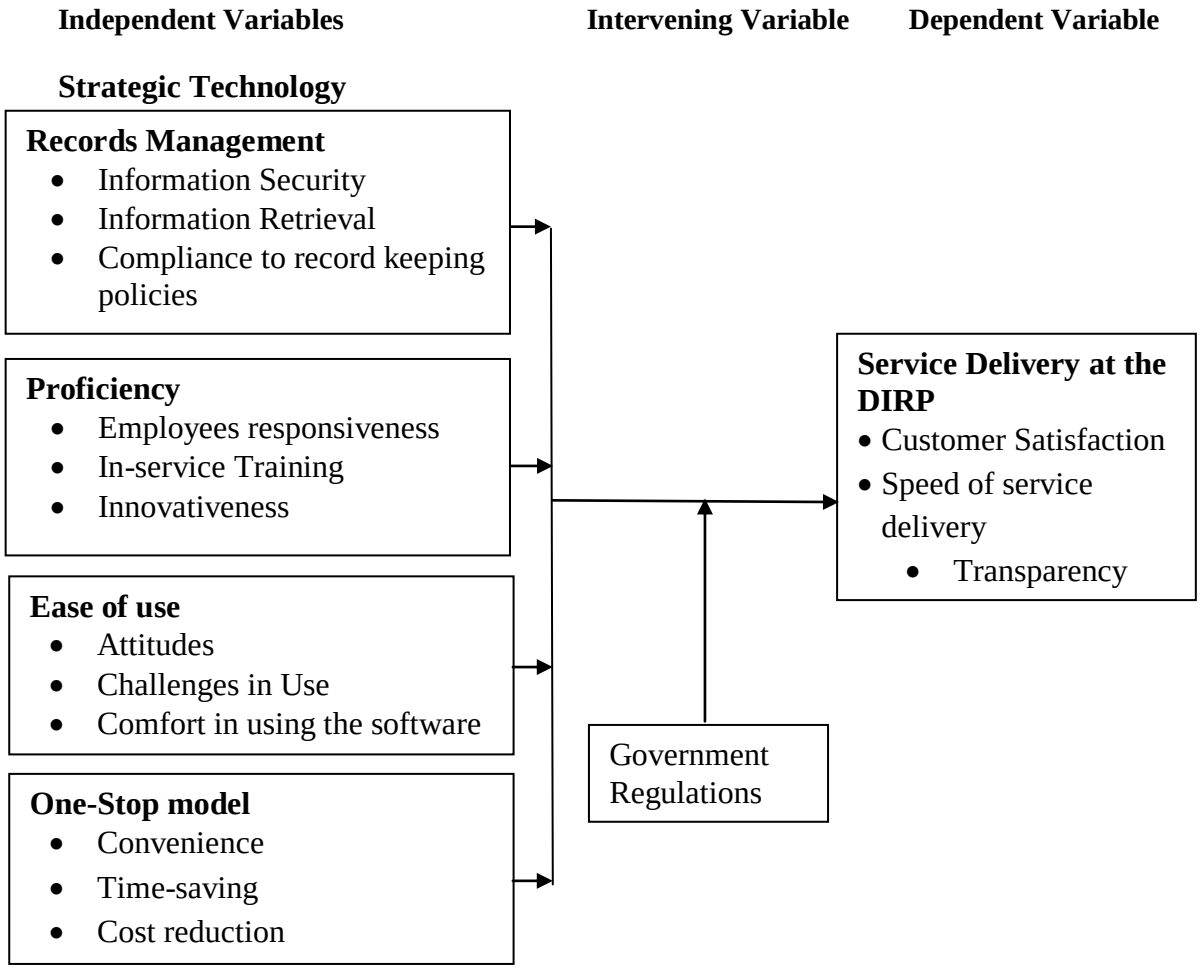


**Figure 2.1Conceptual Framework**

The conceptual framework in Figure 2.1 shows the expected relationships existing between the independent variables and the dependent variable. It is expected that records management as a strategic technology strategy has an effect on service delivery at the DIRP. The framework also shows that anticipates that proficiency in strategic technology on service delivery at the DIRP. It is also expected that ease of use of strategic technology can significantly affect on service delivery at the DIRP. Finally, the framework theorizes that one stop model of strategic technology can significantly affect on service delivery at the DIRP. The study also expects that government regulations can have an effect on service delivery at the DIRP.

# CHAPTER THREE
# RESEARCH DESIGN AND METHODOLOGY

## 3.1 Introduction

This chapter examines the research design and methodology of the study. In this context, the study examined the research design, population and sampling aspects, instrumentation, validity and reliability aspects, data collection and analysis procedures, and ethical considerations.

## 3.2 Research Design

This study used correlation research design. According to Donoghue (2010) the correlation research design examines the relationship between two or more variables. This research design was used in this study since the researcher seeks to examine the aggregate level of the influence of application of strategic technology on service delivery aspects within the DIRP. At the research objective level, the study seeks to examine the influence of records management, proficiency of strategy technology application, ease of use of strategic technology, and one-stop model strategic technology on service delivery at the directorate. The purpose of the study is therefore to link diverse aspects of strategic technology with service delivery aspects. In particular, the prediction correlation research design was used. Creswell (2014) notes that prediction correlation research design seeks to determine the outcome of a dependent variable based on the independent variables. In the context of this study, the multiple linear regression analysis was used to examine the predictive capacities of records management, proficiency of strategy technology application, ease of use of strategic technology, and one-stop model strategic technology on service delivery at the DIRP.

## 3.3 Population of the Study

The population of the study refers to the entire group of people that the study is seeking to understand or the study is based on (Singh, 2006). Also according to Saunders, Lewis and Thornhill (2007) accessible population refers to the portion of target population that is practically accessible to the researcher due to diverse aspects such as logistical and cost implications. The target populations of this study, therefore, are the employees of the DIRP in Nairobi national head office. The employees of DIRP at the head office are accessible to the researcher. There are a

total of 1059 employees of the directorate working at the head office distributed amongst diverse service departments. The employees of the directorate use the diverse technology in their work execution that is critical in the service delivery aspects, therefore, are expected to be in a position to provide meaningful information for the study purposes.

**Table 3.1: Population of the Study**

| Service Department | Population Size | Percentage |
|---|---|---|
| Immigration Services | 201 | 19% |
| National Registration Bureau | 318 | 30% |
| Civil Registration Bureau | 349 | 33% |
| Integrated Population Registration Services | 127 | 12% |
| Border Control | 22 | 2% |
| Refugee Affairs Secretariat | 42 | 4% |
| | **1,059** | **100%** |

### 3.4 Sampling Techniques and Sample Size

The sampling techniques and sampling size are illustrated for the study.

#### 3.4.1 Sampling Technique

The sampling technique illustrates the manner in which the specific members of the population were picked for the purposes of forming sample membership (Dudovskiy, 2018). This study used proportionate stratified sampling method as the sampling technique method. The method were used since it enables each employee to have an equal chance within their strata of being chosen and also enables the picking of sample members relative to their strengths in the population (Mugenda & Mugenda, 2003).Therefore, the service departments that is Immigration Services, National Registration Bureau, Civil Registration Bureau, Integrated Population Registration Services, Border Control, and Refugee Affairs Secretariat formed the strata. Within each stratum the lottery method of simple random sampling was utilized to select the individual members of population to form sample membership. The number of respondents to be used per stratum were determined by its proportionate strengths relative to the other strata.

### 3.4.2 Sample Size

The sample size refers to the proportion of the accessible population that were used in the study for the purposes of data collection that would later be generalized to the population (Orodho, 2003). The population of interest in the present study is sufficiently large to warrant the use of probability sampling methods. The main factor considered in determining sample size is the need to keep it manageable while being representative enough of the entire population under study. Thus, the study first obtained the required sample size using the formula by Nassiuma (2000);

$$n = \frac{Nc^2}{c^2 + (N-1)e^2}$$

Where n = sample size, N = population size, c = coefficient of variation (≤ 30%), and e = error margin (≤ 5%). In this study c is taken as 30%, e to be 3% and N = 1059, therefore, fitting this into the formula:

$$n = \frac{1059 * (0.3)^2}{(0.3)^2 + (1059-1) * (0.03)^2} = 91.45 \approx 91$$

the right sample size was 91 respondents.

Using the proportionate stratified sampling, the study distributed the sample size across the service departments as illustrated in Table 3.2. This implies that per stratum a proportionate sample size was collected based on the relative proportionate strength of the stratum to the population.

**Table 3.2: Sample Size**

| Service Department | Population Size | Percentage | Sample size ($n_h=(N_h/N)n$) |
|---|---|---|---|
| Immigration Services | 201 | 19% | 17 |
| National Registration Bureau | 318 | 30% | 27 |
| Civil Registration Bureau | 349 | 33% | 30 |
| Integrated Population Registration Services | 127 | 12% | 11 |
| Border Control | 22 | 2% | 2 |
| Refugee Affairs Secretariat | 42 | 4% | 4 |
| Totals | 1,059 | 100% | 91 |

### 3.4 Instrumentation

Structured questionnaire was used for the purposes of data collection in this study. According to Ragab and Arisha (2017) structured questionnaires are set and written questions that the respondents fill for the purposes of addressing the set research objectives. The responses for the structured questions are often preset and the respondents need to pick their responses from the provided options. The structured questionnaire was used in this study as it makes it easy for data collection process, it is cost effective in nature, and is easy to analyze using Statistical Packages for Social Sciences (SPSS) software. The structured questionnaire yielded quantitative data for the study. This is data in numerical form. The questionnaire was divided into five sections that is section one with the demographic information and sections two to six covering the variables with a single variable per section. In the context of the measurement scales used for the structured questionnaires, the demographic section of the questionnaire consisted of nominal data. On the other hand, a five point Likert scale was used as the measurement scale for the variables for both the independent and dependent variable.

#### 3.5.1 Pilot Study

The pilot study was undertaken for the study. According to Mugenda & Mugenda (2003), a pilot study refers to small scale study that is undertaken for the purpose of detecting validity and reliability of the study as well as any logistical challenges that may be present in undertaking of the study. Creswell (2014) further notes that the pilot study should be undertaken in similar conditions as possible to those that were used in the final study. In this context, the pilot study was undertaken in Nakuru offices of DIRP. This is with a view that the Nakuru offices use similar technology as their Nairobi counterparts. According to Mugenda and Mugenda (2003), 10% of the sample size should be used for the purposes of pilot study. In this study therefore, nine respondents were used being 10% of the sample size.

#### 3.5.2 Validity of the Instrument

The validity of the instrument refers to the ability of the instrument to measure what it purports to measure (Anastasiadou, 2011). In the context of this study, validity refers to the ability of the structured questionnaire to measure the five variables that is influence of records management, proficiency of strategy technology application, ease

of use of strategic technology, and one-stop model strategic technology on service delivery at the directorate. The validity in this study was measured using content validity. This examines the relevance of the structured questionnaires in measuring the set variables of the study. To ensure validity of the structured questionnaires, the opinions of the researcher's academic supervisors at the university were used in advising the relevancy of the set questions in the questionnaire during the pilot study phase.

### 3.5.3 Reliability of the Instrument

The reliability of the instrument refers to the reliability of the results over a period of time or over a number of respondents. The reliability that was measured in this study is the internal reliability that measures internal consistency (homogeneity) of responses within a latent variable(Fienberg & Linden, 2012). According to Atmowardoyo (2018) a latent variable is a variable measured in an indirect manner using several indicators that collectively measure the variable. In this context, each variable had a series of Likert type questions that measured the specific variable. The Cronbach alpha coefficient was used for testing the internal reliability at a threshold of 0.7.The instrument was found to have an internal reliability coefficient of $\alpha = 0.8819$ which was high and above the minimum threshold and was, therefore, acceptable for the study purposes.

## 3.6 Data Collection Procedure

The data collection procedure commenced with obtaining a data collection authorization letter from Kabarak University. The letter was used for obtaining permission for data collection process from National Commission of Science, Technology and Innovation (NACOSTI). The NACOSTI letter further assisted the researcher in obtaining data collection authorization from the DIRP. After achieving these set of authorizations, the researcher introduced himself to the individual respondents through a consent statement. The data collection process was undertaken through a drop-off and-pick-up later method. This method enabled the questionnaires to be dropped for the respondents to fill and then collected at a later stage. The drop-off and pick-up later method of self-administrated questionnaires is associated with a higher response rate (Wanjohi, 2014).

### 3.7 Data Analysis

The data analysis process commenced with receipt of filled questionnaires from the respondents, this involved coding of the data to the SPSS software to enable the management of quantitative data from the questionnaires through the use of the SPSS software. The descriptive statistics such as frequency distributions were utilized for the purposes of determining the proportion of respondents choosing a specific option. The Chi square analysis was undertaken to determine on whether the observed frequency values are significant. Correlation analysis was undertaken between the variables with a view of understanding the association levels between them. In respect to the correlation aspects, the direction of correlation as well as the magnitude of the correlation were undertaken. Pearson's product moment correlation coefficient, R, was used to examine the relationship between the independent and dependent variables under the correlation analysis. The multiple linear regression analysis was also used with a view of explaining the influence of specific independent variables on the dependent variable in a joint model. In this context, several statistics were obtained through regression analysis. However, the standardized beta value, β, was used for hypothesis testing. The multiple regression equation that was used for the study, held under;

$$Y = \beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+ \beta_4X_4+\varepsilon$$

Whereby;

Y= Service Delivery

$X_1$ = Records Management

$X_2$ = Proficiency of application

$X_3$ =Ease of Use

$X_4$= One-Stop Model

$\beta_0$, $\beta_1$, $\beta_2$, $\beta_3$, $\beta_4$= Model coefficients

$\varepsilon$ = Error term

Tables were used for the purposes of data presentation due to the ease of their use as well as versatility in data presentation.

### 3.8 Ethical Consideration

Ethical consideration refers to the best practices and moral obligations that should be adhered to in the process of research undertaking (Wanjohi, 2014). Amongst the ethical consideration is obtaining of various authorizations in the data collection process. The study subscribed to the stipulated ethical requirements. Permission to conduct the study research was sought from the relevant authorities and departments. Initial permission was sought from the School of Post Graduate Studies, Kabarak University. The permit was then presented to the National Commission for Science, Technology and Innovation (NACOSTI) to obtain a permit for the research and also the DIRP director's office for permission to carry out the study in the area. Respondents were made to understand that participation in the study was out of their own volition and they were also assured of utmost privacy and confidentiality regarding the information gathered and that it was meant to be used solely for academic purposes. The respondents were, thus, assured of data privacy and confidentiality during the data processing stage. The respondents were, further, given freedom to voluntarily respond to the questionnaires at free will. Ethical measures were also followed in the data analysis to ensure the integrity of data and findings (Fowler, 1984).

# CHAPTER FOUR
# DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

## 4.1 Introduction

This chapter presents results arising from the analysis of data collected using questionnaires. The data collected was analyzed using descriptive and inferential statistical methods for each variable and the findings presented in tables, and their implications discussed.

### 4.1.1 Response Rate

Table 4.1 shows the response rate of the questionnaires.

**Table 4.1: Response Rate**

| No. of questionnaires Issued | No. of questionnaires Returned | Response Rate (%) |
|---|---|---|
| 91 | 79 | 87 |

The high questionnaire response rate (87%) shown in Table 4.1 resulted from the method of administration of the instrument, which was in this case self-administered. This was acceptable according to Wanjohi (2014). This method also ensured that the respondents' queries concerning clarity were addressed at the point of data collection; however, caution was exercised so as not to introduce bias in the process. The other questionnaires were not returned by the respondents, hence, they were not included in the study.

## 4.2 Demographic Characteristics of the Respondents

The study sought to determine the demographic characteristics of the respondents as they are considered as categorical variables which give some basic insight about the respondents. The characteristics considered in the study were; range of ages of the respondents; gender; highest level of education attained by them and; number of years they had worked in the present firm. The findings on these are summarized in Table 4.2.

**Table 4.2: Demographic Characteristics of the Respondents**

| Variable | Category | Frequency | Percentage(%) |
|---|---|---|---|
| Gender | Male | 41 | 52 |
| | Female | 38 | 48 |
| Age in Years | 19 – 28 | 29 | 37 |
| | 29 – 38 | 24 | 30 |
| | 39 – 48 | 18 | 23 |
| | Above 48 | 8 | 10 |
| Number of years Worked in the Directorate of Immigration | 1 – 5 yrs | 20 | 25 |
| | 6 – 10 yrs | 35 | 45 |
| | 11 - 15 yrs | 13 | 16 |
| | Above 15yrs | 11 | 14 |

The findings in Table 4.2 suggest that majority (52%) of the respondents were male although the high proportion of females indicated that there was a considerable number of female employees in the Directorate that met the one third gender threshold stipulated by the constitution. The results also indicate that majority (37%) of the respondents were young and aged between 19 – 28 years. This was an important groups as far as the study was concerned as most of them were highly prepared for digital technology applications. In addition, majority (45%) of the respondents had also worked in the Directorate for between six and ten years. These findings imply that majority of the respondents were youthful and had considerable experience working in the industry and were, therefore, expected to give valid opinions in relation to the application of strategic technology on service delivery in the Directorate. Abere and Muturi (2015) explained that for a reliable study to be conducted, the respondents background characteristics, such as, age, gender, educational qualifications and work experience needed to be established so as to ascertain that one sampled from a reliable population that is likely to give valid answers for the study.

### 4.3 Descriptive Analysis Results

This section presents the results of the descriptive statistical analyses of the data and their interpretations. The descriptive statistics helped to develop the basic features of

the study and form the basis of virtually every quantitative analysis of the data. The results were presented in terms of the study objectives.

### 4.3.1 Records Management Application of Strategic Technology

The first objective of the study was to examine the influence of records management strategic technology on service delivery at the DIRP. This variable was described in terms of Information Security, Information Retrieval and Compliance to record keeping policies. A five point Likert scale was used to rate responses of this variable and it ranged from; 1 = strongly disagree to 5 = strongly agree and was analysed on the basis of frequencies and percentages. The findings are presented in Table 4.3.

**Table 4.3: Records Management in Application of Strategic Technology**

| | SA Freq(%) | A Freq(%) | N Freq(%) | D Freq(%) | SD Freq(%) | $\chi 2$ | p-value |
|---|---|---|---|---|---|---|---|
| There is integration of technology in record management in the DIRP | 20(25) | 26(33) | 13(17) | 14(18) | 6(7) | 93.39 | 0.001 |
| There is easy retrieval of information through the use of digital record management systems. | 12(15) | 30(38) | 12(15) | 15(19) | 10(13) | 90.15 | 0.001 |
| There is enhancement of compliance to record keeping policies and procedures though the use of electronic records management systems | 14(18) | 42(53) | 19(24) | 2(3) | 2(3) | 73.88 | 0.001 |
| There is security of clients' data through the integration of technology in record management | 12(15) | 44(56) | 16(20) | 5(6) | 2(3) | 74.82 | 0.001 |
| There is regular upgrading of electronic records management systems | 12(14) | 39(49) | 22(28) | 3(4) | 3(4) | 84.1 | 0.001 |

The results in Table 4.3 suggest that majority (33%) of the respondents agreed and 25% strongly agreed that there was integration of technology in record management

in the DIRP. The findings also indicate that retrieval of information had been made easy through the use of digital record management systems as indicated by most of the respondents who agreed (38%) and 15% who strongly agreed. In addition, majority of the respondents agreed (53%) while 18% strongly agreed that there was enhancement of compliance to record keeping policies and procedures though the use of electronic records management systems. The results also suggest that there was security of clients' data through the integration of technology in record management as indicated by majority (56%) of the respondents who agreed and 15% who strongly agreed. Majority (49%) of the respondents also agreed while 14% strongly agreed that there was regular upgrading of electronic records management systems.

The observations of findings that majority of the respondents were in agreement with the statements posed in relation to strategic technology applications in records management suggest that the applications had enhanced records management at the DIRP. These findings agree with Luthuli and Kalusopa (2018)who found that records management technology and infrastructure was useful in speeding up service delivery, easy retrieval of information and also enhancement of compliance to record keeping policies and procedures. The findings, however, disagree with Marutha and Ngulube (2012) who found that there was poor use of electronic document and records management system in public health sector.

Further, contrary to Ondieki (2017) whose study established that there was low level of integration of technology in record management and this slowed the speed of service delivery, the current study found that there was considerable integration of technology in record management in the DIRP. In terms of security, the findings indicated that the was considerable security of clients' data through the integration of technology in record management. This was consistent with Obotu, Uganneya and Ogezi (2018) who established that availability of electronic record management systems in hospitals in Nigeria led to improved security of patients data.

### 4.3.2 Proficiency of Strategic Technology Usage

The second objective of the study was to establish the influence of proficiency of strategic technology usage on service delivery at the DIRP. The status of this variable was described on the basis of Employees responsiveness, In-service Training and Innovativeness. A five point Likert scale was used to rate responses of this variable

and it ranged from; 1 = strongly disagree to 5 = strongly agree and was analysed on the basis of frequencies and percentages. These results are presented in Table 4.4.

**Table 4.4: Proficiency of Application of Strategic Technology**

| Statement | SA Freq(%) | A Freq(%) | N Freq(%) | D Freq(%) | SD Freq(%) | $\chi 2$ | p-value |
|---|---|---|---|---|---|---|---|
| Employees are well-knowledgeable on the use of management information systems | 9(11) | 15(19) | 11(14) | 29(37) | 15(19) | 62.59 | 0.001 |
| There is in-service training to employees on the use of ICT based programs | 23(29) | 28(35) | 11(14) | 9(11) | 8(9) | 100.77 | 0.001 |
| ICT personnel in the DIRP are able to serve larger number of customers | 16(21) | 33(42) | 17(20) | 8(10) | 5(6) | 116.17 | 0.001 |
| Employees in the DIRP are able to deliver services on time | 16(21) | 41(52) | 13(16) | 4(5) | 5(6) | 162.28 | 0.001 |
| There is faster responsiveness to clients' needs in the larger number of customers | 9(11) | 38(48) | 17(20) | 9(11) | 6(7) | 89.04 | 0.001 |

The findings in Table 4.4 indicate that the employees of the Directorate were not well-knowledgeable on the use of management information systems as indicated by majority (37%) of the respondents who disagreed and 19% who strongly disagreed with the statement posed. The results also indicate that there was in-service training to employees on the use of ICT based programs as suggested by most of the respondents who agreed (35%) and 29% who strongly agreed. Majority (42%) of the respondents agreed while 21% strongly agreed that the ICT personnel in the DIRP are able to serve larger number of customers. The findings further suggest that employees in the

DIRP were able to deliver services on time as indicated by majority of the respondents who agreed (52%) and those who strongly agreed (21%). Most of the respondents were of the view that there was faster responsiveness to clients' needs in the larger number of customers as indicated by majority who agreed (48%) and 11% who strongly agreed.

Save for the responses on the statement suggesting that the employees of the Directorate were well-knowledgeable on the use of management information systems in which majority of the respondents disagreed, it is evident that the proficiency levels of the use of strategic technology at the directorate was good as indicated by majority of the responses showing agreement with the statements. Specifically, the findings suggesting the employees of the Directorate were not well-knowledgeable on the use of management information systems disagree with Kairu (2013) who established that to a large extent, Kenya Revenue Authority has well-knowledgeable employees on the use of management information system.

However, consistent with Kairu (2013), the study established that the Directorate provided in-service training to employees on the use of ICT based programs and this raised their levels of employees' proficiency in the use of ICT. The findings also agree with Long (2013) who established that employees' proficiency in the use of technology improved the level of service delivery to customers. Also consistent with Tran (2013), the study established that employee skills in the use of ICT positively affected the quality of service delivery. In addition, the finding that view that there was faster responsiveness to clients' needs in the larger number of customers as indicated by majority who agreed supports those of Sharma (2014) notes that in India who found that strategic technology has been used to improve on convenience of service delivery, responsiveness aspects in service delivery, and timelines aspects in service delivery.

### 4.3.3 Ease of Use of Strategic Technology

The third objective of this study was to establish the ease of use of strategic technology on service delivery at the DIRP. The status of this variable was described in terms of Attitudes, Challenges in Use and Comfort in using the software. A five point Likert scale was used to rate responses of this variable and it ranged from; 1 =

strongly disagree to 5 = strongly agree and was analysed on the basis of frequencies and percentages. The results are presented in Table 4.5.

**Table 4.5: Ease of Use of Strategic Technology**

| Statement | SA Freq(%) | A Freq(%) | N Freq(%) | D Freq(%) | SD Freq(%) | $\chi 2$ | p-value |
|---|---|---|---|---|---|---|---|
| There is positive attitudes toward the use of management technology systems | 10(13) | 31(39) | 10(13) | 17(22) | 11(14) | 67.14 | 0.001 |
| The management technology systems is easy to use even for beginners | 9(11) | 20(25) | 29(37) | 13(16) | 8(10) | 84.26 | 0.001 |
| Employees have good skill endowment for the use of management information systems | 13(16) | 18(23) | 12(15) | 25(32) | 11(14) | 58.67 | 0.001 |
| Users of management technology systems are unlikely to find challenges in using the system | 10(13) | 17(22) | 35(44) | 8(10) | 9(11) | 84.05 | 0.001 |
| Users of management technology systems can comfortably browse the software. | 15(19) | 31(39) | 14(18) | 9(11) | 10(13) | 87.34 | 0.001 |

The results in Table 4.5 there were positive attitudes toward the use of management technology systems as indicated by majority (39%) of the respondents who agreed and 13% who strongly agreed. However, majority of the respondents were uncertain (37%) on whether the management technology systems was easy to use even for beginners. The findings also suggest that majority of the respondents disagreed (32%) while strongly disagreed (14%) that the employees have good skill endowment for the use of management information systems. The findings further suggest users of management technology systems are unlikely to find challenges in using the system as indicated by majority (44%) of the respondents who expressed uncertainty. Other findings also indicate that majority of the respondents agreed (39%) while 19%

strongly agreed that users of management technology systems can comfortably browse the software.

The findings imply that the ease of use of the technologies was important in enhancing service delivery in the Directorate. However, the findings revealed that the management technology systems were not easy to use even for beginners. While this could be driven by reasons of security it could affect the ease of use and the attitudes of the users. Nevertheless, the findings revealed that it did not have a negative impact on users as indicated by majority of the respondents who said they had positive attitudes toward the use of management technology systems. The results, therefore, disagree with those of Mensah (2017) whose study on the predictors of adoption of e-government services by Russian students in China found that due to ease of use difficulties, students developed negative attitudes towards the use of e-government services and therefore low adoption of the technology. Chiravuri and Al-Ahmed (2016)similarly established that ease of use of e-government services influenced the level of usability and reliability of the services and therefore improving the service delivery aspects such as responsiveness, assurance and customer satisfaction.

The findings further revealed that majority of the respondents were of the view that the employees did not yet possess adequate skill endowment for the use of management information systems and that there was uncertainty on whether users of management technology systems are unlikely to find challenges in using the system. This meant that there was need for more trainings on the use of the strategic technologies as recommended by Asiligwa (2016) who established that adoption of e-government services depended on perceived ease of use as well as skill endowment of the users. As such, users with the required ICT skills in e-government services were unlikely to find challenges in using the services and also found the e-government services helpful. Finally, the finding that majority of the users of management technology systems in the Directorate can comfortably browse the software agree with Colesca and Dobrica (2018) whose study in Romania revealed that that residents who were able to comfortably and with ease browse around e-government website were satisfied with the service delivery of the Romanian Government.

### 4.3.4 One-Stop Model Strategic Technology

The fourth objective of this study was to establish use of one-stop model strategic technology on service delivery at the DIRP. The status of this variable was described in terms of Convenience, Time-saving and Cost reduction. A five point Likert scale was used to rate responses of this variable and it ranged from; 1 = strongly disagree to 5 = strongly agree and was analysed on the basis of frequencies and percentages. The results are presented in Table 4.6.

**Table 4.6: One-Stop Model Strategic Technology**

| Statement | SA Freq(%) | A Freq(%) | N Freq(%) | D Freq(%) | SD Freq(%) | $\chi 2$ | p-value |
|---|---|---|---|---|---|---|---|
| The Strategic Technology one stop model provides many services in one platform. | 14(18) | 32(41) | 20(24) | 9(11) | 5(6) | 74.16 | 0.001 |
| There is cost reduction in provision of many services in one platform. | 17(22) | 31(39) | 7(9) | 16(20) | 8(10) | 79.91 | 0.001 |
| One-Stop Model Strategic Technology provides convenience in assessing services. | 9(12) | 31(39) | 8(10) | 20(25) | 11(14) | 83.84 | 0.001 |
| All paper work procedures were computerized and integrated in one-stop portal. | 12(15) | 29(36) | 12(15) | 15(19) | 11(14) | 81.38 | 0.001 |
| One-Stop Model Strategic Technology enables clients to receive information and services from the DIRP at any place | 19(23) | 26(33) | 12(14) | 12(14) | 10(12) | 75.85 | 0.001 |

The results indicate that the Strategic Technology one stop model provides many services in one platform as indicated by majority of the strategic as indicated by majority (41%) of the respondents who agreed and 18% who strongly agreed. The results also suggest that there was cost reduction in provision of many services in one platform as indicated by majority (39%) of the respondents who agreed and 22% who strongly agreed. The results also indicate that (39%) of the respondents agreed while 12% strongly agreed indicating that majority of the respondents were in agreement with the statement that the One-Stop Model Strategic Technology provides convenience in assessing services. Further, majority (36%) of the respondents agreed while 15% strongly agreed that all paper work procedures were computerized and integrated in one-stop portal. The findings also indicate that most of the respondents agreed (33%) while 23% strongly agreed that the One-Stop Model Strategic Technology enables clients to receive information and services from the DIRP at any place.

The findings underscore the merits of the one-stop-model for transacting business with government. The use of One-Stop Model Strategic Technology indicates maturity of e-government services (Joshi & Islam, 2018). Particularly, the finding on access to information on government services agrees with a study on e-government services in Zambia by Chipeta (2018)who found that Zambian students were able to access a range of government services using one model such as information on taxes, driver's licenses and registers, fines, fees and all kinds of bills. The service also included business registration and licensing, customs and taxes rules among others. The findings also support those of As'ad et al., (2016) in the UAE who found that by using one-stop portal for all government activities and communication, citizens were able to receive information and services from the government at any place and in the most convenient manner. Another advantage of integrating all government services to one online platform was reduction of time and cost in accessing Government services, enhancement of good relationship between the citizens and the government, improvement of accountability, transparency and citizen participation in Government activities.

### 4.3.5 Service Delivery at the DIRP

Finally, the study sought to determine the status of service delivery at the DIRP. This was the dependent variable and the status of this variable was described in terms of Customer Satisfaction and Speed of service delivery. The status of this variable was rated on a 5 point Likert scale ranging from; 1 = strongly agree to 5 = strongly disagree and was analysed on the basis of frequencies and percentages. These results are presented in Table 4.7.

**Table 4.7: Service Delivery at the DIRP**

| Statements | SA Freq(%) | A Freq(%) | N Freq(%) | D Freq(%) | SD Freq(%) | $\chi 2$ | p-value |
|---|---|---|---|---|---|---|---|
| Enhances good relationship between the clients and the DIRP | 9(11) | 14(18) | 23(29) | 20(25) | 13(17) | 69.58 | 0.001 |
| Reduces clients' waiting time | 17(21) | 25(32) | 16(20) | 11(14) | 10(13) | 63.65 | 0.001 |
| Improves clients' satisfaction | 11(14) | 23(29) | 14(18) | 16(20) | 15(19) | 81.93 | 0.001 |
| Increases the number of clients served per day | 17(21) | 27(34) | 16(20) | 13(17) | 6(8) | 79.48 | 0.001 |
| Increases transparency in service delivery | 20(25) | 26(33) | 13(17) | 14(18) | 6(7) | 72.17 | 0.001 |

From the results in Table 4.7, there was uncertainty on the effect of strategic technology in enhancing good relationship between the clients and the DIRPas indicated by majority (29%) of the respondents. The results also indicate that the application of strategic technology reduces clients' waiting time as indicated by majority (32%) of the respondents who agreed and 21% who strongly agreed. The results also indicate that the strategic technology improves clients' satisfaction as indicated majority (29%) of the respondents who agreed and 14% of the respondents who strongly agreed. Further, the findings suggest that the use of strategic technology

increases the number of clients served per day as indicated by 34% of the respondents who agreed and 21% who strongly agreed. Strategic technology also increases transparency in service delivery as indicated by majority of the respondents who agreed (33%) and 25% who strongly agreed.

These findings indicate that the use of strategic technology improved service delivery in the Directorate of Immigration through several dimensions. The findings, therefore, agree with Othman and Yasin (2015) in Malaysia, who found that the introduction of strategic technology was instrumental in enhancing service delivery amongst government bodies by ensuring that government services are convenient, holistic, consistent, faster, reliable, and transparent in nature. The findings also concur with Din et al., (2017) and Shaikh et al., (2016) in Pakistan who noted that Information and Communication Technology (ICT) has been used to improve on efficiency, transparency, responsiveness, and effectiveness of the public sector service delivery in the country. Lember (2017) in Estonia also found that use of strategic technology in service delivery shapes the kind of services that can be delivered and the manner in which these services can be delivered. Sharma (2014) notes that in India, technology is being used by government to meet the increasing demands of service delivery in the country. In this context, technology has been used to improve on convenience of service delivery, responsiveness aspects in service delivery, and timelines aspects in service delivery.

### 4.4 Correlation Analysis

In this subsection a summary of the Pearson's product moment correlation analyses is presented. It seeks to first determine the degree of interdependence of the independent variables and also show the degree and strength of their association with the dependent variable separately. These results are summarized in Table 4.8.

**Table 4.8: Summary of Correlations**

| | | Records management | Proficiency | Ease of Use | One-Stop Model | Service Delivery |
|---|---|---|---|---|---|---|
| Records management | Pearson Correlation | 1 | | | | |
| | Sig. (2-tailed) | | | | | |
| | N | 79 | | | | |
| Proficiency of strategic technology | Pearson Correlation | .199 | 1 | | | |
| | Sig. (2-tailed) | .069 | | | | |
| | N | 79 | 79 | | | |
| Ease of Use | Pearson Correlation | -.001 | .184 | 1 | | |
| | Sig. (2-tailed) | .994 | .094 | | | |
| | N | 79 | 79 | 79 | | |
| One-Stop Model | Pearson Correlation | .033 | .133 | 0.419 | 1 | |
| | Sig. (2-tailed) | .763 | .227 | .742 | | |
| | N | 79 | 79 | 79 | 79 | |
| Service Delivery | Pearson Correlation | .096 | .218* | .528** | .443** | 1 |
| | Sig. (2-tailed) | .386 | .047 | .000 | .000 | |
| | N | 79 | 79 | 79 | 79 | 79 |

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

*. Correlation is significant at the 0.05 level (2-tailed).

The first correlation was done to determine whether records management strategic technology significantly influenced service delivery at the DIRP. The results in Table 4.8 shows that the relationship between the variables was not significant ($r = 0.096$, $p > 0.05$). This means that the records management through strategic technology in the current situation did not significantly influence service delivery at the directorate. This finding is failed to agree with the assertions of Oyaro (2013) that records management at the Department of Immigration and Registration of Persons is a key aspects of service delivery. However, this could be explained by the fact that standardization of records was still an on-going process in the country where majority of the citizenry still lacked access to standard digital technologies that were compatible with the ones at the directorate.

The study also sought to determine whether proficiency of strategic technology significantly influenced service delivery at the DIRP. The correlation results in Table 4.8 indicates that a significant relationship ($r = 0.218$, $p \leq 0.05$) existed between the

variables. The Pearson's product moment coefficient of correlation further suggests that a weak relationship existed between the variables. This implies that the current levels of proficiency were low but improving on them could lead to better levels of service delivery. The findings agree with Storey and Kahn (2014) whose study revealed that there was a positive and significant relationship between proficiency in the use of ICT innovations and service delivery. In respect to this, the study noted that knowledgeable personnel on ICT innovations were able to deliver services on time, meet customer needs as well as offering more services related to the service a customer sought. Proficiency in ICT innovations was also related to productivity and speed in service delivery and therefore serving a larger number of customers, and hence improved service delivery.

It was also important to determine whether the ease of use of strategic technology significantly influenced service delivery at the DIRP. The correlation analysis in Table 4.8 indicates that there was indeed a significant relationship ($r = 0.528$, $p \leq 0.05$) between the variables. The result suggests that there was a significant and strong positive relationship between the variables. This indicates that the ease of use was a very important determinant of strategic technology use in service delivery at the Directorate and needed to be taken into consideration always. These results agree with Colesca and Dobrica (2018) carried out a study in Romania that established that significant relationship between perceived ease of use of e-government services and service delivery by the government of Romania. However, the study disagreed with Alrashidi (2012) in United Arabs Emirates (UAE) who established that there was no significant effect of ease of use of e-government services and service delivery.

Finally, the study sought to determine whether use of One-Stop Model strategic technology significantly influenced service delivery at the DIRP. The correlation analysis in Table 4.8 indicates that there was indeed a significant relationship ($r = 0.443$, $p \leq 0.05$) between the variables. This finding suggests that the relationship between the variables was moderate implying that the presence of simplified the processes of service delivery and when well emphasized could lead to high levels of productivity in the directorate. This finding is in agreement with Chipeta (2018) concluded that use of one-stop model strategic technology improved the service delivery in Zambia.

### 4.5 Regression Analysis

Multivariate regression analysis was used to determine the multiple regression model hypothesized in chapter three held. It was also used to determine how the independent variables influenced the dependent variable collectively. The analysis was also meant to establish the extent to which each independent variable affected the dependent variable in such a collective set up and which were the more significant factors. The results are summarized in Table 4.9.

**Table 4.9: Multiple Linear Regression Analysis Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| .712[a] | .507 | .482 | 2.449197 |

a. Predictors: (Constant), Records Management Aspects, Proficiency of Technology Usage, Ease of Use, One-Stop Model

The regression analysis in Table 4.9 shows that the relationship between the dependent variable and all the independent variables pooled together had a model correlation coefficient = 0.712. The adjusted r-square ($R^2_{Adj}$ = 0.482), further, indicates that the model could explain upto 48.2% variations in the service delivery at the DIRP. It also suggests that the model could improve when more predictive variables were incoporated into the model. The appropriateness of the multiple regression model as a whole can be tested using F test (Sen & Srivastava, 2011). Therefore, the study also performed an ANOVA on the independent and dependent variables and the results are summarized in Table 4.10.

**Table 4.10: Summary of ANOVA**

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 189.856 | 4 | 47.464 | 7.91256 | .000[b] |
| Residual | 443.894 | 74 | 5.99857 | | |
| Total | 633.750 | 78 | | | |

a. Dependent Variable: Service Delivery

b. Predictors: (Constant), Records Management, Proficiency of Technology Usage, Ease of Use, One-Stop Model

The results in Table 4.10 indicate that there is a significant difference between means of variables predicting strategic technology and the variable predicting service

delivery at the DIRP($F_{o'}$ = 7.91256> $F_c$ = 2.50; $\alpha < 0.05$; df = 4, 78; p = 0.000). This finding confirms that the model predicted by Table 4.9 and shows it is indeed significant. In order to determine which of the strategic technology variables was more important when it came to service delivery at the DIRP,the beta value was used. The results are given in Table 4.11 provides a summary of the multiple linear regression analysis correlation coefficients.

**Table 4.11: Multiple linear regression results**

| | **Unstandardized Coefficients** | | **Standardized Coefficients** | **T** | **Sig.** |
|---|---|---|---|---|---|
| | **B** | **Std. Error** | **Beta** | | |
| (Constant) | 2.01 | 4.759 | | 0.422358 | 0.638 |
| Records Management | -0.063 | 0.108 | -0.055 | -0.583333 | 0.522 |
| Proficiency of Technology Usage | 0.175 | 0.076 | 0.161 | 2.6302632 | 0.001 |
| Ease of Use | 0.444 | 0.084 | 0.407 | 5.285714 | 0.000 |
| One-Stop Model | 0.358 | 0.117 | 0.279 | 3.059829 | 0.000 |

a. Dependent Variable: Service Delivery

It can be deduced from the findings in Table 4.11 that the most influential strategic technology variables in the model as per the beta values was perceived Ease of Use ($\beta = 0.407$, t = 5.285714, $p < 0.05$). This was followed by the One-Stop Model concept ($\beta = 0.279$, t = 3.059829, $p < 0.05$) and Proficiency of Technology Usage($\beta = 0.161$, t = 2.6302632, $p < 0.05$) respectively. This indicates that the dependent variable, that is, service delivery at the DIRP, would change by a corresponding number of standard deviations when the respective independent variables changed by one standard deviation. However, the Records Management was not found to be significant to the model ($\beta = -0.055$, t = -0.583333, $p > 0.522$). The study therefore establishes that Proficiency of Technology Usage, Ease of Use, One-Stop Model were all factors affecting records management at the DIRP. Records management application of strategic technology was, however, found not to be a factor of service delivery at the directorate.

### 4.6 Hypothesis Testing

The first hypothesis was tested under the null hypothesis;

**$H_{01}$**: There is no statistically significant influence of records management application of strategic technology on service delivery at the DIRP

From the beta values in Table 4.12, it was evident that there was no significant relationship between the variables ($\beta$ = -0.055, $p > 0.522$). Therefore, the null hypothesis was accepted and the view that records management application of strategic technology had no significant influence on service delivery at the DIRP accepted as well. These findings agree with Marutha and Ngulube (2012) who failed to find a significant relationship between use of electronic document and records management system and service delivery in public health sector in South Africa. However, the findings disagree with Obotu, Uganneya and Ogezi (2018) who established that the electronic record management systems reduced medication errors and improved quality of health care services in Nigeria.

The second hypothesis was tested under the null hypothesis;

**$H_{02}$**: There is no statistically significant influence of proficiency of application of strategic technology of strategic technology on service delivery at the DIRP

The beta value from the multiple regression results in Table 4.11 indicate that there was a significant relationship between the two variables ($\beta$ = 0.161, $p < 0.05$). Consequently, the null hypothesis was rejected and the view adopted that proficiency in application of strategic technology was an important factor of strategic technology on service delivery at the DIRP. These findings support those of Storey and Kahn (2014) who established that there was a positive and significant relationship between proficiency in the use of ICT innovations and service delivery. The results also agree with Long (2013) who established that employees' proficiency in the use of technology improved the level of service delivery to customers. In respect to this, the study established that an increase in the level proficiency in using technological innovations among the employees resulted to an increase in service delivery.

The third hypothesis was tested under the null hypothesis;

**$H_{03}$**: There is no statistically significant influence of ease of use of strategic technology on service delivery at the DIRP

It is evident from the results in Table 4.12, it is evident that there was indeed a significant relationship between the variables ($\beta = 0.407$, $p < 0.05$). This meant that the null hypothesis was rejected and, therefore, it can be inferred that improving ease of use of strategic technology could better service delivery at the DIRP. These results are in agreement with Colesca and Dobrica (2018) whose study established that significant relationship between perceived ease of use of e-government services and service delivery by the government of Romania. Similarly, the results concur with Asiligwa (2016) who concluded that ease of use of e-government services was a significant predictor of service delivery at the county government of Nairobi.

The fourth hypothesis was tested under the null hypothesis;

**$H_{04}$**: There is no statistically significant influence of one-stop model strategic technology on service delivery at the DIRP

The results from the multiple regression analysis suggest that there was indeed a significant relationship between the two variables ($\beta = 0.279$, $p < 0.05$). Therefore, the null hypothesis was rejected and, subsequently, the accept the view adopted that the one-stop model strategic technology played an important part in service delivery at the DIRP. This result supports that of Joshi and Islam (2018) which revealed that the models generally improved the level of service delivery in the respective countries resulting to satisfaction of its citizens. Similarly, the findings agree with Al-khouri (2013) which concluded that the one-stop Model Strategic Technology significantly affected the level of service delivery by government agencies in Abu Dhabi. Further, technology was found to play a major role of joining up different government agencies into one model where the citizens and businesses could obtain government services. By joining up government services in an online platform, citizens and businesses were able to receive government services in 24 hours a day and also increased citizen participation in government activities including policy making. The study concluded.

Therefore, the resulting linear model was;

Service Delivery at DIRP = 2.010 - 0.063 Records Management+ 0.175 Proficiency+ 0.444 Ease of Use+ 0.358 One-Stop Model+ E(error term)

Or

Y = 2.010 - 0.063 RM + 0.175 P + 0.444 EU + 0.358 OSM + E(error term)

# CHAPTER FIVE
# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Introduction

This chapter presents the summary of the findings and the conclusions drawn from them, and makes recommendations for stakeholders that can be implemented to help address the problem identified in the study.

## 5.2 Summary of the Findings

Therefore, the present study sought to examine the impact of strategic technology on service delivery at DIRP. Amongst the aspects of strategic technology that were examined included the influences of records management aspects, proficiency of technology usage, ease of use of strategic technology, and one-stop model aspects of strategic technology on service delivery. A summary of the major findings arising from the analysis of these variables is presented in this section.

### 5.2.1Records Management Application of Strategic Technology

In relation to this objective, the study findings revealed that there was integration of technology in record management in the DIRP. The retrieval of information had been made easy through the use of digital record management systems and, in addition there was enhancement of compliance to record keeping policies and procedures though the use of electronic records management systems. The results also revealed that there was security of clients' data through the integration of technology in record management. Also, the directorate carried out regular upgrading of electronic records management systems. Results from the correlation analysis, however, revealed that there was no significant correlation between records management in application of strategic technology and service delivery in the Directorate of Immigration($r = 0.096$, $p > 0.05$). Similar findings were obtained when considering the effect of records management in application of strategic technology in the joint regression model ($\beta = -0.055$, $p > 0.522$).

### 5.2.2 Proficiency of Strategic Technology Usage

Concerning this objective, the study found that the employees of the Directorate were not well-knowledgeable on the use of management information systems. The results, however, revealed that there was in-service training to employees on the use of ICT

based programs. Further, it was revealed that the ICT personnel in the Directorate were able to serve larger number of customers were also able to deliver services on time. Most of the respondents were of the view that there was faster responsiveness to clients' needs in the larger number of customers. Results from the correlation analysis, however, revealed that the correlation between proficiency of strategic technology usage and service delivery in the Directorate of Immigration was indeed significant($r = 0.218$, $p \leq 0.05$), proficiency of strategic technology usage was also found to be significant in the joint regression model($\beta = 0.161$, $p < 0.05$). However, its effect relative to the other variables in the model was weak suggesting that the proficiency levels of the staff still needed to be further developed for better service delivery.

### 5.2.3 Ease of Use of Strategic Technology

The results from this objective reveal that there were positive attitudes toward the use of management technology systems. However, there was uncertainty over whether the management technology systems were easy to use even for beginners. The findings also suggest that majority of the employees have good skill endowment for the use of management information systems. There was also uncertainty on whether the users of management technology systems were unlikely to find challenges in using the system. Other findings also indicate that majority of the users of management technology systems can comfortably browse the software. Results from the correlation analysis further revealed that there was a significant correlation between ease of use of strategic technology and service delivery in the Directorate of Immigration($r = 0.528$, $p \leq 0.05$). Similar findings were obtained when considering the effect of ease of use of strategic technology in the joint regression model($\beta = 0.407$, $p < 0.05$). This was the most influential variable in the model suggesting that more emphasis had been put by the system designers to make it more user friendly.

### 5.2.4 One-Stop Model Strategic Technology

Finally, the results revealed that the Strategic Technology one stop model provides many services in one platform. The results also revealed that there was cost reduction in provision of many services in one platform. Majority of the respondents were of the view that the One-Stop Model Strategic Technology provides convenience in assessing services. Further, it enabled all paper work procedures to be computerized

and integrated in a one-stop portal. The findings also revealed that the One-Stop Model Strategic Technology enables clients to receive information and services from the DIRP at any place. Moreover, results from the correlation analysis revealed that there was a significant correlation between the application of the one-stop model in strategic technology on service delivery in the Directorate of Immigration($r = 0.443$, $p \leq 0.05$). Similar findings were obtained when considering the effect of the one-stop model in application of strategic technology in the joint regression model ($\beta = 0.279$, $p < 0.05$).

### 5.3 Conclusions

From the observations of findings, it was evident that that use of strategic technology had enhanced records management at the DIRP. However, application of strategic technology to records management was not found to have a significant correlation with service delivery in the Directorate. Therefore, basing on these evidence, the study concludes that as currently applied, records management through strategic technology was not a factor of service delivery at the DIRP.

In relation to Proficiency of Strategic Technology Usage, the study established that there was a significant correlation between proficiency of strategic technology usage and service delivery in the Directorate of Immigration, proficiency of strategic technology usage was also found to be significant in the joint regression model. However, its effect relative to the other variables in the model was weak suggesting that the proficiency levels of the staff still needed to be further developed for better service delivery. Therefore, the study concludes that proficiency of strategic technology usage was a factor of service delivery at the DIRP.

Regarding the ease of use of strategic technology and service delivery, the findings revealed that the ease of use of the technologies was important in enhancing service delivery in the Directorate. Results from the correlation analysis further revealed that there was a significant correlation between ease of use of strategic technology and service delivery in the Directorate of Immigration. Similar findings were obtained when considering the effect of ease of use of strategic technology in the joint regression model. This was the most influential variable in the model suggesting that more emphasis had been put by the system designers to make it more user friendly.

Based on these results, the study concludes that ease of use of strategic technology was a very important factor of service delivery in the Directorate of Immigration.

Finally, the study underscore the merits of the one-stop-model for transacting business with government. Results from the correlation analysis also revealed that there was significant correlation between the application of the one-stop model in strategic technology on service delivery in the Directorate of Immigration. Similar findings were obtained when considering the effect of the one-stop model in application of strategic technology in the joint regression model. Therefore, the study concludes that the use of the one-stop model in strategic technology was an important factor in service delivery at the DIRP. The use of One-Stop Model Strategic Technology indicates maturity of e-government services.

### 5.4 Recommendations

The study makes the following recommendations based on the findings;

The Directorate should emphasize all records management aspects in the application of strategic technology in service delivery. Particularly, the directorate should do regular upgrading of electronic records management systems in such a way as to ensure it does not affect service delivery. The protocols for retrieval of information through the use of digital record management systems should also be made easy for the staffs in the Directorate.

In relation to the proficiency of the use of strategic technology, the results suggest that it had a weak though positive relationship with service delivery at the Directorate. The study, therefore, recommends that the management of the Directorate should put more emphasis on skills upgrading through trainings and workshops to ensure that skills transfer happen rapidly and that emerging issues and challenges are broadly addressed at this point.

Regarding the ease of use of the strategic technology, the study found that this was the most influential factor in service delivery at the directorate. However, there was uncertainty over whether the management technology systems were easy to use even for beginners. There was also uncertainty on whether the users of management technology systems were unlikely to find challenges in using the system. Therefore, the study recommends that the Directorate should make provisions for the users to

remark on the system through a frequently asked questions (FAQ) appendage. Finally, concerning the one stop model, the study reccomends that the Directorate and other line government agencies should emphasize the fast tracking of digitalization of personal records and information so as to reduce the levels of paperwork needed for immigration purposes and make the one-stop model a better customer service reality.

### 5.5 Recommendations for Further Studies

The study recommends that future studies should be done on the effect of using advanced records management systems such as the blockchain on the service delivery in the Directorate. The time and cost dimensions was not examined in depth in the current study, therefore, there is need to examine these dimensions in depth in relation to the application of strategic technology in service delivery in the Directorate.

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## APPENDIX 1: LETTER OF INTRODUCTION

Dear Respondent,

I am a Master's student from Kabarak University undertaking a research study on the topic; **Influence of Strategic Technology On Service Delivery In Public Service: A Case Study Of DIRP**. This research forms part of the requirement for my masters' degree qualification. I would appreciate if you would kindly take a little of your time to complete a questionnaire attached. You have a right to accept or decline participation in this study.

All the responses you will provide in this study will be kept confidential and used only for the purpose on this study. Your identity will be kept anonymous thus you are not required to indicate your name. You may feel free to skip any section of this questionnaire if you are not willing to respond to the question therein or completely opt out of this study. By filling the section below, you indicate that you are participating in the study out of self-willingness and that the responses you give are true and honest.

Your cooperation is most valued and appreciated.

Yours Faithfully,

Thomas Ondora Omboti

## APPENDIX II: QUESTIONNAIRE

## INFLUENCE OF STRATEGIC TECHNOLOGY ON SERVICE DELIVERY IN PUBLIC SERVICE: A CASE STUDY OF DIRP

**Section I: Background Information**

Indicate your answer by ticking the response that best describes your answer.

1. What is your gender?

   Male [ ] Female [ ]

2. What is your age?…….....……..

3. What is your work Experience at the DIRP?

…….....…….

**Section II: Records Management Application of Strategic Technology**

Please use the five point Likert scale whereby **1=No extent, 2=little extent, 3=Moderate extent 4=great extent and 5=very great extent,** to appropriately answer the following questions in regard to Records Management Application of Strategic Technology.

| **No** | ***To what extent do you agree that;*** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| 4. | There is integration of technology in record management in the DIRP | | | | | |
| 5. | There is easy retrieval of information through the use of digital record management systems. | | | | | |
| 6. | There is enhancement of compliance to record keeping policies and procedures though the use of electronic records management systems | | | | | |
| 7. | There is security of clients' data through the integration of technology in record management | | | | | |
| 8. | There is regular upgrading of electronic records management systems | | | | | |

**Section III: Proficiency of Application of Strategic Technology**

Please use the five point Likert scale whereby **1=No extent, 2=little extent, 3=Moderate extent 4=great extent and 5=very great extent,** to appropriately answer the following questions in regard to Proficiency of Application of Strategic Technology.

| **No** | ***To what extent do you agree that;*** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| 9. | Employees are well-knowledgeable on the use of management information systems | | | | | |
| 10. | There is in-service training to employees on the use of ICT based programs | | | | | |
| 11. | ICT personnel in the DIRP are able to serve larger number of customers | | | | | |
| 12. | Employees in the DIRP are able to deliver services on time | | | | | |
| 13. | There is faster responsiveness to clients' needs in the larger number of customers | | | | | |

**Section IV: Ease of Use of Strategic Technology**

Please use the five point Likert scale whereby **1=No extent, 2=little extent, 3=Moderate extent 4=great extent and 5=very great extent,** to appropriately answer the following questions in regard to Ease of Use of Strategic Technology.

| **No** | ***To what extent do you agree that;*** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| 14. | There use of management technology systems has been well received | | | | | |
| 15. | The management technology systems is easy to use even for beginners | | | | | |
| 16. | Employees have good skill endowment for the use of management information systems | | | | | |
| 17. | Users of management technology systems are unlikely to find challenges in using the system | | | | | |
| 18. | Users of management technology systems can comfortably browse the software. | | | | | |

**Section IV: One-Stop Model Strategic Technology**

Please use the five point Likert scale whereby **1=No extent, 2=little extent, 3=Moderate extent 4=great extent and 5=very great extent,** to appropriately answer the following questions in regard to One-Stop Model Strategic Technology.

| **No** | ***To what extent do you agree that;*** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| 19. | The Strategic Technology one stop model provides many services in one platform. | | | | | |
| 20. | There is cost reduction in provision of many services in one platform. | | | | | |
| 21. | One-Stop Model Strategic Technology provides convenience in assessing services. | | | | | |
| 22. | All paper work procedures were computerized and integrated in one-stop portal | | | | | |
| 23. | One-Stop Model Strategic Technology enables clients to receive information and services from the DIRP at any place | | | | | |

**Section IV: Service Delivery**

Please use the five point Likert scale whereby **1=No extent, 2=little extent, 3=Moderate extent 4=great extent and 5=very great extent,** to appropriately answer the following questions in regard to service delivery.

| **No** | ***To what extent do you agree that application of strategic technology;*** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| 24. | Enhances good relationship between the clients and the DIRP | | | | | |
| 25. | Reduces clients' waiting time | | | | | |
| 26. | Improves clients' satisfaction | | | | | |
| 27. | Increases the number of clients served per day | | | | | |
| 28. | Increases transparency in service delivery | | | | | |

## APPENDIX III: RESEARCH PERMIT FROM NACOSTI

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Date of Issue: **14/August/2019**

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**This is to Certify that Mr.. THOMAS OMBOTI of Kabarak University, has been licensed to conduct research in Nairobi on the topic: INFLUENCE OF STRATEGIC TECHNOLOGY ON SERVICE DELIVERY IN PUBLIC SERVICE: A CASE STUDY OF DIRECTORATE OF IMMIGRATION AND REGISTRATION OF PERSONS for the period ending : 14/August/2020.**

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