

**THE ROLE OF ELECTRONIC STRATEGIES ON  
EFFECTIVE BORDER MIGRATION CONTROL  
ADOPTED BY IMMIGRATION AUTHORITY IN  
KENYA**

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**The role of electronic strategies on Effective border  
migration control in Kenya**

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**A thesis submitted in partial fulfillment for the degree of Master of  
Science in ICT Policy and Regulation in the Jomo Kenyatta  
University of Agriculture and Technology**

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## DECLARATION

This thesis is my original work and has not been presented for examination in any other University.

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This thesis has been forwarded for examination with my approval as the University supervisor.

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## DEDICATION

This thesis is dedicated to my mother, sister and brother who have supported me all the way since the beginning of my studies and have been a great source of motivation and inspiration. I also dedicate this to my best friend for being there when I needed encouragement. Without their continued support I could not have completed this process.

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## LIST OF ABBREVIATIONS AND ACRONYMS

|              |   |
|--------------|---|
| <b>G2B</b>   | Government to Business  |
| <b>G2C</b>   | Government to Citizens  |
| <b>G2G</b>   | Government to Government                                      |
| <b>ICIO</b>  | International Civil Aviation Organization                     |
| <b>ICT</b>   | Information and Communication Technology                      |
| <b>IOM</b>   | International Organization of Migration                       |
| <b>MPI</b>   | Migration Policy Institute                                    |
| <b>MRIP</b>  | Ministry Of State for Immigration of Persons and Registration |
| <b>NACTS</b> | North American Center for Trans-border Studies                |
| <b>V2030</b> | Vision 2030   |

## DEFINITION OF KEY TERMS

**e-Governance:** Refers to a technology driven governance where ICT is applied for delivering government services, exchanging of information communication transactions, integration of various stand-one systems and services between Government-to-Citizens (G2C), Government-to-Business(G2B),Government-to-Government(G2G) as well as back office processes and interactions within the entire government frame work, (Seagate & Masud, 2007).

**e-Strategy:** This refers to the blueprint that establishes the plan for the use of the Internet and related technologies in achieving an organization's overall business objectives (Hitachi,2008).

**Questionnaire:** This is a form of a research instrument that consists of a series of questions and other prompts for the purpose of gathering information from respondents (Mellenbergh, 2008).

**Interviews:** A qualitative research method that seeks to understand the meaning of what the interviewees say (Kvale, 1996).

**Entry:** means admission into Kenya at a designated port of entry on the basis of authority to do so validly granted under the Kenya Citizenship and

Immigration Act, 2011

## ABSTRACT

In the recent past, many countries have begun to assess and evaluate their cross border procedures and modern innovations in information and communications technology (ICT) that have significant potentials in enhancing this cross border procedures. For nations that have established their own regional cooperation they have been able to embark on harmonizing their cross border policies and strategies so as to have secure and efficient movement of people and goods. The study sought to evaluate the important role of ICT strategies in harmonizing and standardizing cross border procedures and thereby improving the immigration systems. The study evaluated the role of electronic strategies on effective border migration control in Kenya. The target population of this study was 500 employees from the Ministry of State for Immigration and Registration of Person, Head Office in Nairobi. Stratified random sampling was used, based on the current departments of the Ministry the strata was formed. Respondents were identified by simple random sampling and a questionnaire was issued to them. The sample size was 100 forming 20% of the target population. One of the key findings was that employees at immigration department were concerned with the cross border migration controls. The findings indicated that the department had electronic methods of verification of visa; electronic methods of visa processing were more reliable than semi manual or fully manual processes. The findings also revealed that it is easier to track passports and visa utilization. Results showed that e-verification systems influenced cross border migration control in Kenya. The study concluded that Electronic visa application is a key determinant of cross border migration control at Kenya immigration authority and e-verification systems influenced border migration controls in Kenya. It was possible to conclude that all departments had E-verification systems and systems were capable of verifying all passports, the entry and exit recording systems influenced cross border migration controls and that there were effective strategies put in place at entry and exit points of cross border to curb movement of persons to and from the country. The study recommended to the immigration department management to ensure that all the electronic visa application system is upgraded with

the technological changes taking place in the whole world. It is also recommended that the management conducts a market survey of the technological facilities in use in other public institutions so as to minimize corruption and fraudulent activities. It is recommended to the management that they ensure the staff are competent enough and have the technical knowledge on the use of verification systems and machines. It is also recommended that all employees should have a sense of urgency in attending to visitors who enter immigration offices and ensure they pass through scanners for security verification. The study also recommends that the management ensures that the employees are well paid and remunerated to curb corruption and fraud cases.



# CHAPTER ONE

## INTRODUCTION

This chapter looks at the background of cross border migration and the several studies on electronic strategies on cross border migration. It also discusses the statement of the problem, purpose of the study, research objectives and questions, significance of the study and the limitations to the study.

### **1.1 Background of the study**

Hundreds of millions of travelers cross international borders every year. For government border management agencies, it is important to know the identities of each and every one in order to protect national security and identify travelers of interest (Sita, 2010). Effective border control systems produces positive self-esteem in workers and enhanced national security. However, on the other hand lack of border control systems results in low productivity due to lack of monitoring and evaluation procedures and lack of confidence in making decisions. Decisions at the points of entry should be made faster, accurate in order to reduce the impacts of illegal immigration to Kenyan citizens. The ability to manage the border effectively has great impact on the number of visitors arriving and leaving at the points of entry (Kasimis and Kassimi, 2004).

According to the International Organization for Migration (2000), causes of cross border migration range from differences in employment opportunities, living standards between countries; increased education broader access to information abroad, changing demographics, poor socio-economic living conditions, government systems that are rigid, drops in real income, currency devaluation, war and corruption. Migrants have been feared to cause various problems; the rise in crime, spread of diseases, taking away jobs from locals or driving down the wages of local workers. The number of persons living outside their country of birth for the last 42 years has more than doubled from an estimated 75 million in 1960 to nearly 215 million (UN, 2009), representing 3% of World population. About 30 Million Africans

are living outside their home country. These figures clearly indicate how crucial the management of border migration is. ICT plays a major role in the implementation of effective cross border systems in order to ensure management of migration.

This has led to the demand for effective cross border controls in developed and developing countries. In Kenya (Kaur, Kahlon, & Virk, 2013), over 350,000 refugees are being hosted with a growing influx from South-Central Somalia. Kenya is also documented as a hub for human trafficking and smuggling. The management of Kenya's long porous borders has become a challenge to the government; this has led to the realization of the government the importance of effectively securing its borders and improving its capacity for service delivery in the immigration sector.

Due to these concerns African Union (2006), suggested that African nations should strengthen their border management systems in terms of technology, infrastructure, business process for inspection of travelers and training of staff. In addition UN migration Report (2002), notes that an important component of border management is the provision of international standard travel documents through well-structured registration and issuance systems. These travel documents include passports, visas, and temporary travel documents such as emergency passports and laissez-passers and in some cases identification cards that can be used to cross borders on the basis of specific bilateral agreements. The provision and use of travel documents of high integrity supports efforts to make cross-border movement easier for most travelers. The information revolution has effectively captured the imagination of both the civil society and private sector and this has led to an ever-growing number of policies, strategies and initiatives undertaken to ensure that a country is not left behind in the new information age.

According to Ulrich and Chacko (2005), ICT policies and e- strategies represent a road map that guides countries into becoming information societies and knowledge economies; the worldwide technology revolution has made these strategies imperative. The success of initiatives that encourage effectively harnessing capabilities and potentials offered by ICT is dependent on several key elements, that

is, complementary domestic strategies and policies, willingness of governments to transform their focus and perception, deregulation and liberalization, capacity building and long term research to ensure the viability of ICT policies and e-strategies and provide universal access to the digital benefits. When determining an effective e-strategy to use, a country should assess their degree of e-readiness so as to see where they stand along the route to develop ICTs. By understanding the national strengths and weaknesses with respect to the use and development of ICTs, leaders can position their countries to take advantage of emerging opportunities and stave off competitive threats. Many governments have already carried out assessments of their countries' e-readiness and have compiled comparative e-readiness rankings and indices. From the analysis ICT policy makers are able to go after easier to implement approaches that will yield the most benefit at the least cost and a quick return on investment.

Presence of ICT policies and e-strategies alone do not guarantee the desired outcome, development implies action. A frequent fail that occurs is that policy and strategy documents that have been written by those policy makers have never been implemented. By first reviewing best practices around the world and adapting what is learnt to the local context through introducing effective strategies and then revising the national budget allocation upward to cover costs of reaching the specified targets. In the recent years the need to bridge digital divide or re-positioning the nation in the new digital inter-connected economy, and ensuring that marginalized communities and cultures are not discounted in the move to embrace ICT, nations need to step back and evaluate where they stand. They need to ensure that national ICT policies and e-strategies address the core aspect of development and e-strategies should be the means to an end (Anil, et al. 2003).

According to Lyberaki (2008), border control systems offers a suite of complete end-to-end solutions that enhances border security while also allowing seamless and efficient passenger and goods processing at border control checkpoints. These solutions addresses the document processing needs for both arriving and departing travelers as well as goods processing for verification and taxation at all border

processing points whether at land, air or sea. Key benefits realized are the comprehensive prevention of identity theft and misuse, the elimination of document fraud and impersonation, as well as the accurate tracking of the history of movement of goods and people into and out of a country's border crossings. The use of border control systems plays a great role in controlling illegal immigration into the country (Kasimis and Kassimi, 2004).

### **1.1.1 Cross Border Migration**

According to Grundy-Warr (1993), the post-Cold War formalization of cross-border political and economic relations has turned previously alienated borderlands into coexistent, even interdependent ones, such that each state tries to maximize economic advantage through more open borders. In Kenya migration has become a major concern for policy makers, it is considered as an integral part of the labour market (SAMP, 2006). Long histories of rural- urban, circular and cross border migration are mainly for the search of economic opportunities and education as well as trade (Masinjila, 2009; Black et al 2004). In recent past Kenya has experienced a high level of rural-urban migration especially among the youth due to high levels of rural youth empowerment (IMF,2010). Kenya has also witnessed a large flow of refugees and asylum seekers from surrounding countries and in addition, violence that occurred in the aftermath of the 2007 presidential elections has generated a very large number of internally displaced people, Kenyan Human Rights Commission (2007).

According to the Kenya Poverty Reduction Strategy Paper (IMF,2010) migration has brought to the Kenyan society many challenges in terms of security, small arms and trafficking in persons, HIV risks, labor opportunities in urban areas, environmental pressure in urban areas as well as large scale migration of the highly skilled. However despite the negative impacts of cross- border migration several studies suggest that numerous positive impacts on the wellbeing of Kenyan households and on poverty reduction (WHO & UNDP,2009). Furthermore, there is an increasing

recognition among both civil society and public authorities about the potential of diaspora to contribute to the country's development (Ghai, 2004).

### **1.1.2 Electronic Border Controls**

The explosion in global travel and the dawning of the age of risk have exposed substantial weaknesses in border management systems. According to Koslowki (2011), the total number of international tourist arrivals worldwide increased from 69.3million in 1960; to 165.8 million in 1970; to 278.1 million in 1980 to 439.5 million in 1999 and to 687million in 2000. This has led to the emergence of a new border architecture that seeks to respond effectively to the seemingly competing demands of facilitating mobility while better managing the risks associated with cross-border travel. Information and technology are the centerpieces of this new architecture (MPI, 2011). Over the past decade, many countries have invested enormously in new border management systems designed to achieve two potentially conflicting goals; stopping the mobility of those traveling without authorization or with malicious intent and facilitating mobility for legitimate travelers (Haddal,2010).

On a global level the major border management innovations can be grouped into for main trends: collecting and sharing detailed traveler data, using new techniques to verify individuals' identity, building partnerships to achieve border management goals and employing new technology in monitoring physical borders. Technological advances have been made available to those responsible for securing borders, according to (MPI, 2011) the Australian entry-exit system that monitors travelers arrival and departure has become the standard for other immigration regions to emulate as it's the most advanced system of its kind, for United states they have also invested deeply in technology to monitor entry to the country

Data collected on individual travelers is only as valuable as the accuracy of the information presented (Seifert,2008; Napolitano ,2010); use of fraudulent identities is a continual weakness and as a result industrialized countries are adopting new methods for identifying travelers, through biometric data, such as finger prints, photographs and retinal scans. The use of Information technology has been the most

obvious transformation in border management over the past decade. Some critics however have highlighted that exponential growth of information technology systems in border management has failed to fully take into account such issues as proportionality of cost, infrastructure and use while suffering from a problem of equating increase efficiency. According to much theoretical and empirical evidence, ICT supported operations offer benefits for a wide range of business processes and improves information and knowledge management within the firm, leading to better performance (Shields, 2009). Information systems' innovation has seen its growing use in such operations processes like transactions processing, vendor and inventory management, office automation and communication, accounts and finance, data mining and management and customer relations just as Antioco *et al.*, (2008) noted that firms can use ICT to increase their service business orientation.

### **1.1.3 Profile of Ministry of State for immigration and Registration of Persons**

The core functions of the Ministry of State for Immigration and Registration of Persons includes; creation and implementation of immigration Policy and services, acts as the lead agency in border control points management, control of entry and exit of persons, issuance of travel documents, regulations of the residency and employment of non- Kenyans, regulate Kenyan Missions abroad, registration of persons, births and deaths, creates and implements refugees policy and services, and manages the integrated population registration system in Kenya. According to the historical records of the department, the control of entry and residence of foreigners into this country dates back to the introduction of what was called the Immigration Restriction Ordinance of 1906. This Ordinance restricted the influx of foreigners especially Indians, coming to the then Kenya colony and Protectorate upon completion of the Kenya- Uganda Railway (KUR) or the Iron Snake.

The Immigration Authority is mandated to contribute to security and socio-economic development of the country by facilitating international travel and regulating entry, exit, residency and citizenship GOK, (1967).

## **1.2 Statement of the Problem**

An effective border management is important in every country and can have a significant effect in supporting economic development through efficient processing systems. Immigration reform should be a matter of national priority. They should aim at enhancing the measures of reducing illegal entry into Kenya as well as reduce the current population of unlawfully present persons. Illegal immigrants hurts poor Kenyans when terrorists strikes, commits crimes, takes over jobs that Kenyans can do and strains the security facilities such as health, education and increase in population.

According to Lyberaki (2008), border control systems offers a suite of complete end-to-end solutions that enhances border security while also allowing seamless and efficient passenger and goods processing at border control checkpoints. These solutions addresses the document processing needs for both arriving and departing travelers as well as goods processing for verification and taxation at all border processing points whether at land, air or sea. Key benefits realized are the comprehensive prevention of identity theft and misuse, the elimination of document fraud and impersonation, as well as the accurate tracking of the history of movement of goods and people into and out of a country's border crossings. The use of border control systems plays a great role in controlling illegal immigration into the country (Kasimis and Kassimi, 2004).

Kenya has a long porous border and coastline that is susceptible to irregular entries of migrants. Along these borders and the coast-line are few immigration check points which are widely spaced with poor infrastructure, inadequate equipment and technology. The policy therefore advocates for enhanced border surveillance by establishing a specialized border patrol unit, the opening of new border posts, improved capacity of existing posts and enhanced use of ICT at all ports of entry. Several studies have been carried out in this sector of immigration, a research by Sauna, (2013). Investigated ICT audits effect on immigration service delivery in two border points in Western Kenya. Simiyu (2013), in his study he investigated the factors influencing the effectiveness of border control system in controlling illegal immigrants. However, only few studies have been carried out to evaluate the role of e-strategies on effective border migration control in Kenya.

### **1.3 General Objective**

The overall objective of the study is to establish the role of electronic strategies on effective border migration control in Kenya.

### **1.4 Specific Objectives**

- i) To find out the extent to which the Kenya Immigration Authority offers electronic visa application as an e-strategy on migration control.
- ii) To investigate the e-verification systems established in Kenya Immigration Authority as an e-strategy on migration control.
- iii) To establish the extent to which Kenya Immigration Authority have implemented entry and exit recording systems as an e-strategy on migration control.
- iv) To identify the extent to which best technology has been implemented in Kenya Immigration Authority has systems that allow advanced sharing of passenger information as an e-strategy on migration control.

### **1.5 Research Questions**

- i) To what extent does the Kenya Immigration Authority offer electronic visa application as an e-strategy on migration control?
- ii) What is the effect of implementation of electronic verification as an effective e-strategy on migration control Kenya Immigration Authority?
- iii) To what extent do the Kenya Immigration Authority have entry and exit systems as an effective e-strategy on migration control?
- iv) Has the best technology been implemented in the Kenya Immigration Authority in advanced sharing of passenger information as an effective e-strategy on migration control?

### **1.6 Justification of the Study**



This study may be valuable to any person interested in e-governance in the immigration department. It is hoped that its findings will specifically benefit the following groups:

#### **1.6.1 Government, Citizens and Businesses**

The policy makers will be able to know whether the electronic strategies in the Immigration department are effective and efficient. This may go a long way in ensuring that policies and strategies can be reviewed in case there is need. This will in turn contribute significantly to enhance the efficiency of the public agency in terms of service delivery; the benefits of which are enjoyed by citizens, businesses and the government alike. From the literature gathered the immigration authority will be enabled to identify the existing and emerging electronic strategies in other developed and developing countries.

The study will enable citizens and businesses to know the commitment that the government has due to the effective strategies deployed for secure cross border controls.

#### **1.6.2 Technology Specialists**

The study findings are expected to introduce a market for new innovations in the delivery of secure electronic services in the Immigration department. From the findings it will enable technology specialists to expand in there research and development for advancing the technologies in the immigration sector. Most of these specialists are in the private sector hence this will create competitive opportunities in development and implementation of effective tools for secure cross border controls.

#### **1.6.3 Scholars and Researchers**

The study is expected to contribute to the existing literature in cross border migration and effective implementation of e-strategies in the immigration services. Since most of the studies are always based on developed countries the findings will greatly add

on to the literature for developing countries, and it will enable further and future researches to be identified in this field of electronic strategies.

### **1.7 Scope of the Study**

Strategies that are adopted on cross border migration controls include exit and entry systems, electronic verification systems, electronic visa applications, advanced passenger information, increased border patrol staffing, improved detention and removal capacity. The study concentrates on the effective electronic strategies on migration controls these are exit and entry systems, electronic verification systems, electronic visa applications and advanced sharing of passenger information. The respondents will be drawn from the various departments in the Ministry Of State for Immigration of Persons and Registration located in Nairobi who are mandated in ensuring effective cross border migration controls.

### **1.8 Limitations to the Study**

Information related to matters of security in the country is treated with high integrity and confidentiality and an approval should be granted before any such information is gained. In light with this the researcher provided a letter of introduction from the university indicating that the information received was purely for academic purposes.

The research assistants got poor reception from the respondents while issuing the questionnaires since the respondents were reluctant in giving information fearing that the information they gave might be used to intimidate them or print a negative image about the institution. To handle this challenge the researcher altered the questionnaire to have close ended questions as the earlier questionnaire had open ended questions; the research assistants were also given copies of the introduction letter from the university and course approval letter.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter discusses theories relevant to the study. Literature related to the study is also reviewed with the aim of identifying literature gaps. The literature reviewed also guide the relevance of the study findings. The specific areas covered in the chapter were the theoretical review, conceptual framework, empirical review and the research gaps.

#### **2.2 Theoretical Review**

The study is hinged on various theories; these are ICT acceptance theory, technology acceptance model and diffusion of innovation theory. A theoretical framework is the structure that can hold or support a theory of a research study. It guides the research, determining what things to measure, and what statistical relationships to look for.

##### **2.2.1 ICT Acceptance**

User acceptance of information and communication technology (ICT) has been focused by researchers in a variety of fields and with different research strategies. There is little doubt that Information and Communication Technologies (ICTs) will have an impact on the economies in general Karl,(2010). But it is questioned whether the impact of technology will ever be even between certain regions (e.g. Developed or Developing countries) and will be adversely affected by the technologies (Sandberg, & Vineberg, 2000). History has proved that availability of basic infrastructure, such as rivers, railroads and interstate road systems drives local economic development whereas in an information economy the drivers of economic growth would be the ICT infrastructure.

The robust stream of acceptance/adoption studies is anchored in behavioral intention. According to this approach, an individual's decision to accept/adopt a technology is a conscious act that can be predicted by their behavioral intention. The literature on

acceptance is broad, ranging from case studies of accepted technologies, to the individual psychological characteristics of acceptors or resisters. Information and Communication Technology (ICT) acceptance research has also led to many models, with different sets of acceptance determinants.

### **2.2.2 Technology Acceptance Model**

Technology Acceptance Model (TAM) is based primarily on the Theory of Reasoned Action (TRA), proposed by Fishbone & Janzen (1975), which postulates that beliefs influence attitude, which in turn shapes a behavioral intention to engage in a particular behavior. The TAM model was developed by Davis et al. (1989), the goal of the model is to provide an explanation of the determinants of computer acceptance by tracing the impact of external factors on internal beliefs, attitudes and intentions, a model that has proven successful in predicting and explaining behavior across a wide variety of domains – including research of technology acceptance. Chau & Hu, (2002) concur that TAM was specifically designed to address the determinants of end user computing technology acceptance.

TAM has been used in several cases, for example to test the acceptance of: Internet banking (Lai et al., 2005), online games (Hsu et al., 2004) and Internet utilization behavior (Shih, 2004). People tend to use or not to use an application to the extent they believe it will help them perform their job better (Davis et al., 1989). Users have a perception of how useful the technology is in performing their tasks by decreasing the time for doing the job, more efficiency, accurately and securely.

Following Hung-Pin Shih (2004) several studies showed that ‘perceived usefulness’ has the greatest impact on an individual’s intention to use a technology

### **2.2.3 Diffusion of Innovation Theory**

Diffusion research centers on the conditions which increase or decrease the likelihood that a new idea, product, or practice will be adopted by members of a given culture. Diffusion of innovation theory predicts that media as well as interpersonal contacts provide information and influence opinion and judgment.

Studying how innovation occurs, E.M. Rogers (1995) argued that it consists of four stages: invention, diffusion (or communication) through the social system, time and consequences. The information flows through networks. The nature of networks and the roles opinion leaders play in them determine the likelihood that the innovation will be adopted. Innovation diffusion research has attempted to explain the variables that influence how and why users adopt a new information medium, such as the Internet. Opinion leaders exert influence on audience behavior via their personal contact, but additional intermediaries called change agents and gatekeepers are also included in the process of diffusion

Diffusion research has focused on five elements: The characteristics of an innovation which may influence its adoption, decision-making process that occurs when individuals consider adopting a new idea, product or practice, characteristics of individuals that make them likely to adopt an innovation, consequences for individuals and society of adopting an innovation and communication channels used in the adoption process.

#### **2.2.4 Unified Theory of Acceptance and Use of Technology (UTAUT) Model**

(Venkatesh et. al. ,2003) formulated the Unified theory of acceptance and use of technology (UTAUT) that aims to explain user intentions to use an information system and the subsequent usage behavior .This theory shows that four key constructs; performance expectancy, social influence, effort expectancy and facilitating conditions are direct determinants of usage intention and behavior. They reviewed the eight most prominent models/theories that predict behavioral intentions and/or usage, developed a unified model that incorporates elements of the previous eight models, and empirically validated the resulting model.

According to Venkatesh et al.'s (2003) model-validation, Performance expectancy is the strongest predictor of intention within each of the individual constructs. In a classical study by Davis (1989) ease of use makes this the second significant component believed to influence technology acceptance as well as the perceived usefulness. Social influence includes consideration of the people's perception of the

opinion of others, as well as the degree to which use of an innovation is perceived to enhance one's image or status in one's social system. The facilitating conditions represent the organizational support that ensures that technology is accepted.

According to (Oshalyanky, et.al., 2010) conclude that technology acceptance, that is, people's attitude to the uptake of technology has emerged as a strong candidate for cross-cultural validation of human computer interaction devices. Chau & Hu (2002), proposed a framework for analysis of technology acceptance their results suggested individuals base their acceptance decisions on the usefulness of the technology, rather than ease of use.

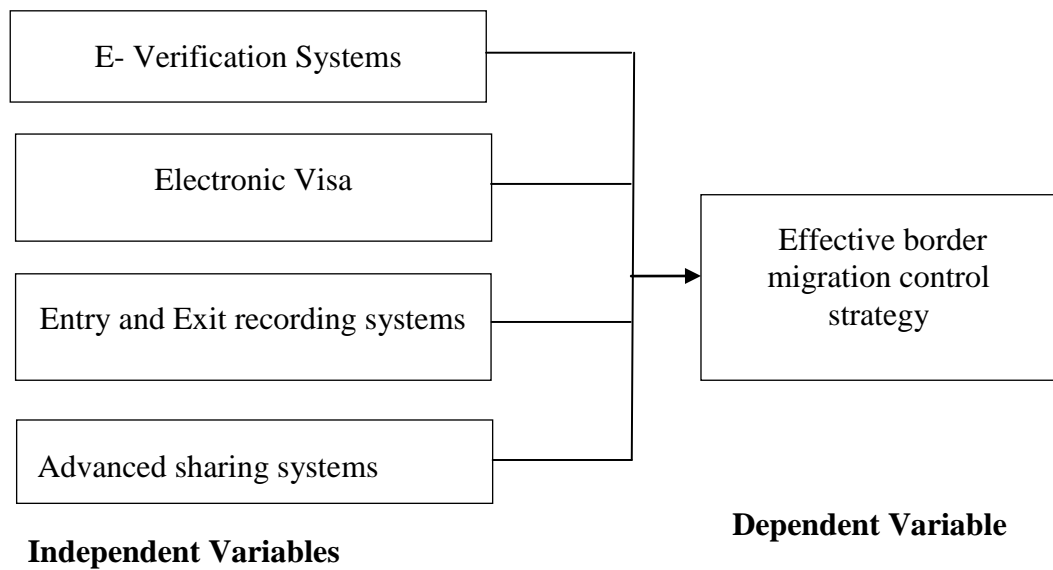
### **2.3 Conceptual Framework**

Miles and Huberman, (1994) define the conceptual framework as a written or a visual presentation that explain the main things to be studied, that is key factors concepts or variables and the presumed relationship among them. Dodge (2003) defines the independent variable as typically the variable representing the value being manipulated or changed and the dependent variable is the observed result of the independent variable being manipulated.

The importance of entry and exit recording systems has been recognized in secure cross-border migration literature European Union, (2007). According to Kolwoski, (2011) electronic verification systems have also been determinants of effective cross border migration controls; however this alone does not lead to effective secure borders hence the inclusion of other determinants such as electronic visa application, sharing of passenger information and increasing resource for border security.

The dependent variable, effective electronic migration control strategy is expected to change whenever the independent variables electronic visa application, e-verification systems, advanced sharing of passenger information and entry and exit recording systems are altered.

This interaction between electronic visa applications, e-verification systems, advanced sharing of passenger information, entry and exit recording systems and the effective electronic migration control strategy ensures that the effectiveness of migration control is complete and successful. Below is the diagrammatic representation of the objective;



**Figure 2.1: Conceptual Framework**

## 2.4 Empirical Framework

In the recent report National e-Strategies for Development, Global Status and Perspectives, (2010) it indicates that as of April 2010, 163 countries and territories, that is, 85.3 percent of all economies, already had some sort of a national e-strategy in place, while other 13 countries and territories (6.8%) are currently on their way to formulate and adopt one.

In the e-governance context, the concept of e-strategy refers to how the web-based technologies can restructure governments' services by providing them with a new competitive edge. An e-Strategy is the blueprint that establishes the plan for the use of the Internet and related technologies in achieving an organization's overall business objectives Hitachi, (2008)

According to Nyaoro (2010), the East African governments are accelerating momentum towards regional integration meant to be complete and functional by the year 2015, though the process is not well synchronized especially with regard to cross border migration.

Chandler (1962) defines strategies as the determination of the basic long-term goals of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals. Most, if not all, e-government strategies and implementation plans in developing countries have been based on theories and experiences of developed countries (Huang and Bhalla, 2002).

Rigon (2010) further emphasizes the fact that people have always migrated in any direction despite opposing legal framework that the issue of illegal white migrants in Africa is an underestimated and understudied emerging phenomenon which opens new research trajectories. Therefore effective controls must be rethought globally not only as a problem affecting Europe as incoming country but a bidirectional issue. Findings from the recent study conducted by NACTS (2011) on secure US-Mexico border confirms that available and emerging e-strategies can enhance border security operations and infrastructure in a cost-effective manner, these technologies can detect a plethora of clandestine activities, they also observed that the key components that provide for secure cross border controls are staffing, technology and infrastructure.

According to ITU, (2010) a sense of increasing competition between economies in the ICT sector is driving national ICT e-strategies. Commonalities observed among the studied e-strategies plans reveal that many countries focus on making their own ICT industry globally competitive. Confidence and security, well-educated and skilled ICT professionals are still a concern in many national e-strategies. In addition Chacko (2004), notes that e-strategies represent a road map guiding countries to becoming an information society. E-Strategies must go beyond technical goals in addressing the challenge of universal access to, and the use of, ICTs. According to UNDP, (2004) sensitization of citizens on emerging technologies on cross border



controls has led to an increase on embracing of new technologies. For example, from a survey conducted on the ministry of immigration of Tanzania, they recommended that as the region embraces e-immigration services they should adopted entry and exit cards that conform to the ICAO electronic format.

In Kenya Dulo (2009), summarizes that the main challenges facing secure cross border migrations is that Kenya has a huge and porous border, transnational communities, lack of a common visa that would reduce bureaucracy at border points and corruption. According to reports by the Department of Homeland Security, US to curb these insecurities the adoption of e-strategies on secure cross-border migration is a must.

#### **2.4.1 E-Verification systems**

According to the Immigration Reform and Control Act of 1986 ("IRCA") it made it illegal for employers to "knowingly" hire non-citizens who were not authorized to work in the United States. Hence the introduction of the employment verification program that allows employers to use an automated internet-based computer records system that effectively requires employers to verify the citizenship status of their current and prospective employees.

Rosenblum (2011) notes that the creation of an effective electronic eligibility verification system has united the disparate sides of the United States immigration debate by giving employers greater certainty of whether an employee is authorized to work in the United States. In this process it assists employers in maintaining a legal workforce. For example, the bipartisan Commission on Immigration Reform, or Jordan Commission (1994) concluded that effective strategies to deter unlawful entries and visa overstay require automated reliable process for verifying authorization to work and an enforcement capacity to ensure that employers adhere to all immigration-related labor standards.

Westat (2009) estimated that the e-verification system allowed employers to screen over 166,000 unauthorized workers in 2009. The system's ability to successfully

identify a large number of unauthorized immigrants has strengthened the ability to ensure legal workforce and is a major step toward reducing the job magnet that motivates most illegal immigration.

#### **2.4.2 Effective Exit and Entry Tracking**

According to Vaughan (2005) document control, state and local law enforcement participation are all reactive methods of immigration law enforcement, an anticipatory method of enforcement is the ability to identify illegal immigrants overstays as soon as they fall out of status, this is achieved by biometric screening systems for visitors. A border security system that records entry of visitors that authenticates their identity screening them against security databases, the exit system requires visitors to check out at borders when they leave ICIO (2004). The United States senate subcommittee on immigration (2001) made the recommendation to the implementation of an automated entry/exit system and the student tracking system that would notify authorities whether foreign nationals have left the country under the terms of their visas, and whether foreign students are properly maintaining their status.

#### **2.4.3 Advanced Sharing of Passenger Information**

Leonard (2011) explains that because of the threat from terrorism, the arrival processing of passengers by the Border Control Agencies has had to be intensified, with additional delays being the unwelcome result. While the demands on the Border Control Agencies continue to grow and the manpower resources within which they must operate tighten, European Union, United States and other countries for security reasons require travel agencies to provide details about their passengers before they travel. This is known as Advance Passenger Information (API) it involves a government receiving data about travelers in advance of their arrival into the country.

According to Council of the European Union, (2009) API is designed to enhance border security by providing Border Control Agencies with pre-arrival and departure manifest data on all passengers. While this technique is beginning to be used by more and more Border Control Agencies it has been used by a number of countries for

some time now. It is very clear that API provides significant benefits by maximizing domestic and regional security of travel and facilitating faster processing of legitimate travelers, while reducing travel opportunities by unauthorized or improperly documented persons.

#### **2.4.4 Electronic Visa Application**

According to the e-visa case study conducted in Australia the findings were eVisa simplifies the entry process for low-risk high-volume visitors and increases the integrity of Australia's borders since it has an improved and consistent objective process to deal with the increasing demands and greatly reduces the cost of services.

There is substantial evidence in Australia and United States that eVisa has led to a significant process improvement to the immigration departments, by addressing two conflicting imperatives that is the tourism and education industries who wanted the entry barriers reduced to encourage tourism and fee- paying students whilst there is a security requirement to retain the border integrity.

In the implementation process of the eVisa, Enhanced Border Security and Visa Entry Reform Act of 2002, the U.S. Congress mandated the use of biometrics in U.S. visas, this identifies are an important link to the national security. Advantages from this process include reduction of stolen and counterfeit visas, protection against possible use by terrorists or any other person who represent a security risk. Introduction of electronic visas has also increased the level of data sharing among the State Department and other federal agencies and has served to enhance border security and facilitated legitimate visitors travel Harty, (2005).

#### **2.5 Critique of Existing Literature**

According to Imran & Gregory (2005), the importance of ICT in developing countries is increasingly being recognized in academic literature though there is no clear and comprehensive framework or theory that has emerged for dealing with the complex issues involved in addition Walsham (2005) says that theoretical approaches are yet to be found in favor from the diverse studies of e-government,

globalization and digital divide. Kelgai (2003), concludes that information research in this area is non-cumulative and fragmented hence lacks an overarching framework regarding the context in which effectiveness is applied. but ICT is only a facilitator, an enabler, an efficiency booster. It cannot compensate for lack of discipline, management, and control.

Jerry Hart (2005) argues that technological innovations with effective information and Communications technology (ICT) can help achieve business objectives and drive world class border agency performance. However, ICT alone offers no magic modernization solutions. Successful ICT merely enables modernization and improved performance. The most effective modernization programs address policy, process, and people issues and then use ICT as an enabler to achieve the agency's mission and vision. Border management agencies have long been seen as the collective stewards of the nations' trade and borders.

## **2.6 Research Gap**

It is evident that ICT has a great impact in the reforms of the immigration sector, though most studies have been done on developed and developing countries but there has not been clear findings and conclusion on effective policies and e-strategies that have been formulated in order to ensure the secure border controls. Therefore there is need of the study to evaluate the e-strategies implemented in Kenya on effective border migration control.

## **2.7 Summary of Review**

The formulation of a national sectoral e-strategy on the basis of these experiences is still lacking in many countries in order to make use of the full potential of ICT for economy and society. Development implies action, e-strategy documents written are never implemented in developing countries, and thus a failing occurs when those who commission studies neglect to act upon their recommendations.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### **3.1 Introduction**

This chapter outlines the research design to be used to meet the objectives of the study. Research methodology are procedures by which researchers go about their work of describing, explaining and predicting phenomena with the aim of giving the work plan of research. The chapter defines the research design, identifies the target population and the sampling technique, data collection method and data analysis.

#### **3.2 Research Design**

De Vaus, (2001) defines a research design as a design that ensures that the evidence obtained enables us to answer the initial questions as unambiguously as possible. It is considered as a "blueprint" for research, dealing with at least four problems: which questions to study, which data are relevant, what data to collect, and how to analyze the results. The research design for this study was of an exploratory research design. According to Earl, (1989) exploratory research design purposes in identifying potential causes of a problem, establishing priorities or direction for a research program, clarifying concepts and assisting in new product developments. Shields and Tajalli, (2006) link exploratory research with the conceptual framework .Exploratory research is flexible and can address research questions of all types (what, why, how).

#### **3.3 Target Population**

Burns and Grove (2003) and Mugenda and Mugenda (2003) describe population as all the elements that meet the criteria for inclusion in a study. Population is therefore the entire group of individuals, events or objects having a common observable characteristic. The study population consisted of an estimate of 500 employees of the Ministry of State for Immigration and Registration of Person, Nairobi.

### 3.4 Sampling and Sampling Technique

Sampling is the process of selecting a number of individuals for a study in such a way that the selected represents the large group from which they are selected. A sample is a small proportion of an entire population Mugenda (2003).

Sampling frame provides a list of elements from which the sample is actually drawn from. Ideally, it is a complete and correct list of population members only. For the proposed study, a stratified sampling technique was applied. This technique was considered appropriate as it gave all respondents an equal chance of being selected, hence no biasness and eased out generalization of the findings. The sampling frame came from a list of top and middle level employees in the departments of Ministry of State for Immigration and Registration of Persons namely; Immigration Department, National Registration Bureau, Civil Registration, Refugee Affairs and Population Registration Services.

The sample size was 100 forming 20% of the target population. The sample was composed of several strata picked from a Stratified random sampling technique. Depablo (2000), states that if a researcher wants to reduce a risk of missing to discover a perception to a minimal 1% then a sample size of 50 is needed hence the size of 100 was very sufficient.

**Table 3.1: Distribution of Sample Size**

| Departments (Strata)             |              | Sample Size | Estimated Target Population | Sample Percentage |
|----------------------------------|--------------|-------------|-----------------------------|-------------------|
| Immigration                      |              | 27          | 150                         | 18                |
| National Registration Bureau     | Registration | 27          | 150                         | 18                |
|                                  |              |             |                             |                   |
| Civil Registration               |              | 6           | 30                          | 20.0              |
| Refugee Affairs                  |              | 23          | 120                         | 19.17             |
| Population Registration services |              | 17          | 50                          | 29.13             |

|              |            |            |           |
|--------------|------------|------------|-----------|
| <b>Total</b> | <b>100</b> | <b>500</b> | <b>20</b> |
|--------------|------------|------------|-----------|

---

### **3.5 Data Collection**

The data used for the purpose of the study was primary data collected by the researcher, through questionnaires and interviews. A questionnaire technique since it is suited for exploratory research. The questionnaires included both closed and open ended questions and were addressed to the top and middle level employees. This approach was chosen because of its flexibility in designing of questions so that the respondent can have easiness in answering the questions. Secondary data was collected from empirical data obtained from observation and past experiences documented.

The first section of the questionnaire dealt with demographic statistics such as name, age, functional responsibility (position held), years of service of employees. This information provided data to be used in analyzing personal statistics based on gender, age and employee years of service. The second section of the questionnaire seeks to gain an understanding of the various ICT strategies implemented in the various departments of MIRP.

### **3.6 Pilot Study**

A pilot study is a pre-study of the main study. The reliability of the questionnaire using a pilot test was carried out. Reliability refers to random error in measurement and indicates the accuracy or precision of the measuring instrument (Norland, 1990). The pilot test seeks to answer the question; does the questionnaire consistently measure whatever it measures? The questionnaire was tested to ensure it can capture the best outcomes for the main study, through the identification and verification that answers are okay and of high validity, by collecting data from 15-20 subjects not included in the sample. The aim of testing the questionnaire is to minimize measurement error.

Validity of the questionnaire was tested by discussing it with two randomly sampled managers of the department of immigration. Arising from their review the content

and structure of the questionnaire was adjusted to improve content and construct validity.

Reliability was tested by issuing 10 questionnaires to randomly sampled employees. The duly filled questionnaires were coded and input into SPSS to generate Cronbach coefficients. The overall coefficient for the sampled questionnaires was found to be 0.892. The coefficient shows the internal consistency of the questionnaire responses and the higher the coefficient the better and the higher degree of internal consistency. According to Cronbach (1951) a coefficient of 0.7 is good for a newly developed tool and hence 0.892 was adequate for the study.

### **3.7 Data Analysis and Presentation**

Qualitative approach in terms of descriptive statistics was used to describe the present and analyze the data. Descriptive studies enable one to document the nature of existing variable, how they change overtime. It provides a basis for classifying data and allows for further questions, since data is recorded in the narrative. Descriptive statistics and qualitative findings are often presented together Mercurio (1979). Qualitative data analysis method were used to analyze qualitative data gathered using the open-end questionnaires. The process entailed the following; gathering of all the questionnaires issued to respondents, checking for completeness on questionnaires, entering coded numerical data in templates so as to calculate the response percentages, mean and variance and checking data for errors.

The multiple regression model was used so as to develop an equation showing how the variables are related. Anderson, Sweeney, Williams (2011) define multiple regression analysis as the study of how a dependent variable  $y$  is related to two or more independent variables. Using multiple linear regression equation of the following form was developed:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where



$Y$  = cross border migration control

$X_1$  = Electronic visa

$X_2$  = E-verification systems

$X_3$  = Entry and exit system

$X_4$  = Advanced sharing systems

In the model,  $\beta_0$  = the constant term while the coefficient  $\beta_i = 1 \dots 4$  was used to measure the sensitivity of the dependent variables ( $Y$ ) to unit change in the predictor variables.  $\mu$  is the error term which captures the unexplained variations in the model.

The Statistical Package for Social Sciences (SPSS) computer software was used to present descriptive statistic inform of pie charts, tables and bar charts.

## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSION

#### 4.1 Introduction

The chapter presents the empirical findings and results of the application of the variables using techniques mentioned in chapter three. Specifically, the data analysis was based on specific objectives where patterns were investigated, interpreted and implications drawn on them. The chapter starts with a preliminary analysis of the data before analyzing the study variables.

#### 4.2 Response Rate

The number of questionnaires that were administered was 100 to the employees in immigration department. A total of 77 questionnaires were properly filled and returned which represented an overall successful response rate of 77%. According to Mugenda and Mugenda (2003), a response rate of 50% or more is adequate. Babbie (2004) also asserted that return rates of 50% are acceptable to analyze and publish, 60% is good and 70% is very good.

**Table 4.1: Response Rate**

| Response     | Frequency  | Percent     |
|--------------|------------|-------------|
| Returned     | 77         | 77%         |
| Unreturned   | 23         | 23%         |
| <b>Total</b> | <b>100</b> | <b>100%</b> |

#### 4.3 Pilot Study Result

Reliability refers to the extent to which a measuring instrument contains variable errors, that is errors that appear inconsistently from observation to observation during any one measurement attempt or that vary each time a given unit is measured by the same instrument (Sekaran, 2003 and Castillo, 2009).

Reliability was tested by issuing 10 questionnaires to randomly sampled employees. The duly filled questionnaires were coded and input into SPSS to generate Cronbach coefficients. The overall coefficient for the sampled questionnaires was found to be 0.892. The coefficient shows the internal consistency of the questionnaire responses and the higher the coefficient the better and the higher degree of internal consistency. According to Cronbach (1951) a coefficient of 0.7 is good for a newly developed tool and hence 0.892 was adequate for the study.

**Table 4.2: Reliability Results**

| Section  | Questionnaires | Questions | Cronbach alpha | Comment  |
|--|----------------|-----------|----------------|----------|
| Electronic visa application                    | 10             | 6         | 0.834          | Reliable |
| E-verification systems                         | 10             | 5         | 0.877          | Reliable |
| Entry and exit recording systems               | 10             | 5         | 0.868          | Reliable |
| Advanced passenger information sharing systems | 10             | 5         | 0.791          | Reliable |
| Cross border Migration control                 | 10             | 6         | 0.824          | Reliable |

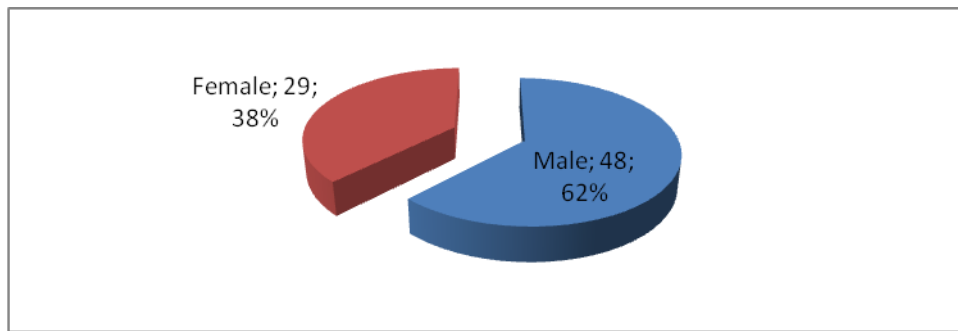
#### **4.4 Respondents Background Information**

This section analyzes the demographic characteristics of the respondents (immigration employees).

##### **4.4.1 Gender of the Respondents**

Respondents of this study were 48 male and 29 female who constituted 62 percent and 38 percent respectively. The differences in gender representation indicate the population ratio of immigration department employee's population where there are more male employees than female in the formal sector. Figure 4.1 presents the results.

The findings reflect the fact that the immigration department is a male dominated field. According to Ellis, Cutura, Dione, Gillson, Manuel and Thongori (2007), in spite of women being major actors in Kenya's economy, and notably in agriculture and the informal business sector, men dominate in the formal sector citing the ratio of men to women in formal sector as 74%:26%. Perhaps the gender disparity may have an implication on the level of effectiveness on e-strategies on cross border migration in Kenya. This is supported by (Stevenson and St-Onge, 2005; Gakure, 1995; Gakure, 2001; Gakure, 2003) who argued that women are more prudent in resource management compared to their men counterparts.

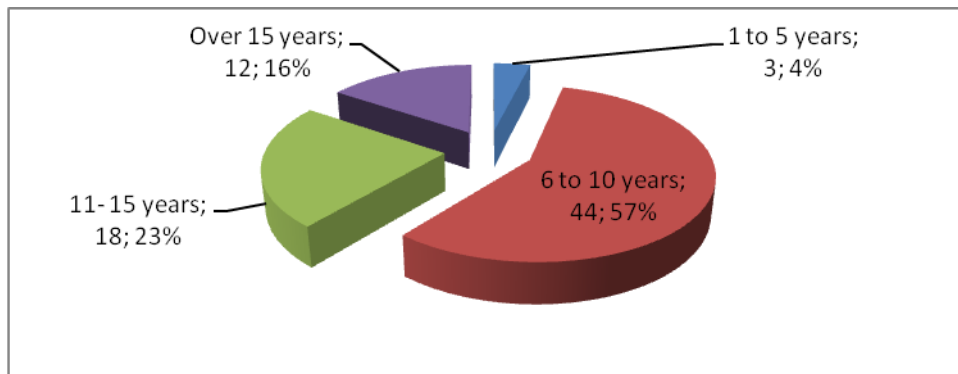


**Figure 4.1: Gender of the Respondents**

#### **4.4.2 Period worked in the Department**

The study findings indicate that majority of the respondents, 57% had worked in the immigration department for 6 to 10 years while 23% of the respondents had been in the immigration department for 11-15 years. Sixteen percent of the respondents indicated over 15 years and only 4% had worked in the department for 1 to 5 years. Results are presented in Figure 4.2

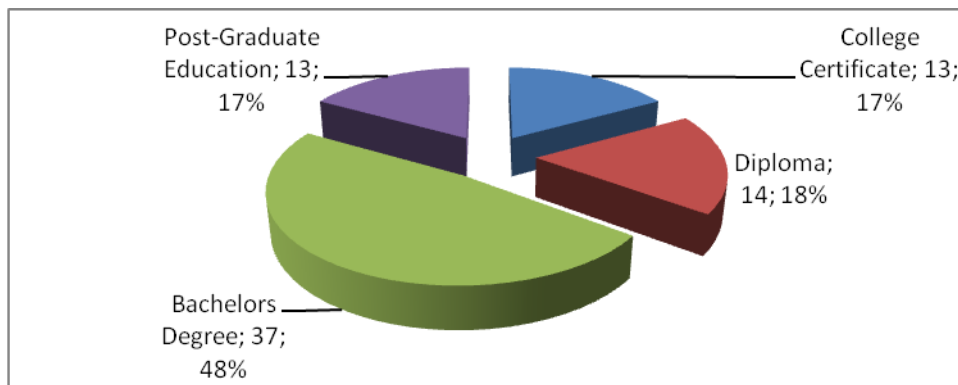
The findings concur with those by Samuel and Chipunza (2009); Swailes and Fahdi (2010), which asserted that labour turnover, is lower in public institutions, compared to private institutions. The finding is consistent with expectations as it is a well-established notion that immigration department (just like any other government related officers) have security of tenure. The findings imply that the employees had been in the department for a lengthy period of time hence accurate responses about the issues regarding the study.



**Figure 4.2: Period worked in the Immigration Department**

#### 4.4.3 Level of Education

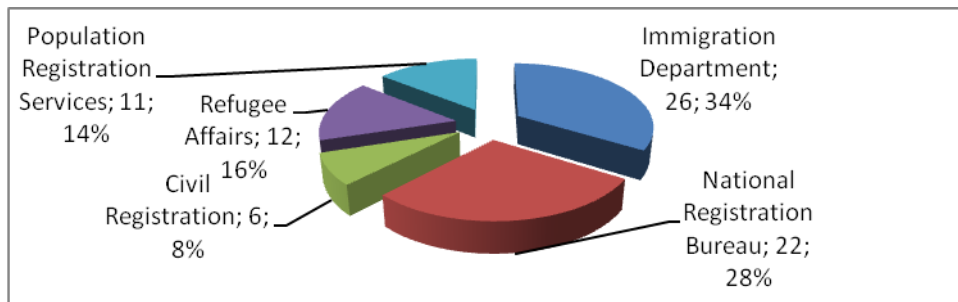
Figure 4.3 shows that 65% of the respondents had either a bachelor degree or a post graduate education of which 48% had bachelor degrees. This indicates that immigration department employs qualified manpower. However, the company is in a sector where manual activities are carried out and this could be represented by the 18% and 17% who had only diplomas and college certificates.



**Figure 4.3: Level of Education**

#### 4.4.4 Department

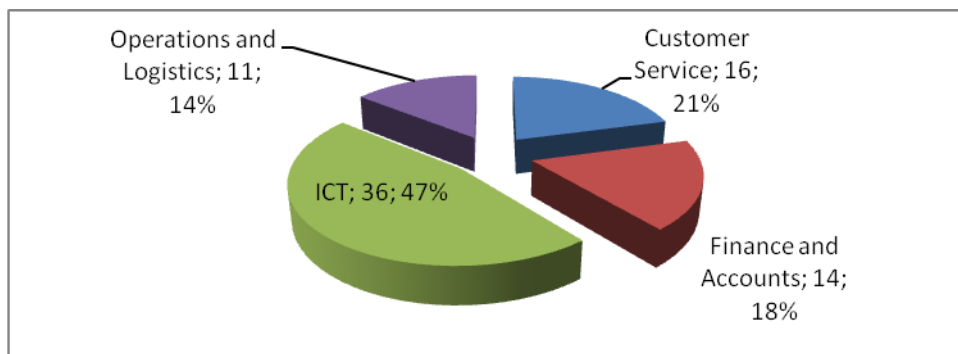
The respondents were asked to indicate the departments they worked in. Results in Figure 4.4 shows that 34% of the respondents indicated immigration department, 28% indicated national registration bureau and 16% indicated refugee affairs. Sixteen percent indicated population registration services and 8% indicated civil registration.



**Figure 4.4: Department**

#### 4.4.5 Current Area of Specialization

The respondents were asked to indicate their current area of specialization. Figure 4.5 indicates that 47% of the respondents indicated ICT, 21% indicated customer service while 18% indicated finance and accounting. Only 14% indicated that operations and logistics. The findings imply that all the respondents were aware of the issues the researcher wanted to find out hence accurate results.



**Figure 4.5: Current Area of Specialization**

#### 4.5 Electronic Visa Application and E-strategy on Migration Control.

The first objective of the study was to find out the extent in which the Kenya Immigration Authority offers electronic visa application as an e-strategy on migration control.

##### 4.5.1 Electronic Methods of Visa Verification

Table 4.3 shows that 74% of the respondents agreed that their department had electronic methods of verification of visa and 23% disagreed with the statement. The

findings imply that the departments in immigration have upgraded their systems according to technological changes taking place in the whole world.

The findings agree with those in Rosenblum (2011) who notes that the creation of an effective electronic eligibility verification system has united the disparate sides of the United States immigration debate by giving employers greater certainty of whether an employee is authorized to work in the United States.

**Table 4.3: Department has Electronic Methods of Visa Verification**

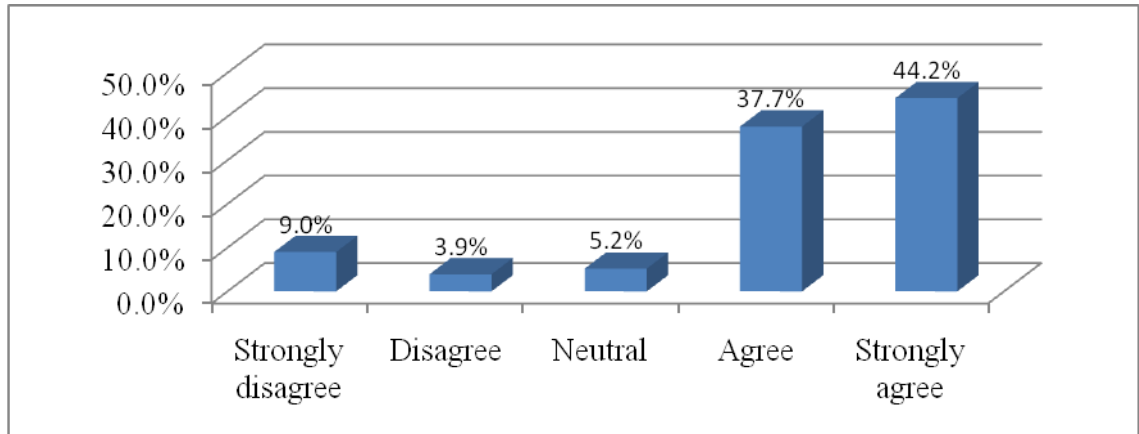
| Statement   |                   | Frequency | Percent    |
|---|-------------------|-----------|------------|
| Our department has electronic methods of verification of visa | Strongly disagree | 8         | 10.4       |
|   | Disagree          | 10        | 13.0       |
|   | Neutral           | 2         | 2.6        |
|   | Agree             | 41        | 53.2       |
|   | Strongly agree    | 16        | 20.8       |
| <b>Total</b>  |                   | <b>77</b> | <b>100</b> |

#### **4.5.2 Electronic Methods of Visa Processing**

The study sought to find out if electronic methods of visa processing are more reliable than semi manual or fully manual processes. Results in Figure 4.6 shows that 82% of the respondents agreed that electronic methods of visa processing are more reliable than semi manual or fully manual processes and 13% disagreed with the statement. The findings imply that electronic methods are more reliable and efficient than manual processes.

The findings concur with those in Harty (2005) who asserted that eVisa has led to a significant process improvement to the immigration departments in Australia and United States, by addressing two conflicting imperatives that is the tourism and education industries who wanted the entry barriers reduced to encourage tourism and

fee- paying students whilst there is a security requirement to retain the border integrity.



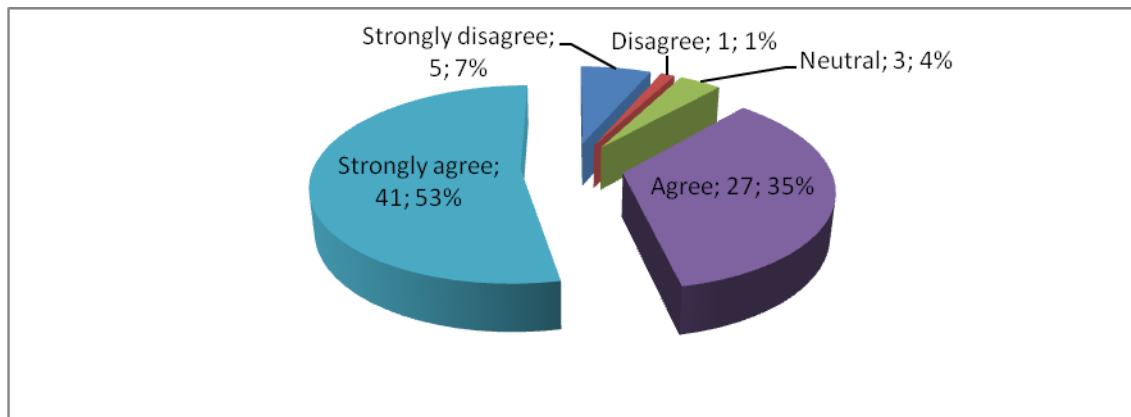
**Figure 4.6: Electronic Methods of Visa Processing**

#### **4.5.3 Passport and Visa Tracking**

The respondents were asked if it is easy to track passport and visa utilization using electronic means as compared to manual methods. A majority (53.2%) strongly agreed while another 35.1% agreed bringing to a total of (88.3%) of those who agreed. Six point five percent strongly disagreed and 1.3% disagreed and 3.9% were neutral. The results are presented in Figure 4.7.

The findings agree with those in NACTS (2011) which confirmed that available and emerging e-strategies can enhance border security operations and infrastructure in a cost-effective manner. The findings imply that the immigration department had put in place passport and visa tracking systems which were easier and faster to use than the traditional methods.





**Figure 4.7: Passport and Visa Tracking**

#### 4.5.4 Visa and Passport Data Integration

The respondents were asked to indicate whether Visa and passport data is highly integrated in order to control all manner of misuse. Table 4.4 reveals that majority (96%) agreed, while 2.6% were neutral and 1.3% strongly disagreed.

The findings concur with those in NACTS (2011) which asserted that these technologies (visa verification) can detect a plethora of clandestine activities and they also observed that the key components that provide for secure cross border controls are staffing, technology and infrastructure. The findings imply that the immigration department has integrated the visa and passport data to control misuse and embrace the technological changes taking place all over the world.

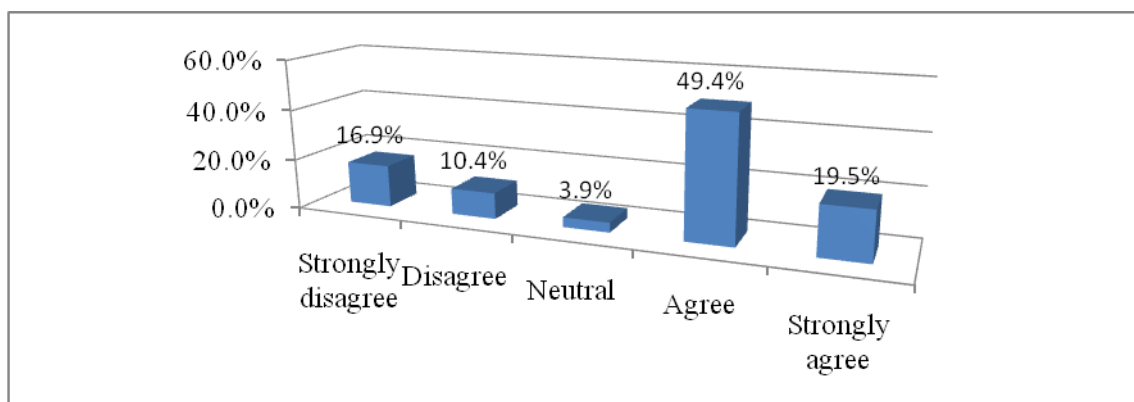
**Table 4.4: Visa and Passport Data Integration**

| Statement  |                   | Frequency | Percent      |
|--|-------------------|-----------|--------------|
| Visa and passport data is highly integrated in order to control all manner of misuse | Strongly disagree | 1         | 1.3          |
|  | Disagree          | 0         | 0.0          |
|  | Neutral           | 2         | 2.6          |
|  | Agree             | 48        | 62.3         |
|  | Strongly agree    | 26        | 33.8         |
| <b>Total</b>   |                   | <b>77</b> | <b>100.0</b> |

#### 4.5.5 Integration of Registration of Person and Passport processing Departments

The respondents were asked to indicate if the Government should integrate registration of person and the passport and visa processing departments. Results in Figure 4.8 indicate that 68.9 of the respondents agreed while 27.3 disagreed and 3.9 were neutral. The findings imply that the immigration employees were for the idea that the Government to integrate registration of persons and the passport and Visa processing departments to curb forging of important documents.

The findings agree with those in UNDP, (2004) which argued that sensitization of citizens on emerging technologies on cross border controls has led to an increase on embracing of new technologies. For example, from a survey conducted on the ministry of immigration of Tanzania, they recommended that as the region embraces e-immigration services they should adopted entry and exit cards that conform to the ICAO electronic format.



**Figure 4.8: Integration of Registration of Person and Passport processing Departments**

#### 4.5.6 Tracking Passport Ways

The respondents were asked to indicate whether the department had a way of tracking passports which are invalid for whatever reason. Table 4.5 shows that 80.5 of the respondents agreed, while 15.6 disagreed and 3.9 were neutral. Results are presented in Table 4.7 below.

The findings agree with those Yepes (2007), the biometric technology in passports is used to improve the screening process and identity checks at the national borders. The screening process and identity checks are important so as to protect the country from immigrants with a probability for conducting terrorist or any other criminal attacks.

**Table 4.5: Tracking Passport Ways**

| Statement  |                   | Frequency | Percent      |
|--|-------------------|-----------|--------------|
| The department has a way of tracking passports which are invalid for whatever reason | Strongly disagree | 5         | 6.5          |
|  | Disagree          | 7         | 9.1          |
|  | Neutral           | 3         | 3.9          |
|  | Agree             | 43        | 55.8         |
|  | Strongly agree    | 19        | 24.7         |
| <b>Total</b>   |                   | <b>77</b> | <b>100.0</b> |

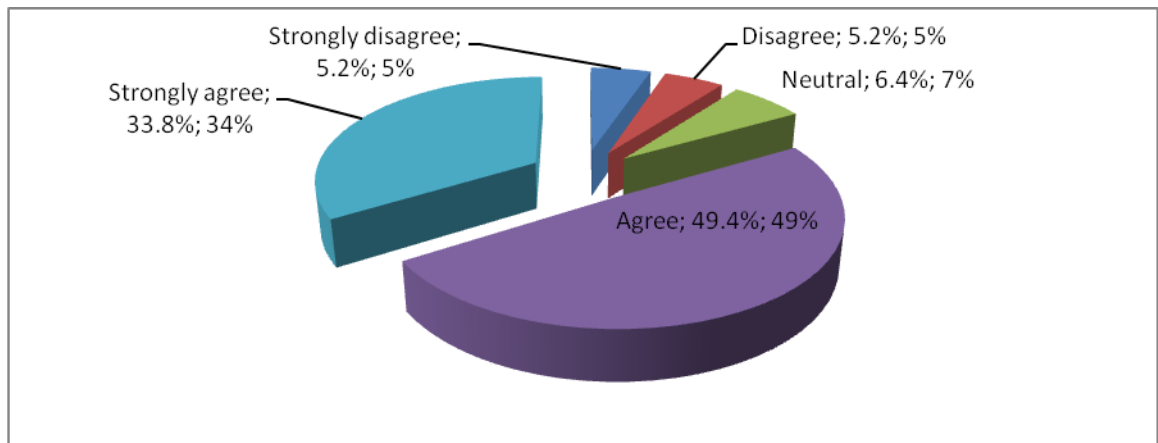
#### **4.6 E-verification Systems and E-strategy on Migration Control**

The second objective of the study was to investigate the e-verification systems established in Kenya Immigration Authority as an e-strategy on migration control.. Results are presented below

##### **4.6.1 Processed Documents are Scanned for Verification**

The respondents were asked to indicate whether all documents processed at the department of immigration are scanned for verification purposes. Figure 4.9 shows that 83.2 of the respondents agreed, 10.2 disagreed and 6.4 were neutral. The findings imply that at immigration department all documents are well screened for verification purposes to ensure that all documents are original and held by the correct and right owners.

The findings agree with those in Westat (2009) who estimated that the e-verification system allowed employers to screen over 166,000 unauthorized workers in 2009. The system's ability to successfully identify a large number of unauthorized immigrants has strengthened the ability to ensure legal workforce and is a major step toward reducing the job magnet that motivates most illegal immigration.

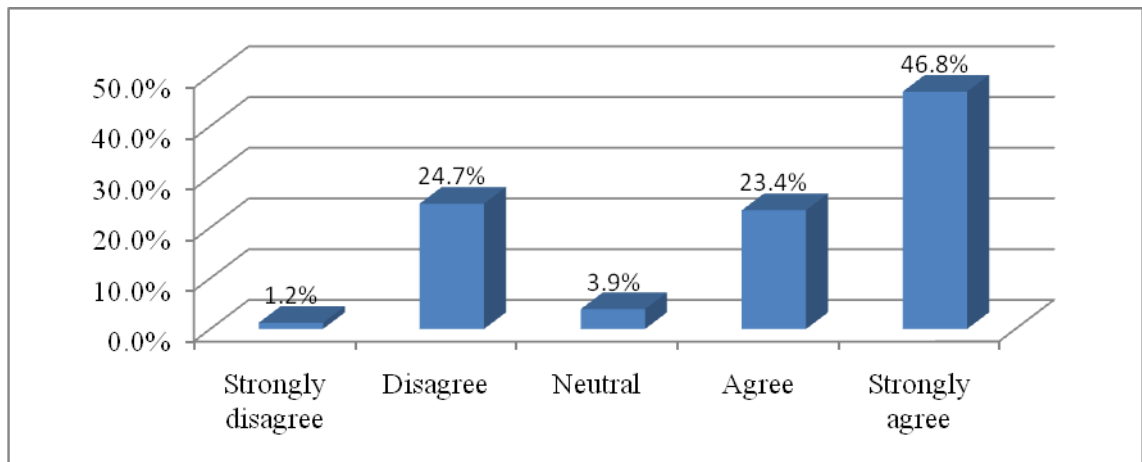


**Figure 4.9: Processed Documents are Scanned for Verification**

#### 4.6.2 Scanning of Visitors at Immigration Offices

The respondents were asked to indicate if visitors who enter immigration offices have to pass through scanners for security verification. Results indicate that majority (46.8) agreed and 23.4 strongly agreed bringing to a total of 70.2 of those who agreed. Twenty four point seven disagreed, 1.2 strongly disagreed and 3.9 were neutral. Results are presented in Figure 4.10 below.

The findings agree with those in Westat (2009) who estimated that the e-verification system allowed employers to screen over 166,000 unauthorized workers in 2009. The system's ability to successfully identify a large number of unauthorized immigrants has strengthened the ability to ensure legal workforce and is a major step toward reducing the job magnet that motivates most illegal immigration. The findings imply that the government is on the lookout of all illegal people in the country and to ensure security all visitors are scanned and their documents verified with the data in the systems.

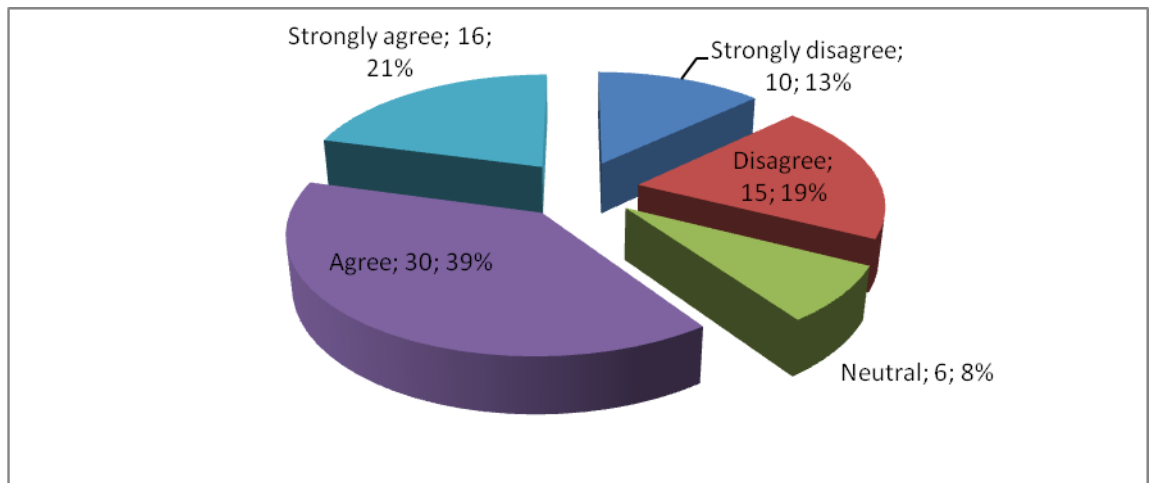


**Figure 4.10: Scanning of Visitors at Immigration Offices**

#### **4.6.3 Fake Passport Production**

The respondents were asked to indicate whether it is not possible to produce a fake passport in Kenya because the department has high level security inscriptions which are not easy replicate by fraudsters. Figure 4.11 shows that majority (59.8) of the respondents agreed, while 19.4 disagreed and 13 disagreed. Only 7.8 of the respondents were neutral.

The findings agree with those in Harty, (2005) who asserted that introduction of electronic visas has increased the level of data sharing among the State Department and other federal agencies and has served to enhance border security and facilitated legitimate visitors travel. The findings imply that the Government is blocking all the open doors for corruption and fake document publications through issuance of electronic visas.



**Figure 4.11: Fake Passport Production**

#### **4.6.4 Verifying Foreign Passports**

The study sought to establish if the systems are capable of verifying foreign passports. Results in Table 4.6 show that majority (80.6) of the respondents agreed that their systems were capable of verifying foreign passports and 14.2 disagreed with the statement. Five point two percent of the respondents were neutral. The findings imply that the Government has enhanced that all departments have invested in upgrading the systems to ensure that they are up to date and are capable of verifying all kinds of passport.

The findings agree with those in Harty, (2005) who asserted that introduction of electronic visas has increased the level of data sharing among the State Department and other federal agencies and has served to enhance border security and facilitated legitimate visitors travel.

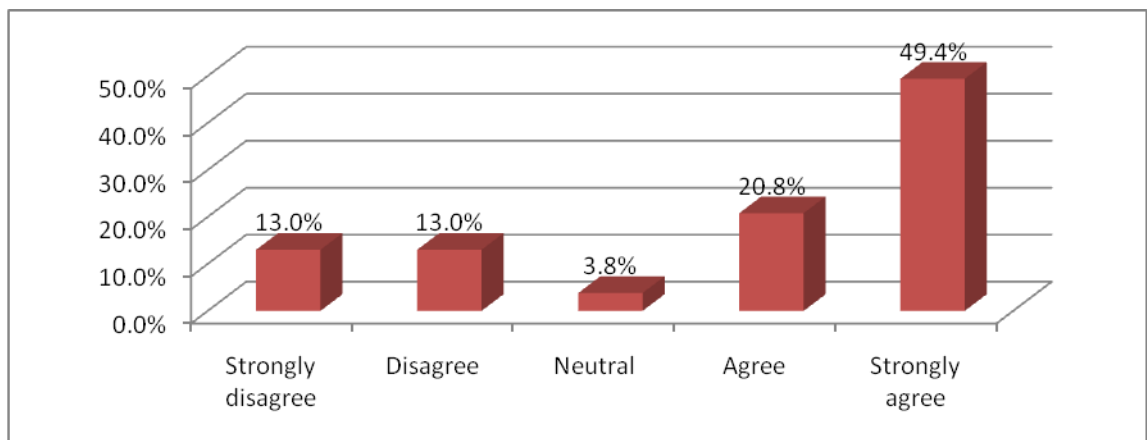
**Table 4.6: Verifying Foreign Passports**

| Statement  |                   | Frequency | Percent      |
|--|-------------------|-----------|--------------|
| Our systems are capable of verifying foreign passports | Strongly disagree | 4         | 5.2          |
|  | Disagree          | 7         | 9.0          |
|  | Neutral           | 4         | 5.2          |
|  | Agree             | 30        | 39.0         |
|  | Strongly agree    | 32        | 41.6         |
| <b>Total</b>   |                   | <b>77</b> | <b>100.0</b> |

#### 4.6.5 Detection and Control of Fraud

The respondents were asked to indicate whether the verification systems in their departments are meant to detect and control fraud. Results in Figure 4.12 shows that 70.2 of the respondents agreed, 26 disagreed and 3.8 were neutral. The findings imply that at immigration department the management had put in place verification systems and strategies to detect and control fraud.

The findings agree with those in Dulo, (2009) who summarized that the main challenges facing secure cross border migrations is that Kenya has a huge and porous border, transnational communities, lack of a common visa that would reduce bureaucracy at border points and corruption.

**Figure 4.12: Detection and Control of Fraud**

## 4.7 Entry and Exit Recording Systems and Migration Control

The third objective of the study was to establish the extent to which Kenya Immigration Authority have implemented entry and exit recording systems as an e-strategy on migration control. Results are presented below.

### 4.7.1 Data base for Records in Department

The respondents were asked to indicate whether the department has data base that records where passports used and the points of entry and exit. Results in Table 4.7 shows that 76.6 of the respondents agreed, 14.3 disagreed and 9.1 were neutral. Results are presented in table 4.13 below.

The findings agree with those in ICIO (2004) who asserted that a border security system that records entry of visitors that authenticates their identity screening them against security databases, the exit system requires visitors to check out at borders when they leave. The findings imply that the immigration department has data base that records where the passports have been used at the entry and exit points at the cross border.

**Table 4.7: Data base for Records in Department**

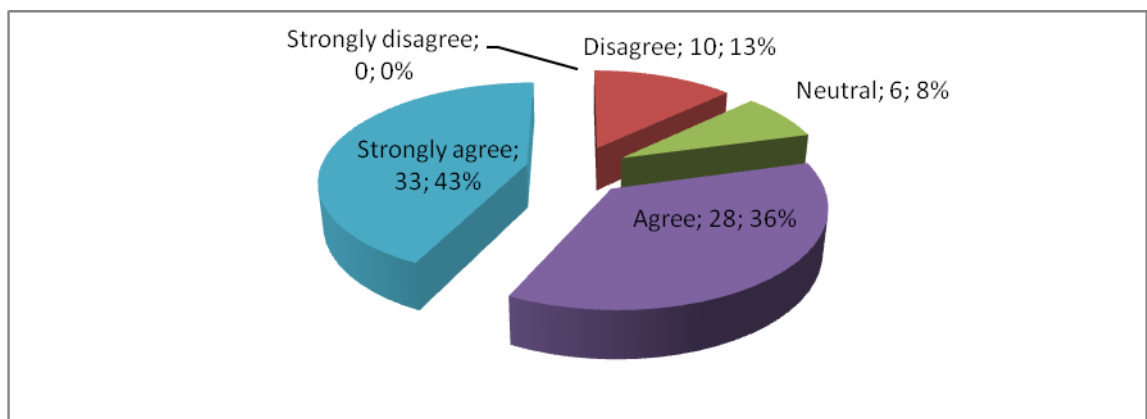
| Statement   |                   | Frequency | Percent |
|---|-------------------|-----------|---------|
| The department has data base that records where passports used and the points of entry and exit | Strongly disagree | 7         | 9.1     |
|   | Disagree          | 4         | 5.2     |
|   | Neutral           | 7         | 9.1     |
|   | Agree             | 28        | 36.4    |
|   | Strongly agree    | 31        | 40.2    |
| Total   |                   | 77        | 100.0   |



#### 4.7.2 Document Verification Scanners at Entry Points

The respondents were asked to indicate if all their entry and exit points have document verification scanners. Figure 4.13 shows that majority (78.2) agreed that all their entry and exit points have document verification scanners, 13 disagreed and 7.8 were neutral. The findings imply that the Government has put document control measures at all borders to ensure that all people crossing the border have the right and correct documents.

The findings agree with those in Vaughan (2005) who asserted that document control, state and local law enforcement participation are all reactive methods of immigration law enforcement and an anticipatory method of enforcement is the ability to identify illegal immigrants overstays as soon as they fall out of status, this is achieved by biometric screening systems for visitors.



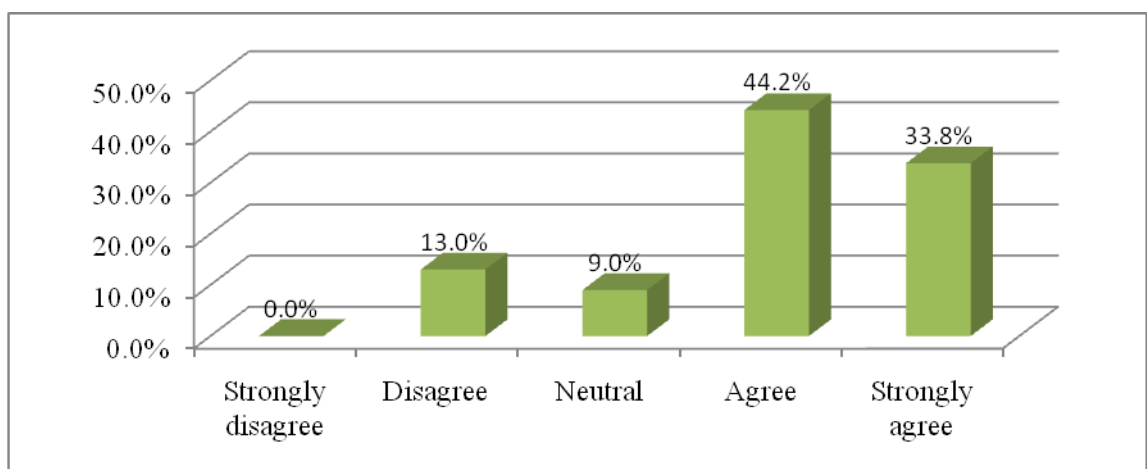
**Figure 4.13: Document Verification Scanners at Entry Points**

#### 4.7.3 Monitoring Usage of Passports

The study sought to establish whether document verification scanners are important in monitoring usage of passports and movement of persons to and from the country. Figure 4.14 reveals that 78 of the respondents agreed that document verification scanners are important in monitoring usage of passports and movement of persons to and from the country. Thirteen percent of the respondents disagreed and 9 were neutral. The findings imply that the verification scanners have helped in a great way

to monitor the usage of passports during the movement of people from one place to the other.

The findings agree with a report from United States senate subcommittee on immigration (2001) which made the recommendation to the implementation of an automated entry/exit system and the student tracking system that would notify authorities whether foreign nationals have left the country under the terms of their visas, and whether foreign students are properly maintaining their status.

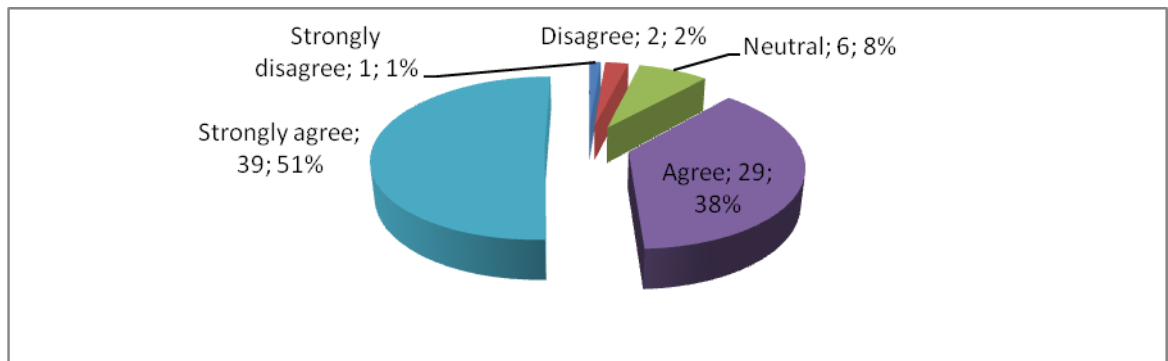


**Figure 4.14: Monitoring Usage of Passports**

#### **4.7.4 Authenticity and Integrity of Verification Systems**

The respondents were asked to indicate whether the authenticity and integrity of their verification systems was checked every year and where necessary if they are improved. Results in Figure 4.15 shows that majority (88.3) of the respondents agreed that authenticity and integrity of their verification systems was checked every year and where necessary they are improved. Three point nine percent of the respondents disagreed and 7.8 were neutral.

The findings imply that the department ensured that the systems were checked regularly to ensure that they are up to date and upgraded to enhance correct working.



**Figure 4.15: Authenticity and Integrity of Verification Systems**

#### 4.7.5 Risk of Manual Verification Process

The respondents were asked to indicate if there are some entry and exit point which have manual processes of verification and they pose a risk to the verification process. Results indicate that majority (74.1) of the respondents agreed that there are some entry and exit points which have manual processes of verification and they pose a risk to the verification process. Twenty two percent of the respondents disagreed and 7.8 were neutral. Results are presented in Table 4.8 below.

**Table 4.8: Risk of Manual Verification Process**

| Statement  |                   | Frequency | Percent      |
|--|-------------------|-----------|--------------|
| There are some entry and exit point which have manual processes of verification and they pose a risk to the verification process | Strongly disagree | 11        | 14.2         |
|  | Disagree          | 6         | 7.8          |
|  | Neutral           | 3         | 3.9          |
|  | Agree             | 35        | 45.5         |
|  | Strongly agree    | 22        | 28.6         |
| <b>Total</b>   |                   | <b>77</b> | <b>100.0</b> |

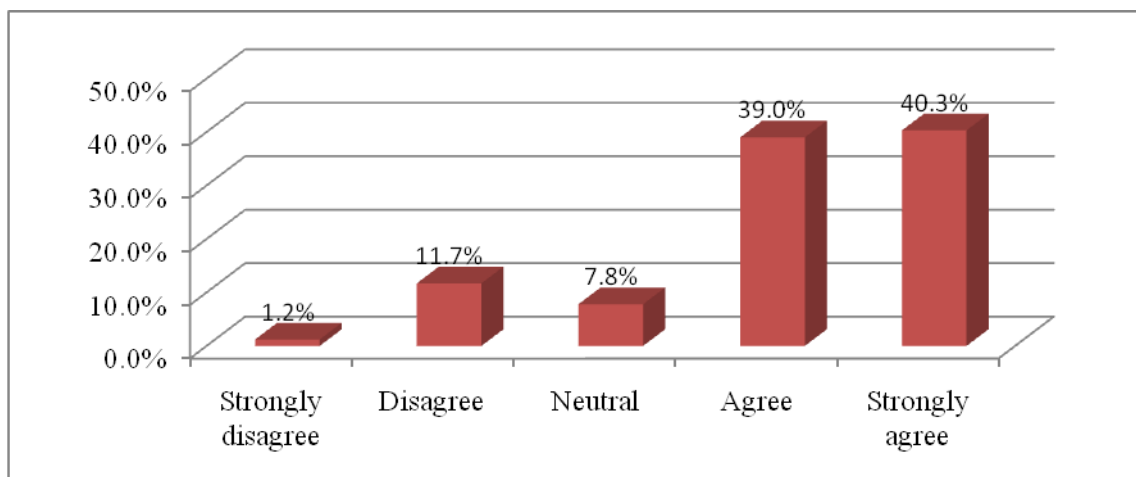
## 4.8 Advanced Sharing of Passenger Information and Migration Control

The fourth and last objective of the study was to investigate the extent to which best technology has been implemented in Kenya immigration Authority and has systems that allows advanced sharing of passenger information as an e-strategy on migration control

### 4.8.1 Tracking of Passport Details at Entry and Exit Points

The respondents were asked to indicate if the entry and exit points are able to track and send passport details to the immigration of their origin. Results in Figure 4.16 shows that 79.3 of the respondents agreed that their entry and exit points are able to track and end passport details to the immigration of their origin. Twelve point nine percent of the respondents disagreed and 7.8 were neutral.

The findings concur with those in Leonard (2011) who explains that because of the threat from terrorism, the arrival processing of passengers by the Border Control Agencies has had to be intensified, with additional delays being the unwelcome result. The findings imply that the electronic visas have helped in tracing the origin of passport holders.

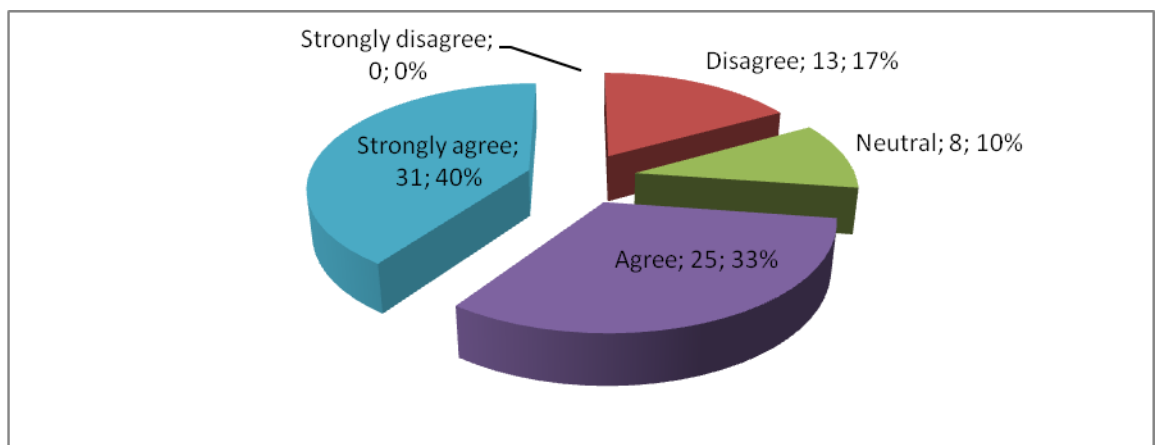


**Figure 4.16: Tracking of Passport Details at Entry and Exit Points**

### 4.8.2 Passengers Records Scrutiny at Cross Borders

The study sought to establish if all passengers who cross their borders have their records scrutinized for risk purpose and when fraudulent detections are found action is taken within the immigration laws. Results indicate that 72.8 of the respondents agreed that all passengers who crossed their borders have their records scrutinized for risk purpose and when fraudulent detections are found action was taken within the immigration laws. Sixteen point nine percent disagreed and 10.3 were neutral. Results are presented on Figure 4.17 below.

The findings agree with those in Westat (2009) who estimated that the e-verification system allowed employers to screen over 166,000 unauthorized workers in 2009. The findings imply that system's ability to successfully identify a large number of unauthorized immigrants has strengthened the ability to ensure legal workforce and is a major step toward reducing the job magnet that motivates most illegal immigration.



**Figure 4.17: Passengers Records Scrutiny at Cross Borders**

#### **4.8.3 Liaison between Departments**

The respondents were asked to indicate whether all flights and water vessels dropping passengers in Kenya must liaise with the department of immigration to ensure that illegal immigrants are detected and action taken. Table 4.9 shows that 76.7 agreed that all flights and water vessels dropping passengers in Kenya must liaise with the department of immigration to ensure that illegal immigrants are

detected and action taken. Fourteen point two percent of the respondents disagreed and 9.1 were neutral.

The findings agree with those in Council of the European Union (2009) which stated that API is designed to enhance border security by providing Border Control Agencies with pre-arrival and departure manifest data on all passengers.

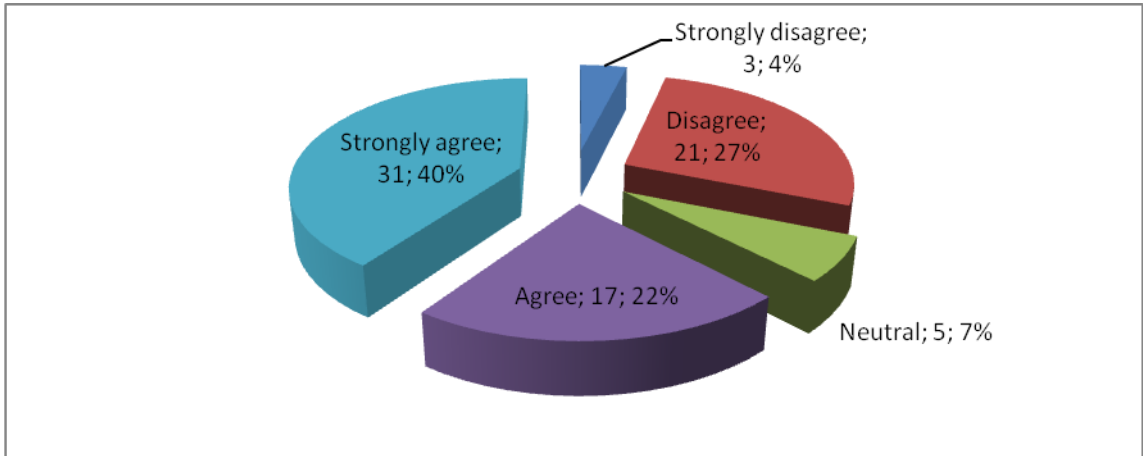
**Table 4.9: Liaison between Departments**

| Statement   |                   | Frequency | Percent      |
|---|-------------------|-----------|--------------|
| All flights and water vessels dropping passengers in Kenya must liaise with the department of immigration to ensure that illegal immigrants are detected and action taken | Strongly disagree | 1         | 1.2          |
|   | Disagree          | 10        | 13.0         |
|   | Neutral           | 7         | 9.1          |
|   | Agree             | 34        | 44.2         |
|   | Strongly agree    | 25        | 32.5         |
| <b>Total</b>  |                   | <b>77</b> | <b>100.0</b> |

#### **4.8.4 Data Base Maintained Manually**

The respondents were asked to indicate if most of their databases are manually maintained and pose challenges when tracking passenger information. Results in Figure 4.18 indicates that majority (62.3) of the respondents agreed that most of their databases are manually maintained and posed challenges when tracking passenger information, (31.2) of the respondents disagreed and 6.5 were neutral. The findings imply that electronic visas will help the immigration department in upgrading the system from the traditional and manual systems to electronically means.

The findings agree with those in Council of the European Union (2009) which stated that API provides significant benefits by maximizing domestic and regional security of travel and facilitating faster processing of legitimate travelers, while reducing travel opportunities by unauthorized or improperly documented persons.



**Figure 4.18: Data Base Maintained Manually**

#### 4.8.5 Detection of Fictitious and Multiple Passports

The respondents were asked to indicate whether their systems were able to detect passengers who use multiple passports or a fictitious one. Results revealed that (67) of the respondents agreed while 18.2 disagreed and 14 of the respondents were neutral. The findings are presented on Table 4.10 below.

The findings concur with those in Harty (2005), who asserted that in the implementation process of eVisa, Enhanced Border Security and Visa Entry Reform Act of 2002, the U.S. Congress mandated the use of biometrics in U.S. visas, which helped in reduction of stolen and counterfeit visas, protection against possible use by terrorists or any other person who represent a security risk. The findings imply that electronic visas will help curb fraud and use of multiple passports by one person.

**Table 4.10: Detection of Fictitious and Multiple Passports**

| Statement | Frequency | Percent |
|-----------|-----------|---------|
|-----------|-----------|---------|

|  |                   |           |              |
|--|-------------------|-----------|--------------|
| Our systems is able to detect a passengers who uses multiple passports or a fictitious one | Strongly disagree | 1         | 1.2          |
|  | Disagree          | 13        | 17           |
|  | Neutral           | 11        | 14           |
|  | Agree             | 28        | 36           |
|  | Strongly agree    | 24        | 31           |
| <b>Total</b>   |                   | <b>77</b> | <b>100.0</b> |

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## 4.9 Cross Border Migration Control

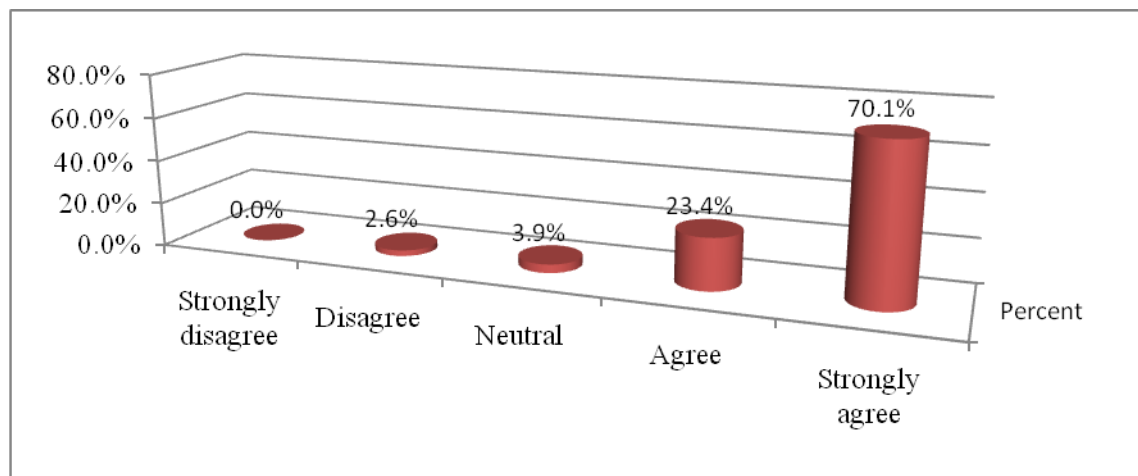
The respondents were asked to indicate their views on cross border migration control. The findings are presented below

### 4.9.1 Computerized Cross Border Processes

The respondents were asked to indicate whether all their cross border processes are computerized. Figure 4.19 shows that majority (93.5) of the respondents agreed that all their cross border processes are computerized. Two point six percent of the respondents disagreed and 3.9 were neutral. The findings imply that all entry and exit points at the cross border have computerized systems for verification of passports and visas.

The findings agree with those in Haddal (2010), who argued that many countries have invested enormously in new border management systems designed to achieve two potentially conflicting goals; stopping the mobility of those traveling without authorization or with malicious intent and facilitating mobility for legitimate travelers.



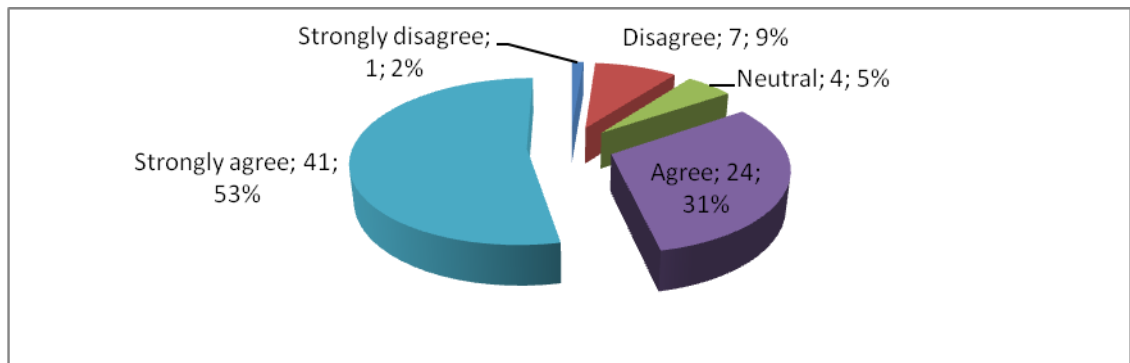


**Figure 4.19: Cross Border Migration Control**

#### **4.9.2 Upgrading of ICT Departments**

The respondents were asked to indicate if in the past five years the departments have upgraded ICT capacity of employees. Results in Figure 4.20 indicate that 84.4 of the respondents agreed, 10.4 disagreed and 5.2 were neutral. The findings imply that all the employees working at immigration department have ICT knowledge and knew how to work the systems in the departments.

The findings concur with those in Anil et al. (2003) who posts that in the recent years the need to bridge digital divide or re-positioning the nation in the new digital inter-connected economy, and ensuring that marginalized communities and cultures are not discounted in the move to embrace ICT, nations need to step back and evaluate where they stand. They need to ensure that national ICT policies and e-strategies address the core aspect of development and e-strategies should be the means to an end.

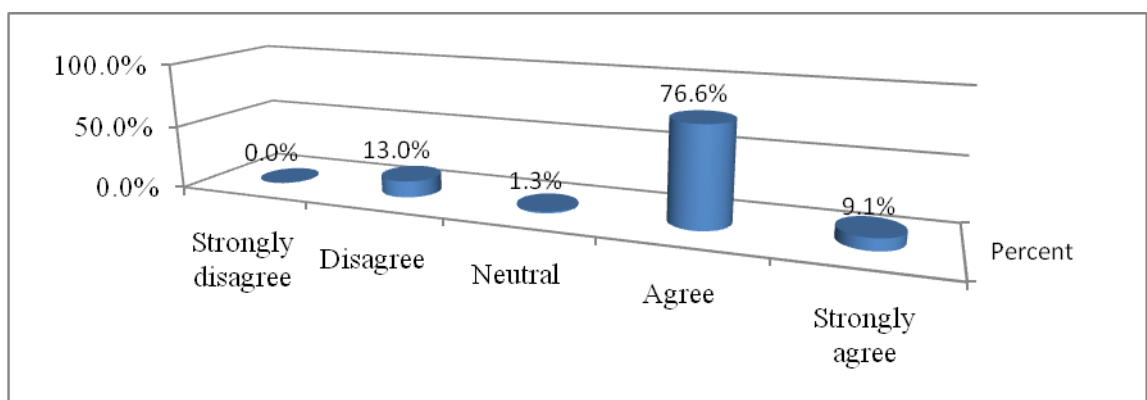


**Figure 4.20: Upgrading of ICT Departments**

#### 4.9.3 Computer Literate Employees

The respondents were asked to indicate whether all of their employees are computer literate. Figure 4.21 indicates that majority (85.7) of the respondents agreed that all of their employees are computer literate, 13 disagreed and 1.3 were neutral. The findings imply that the employees were computer literate hence took less time in verifying the documents.

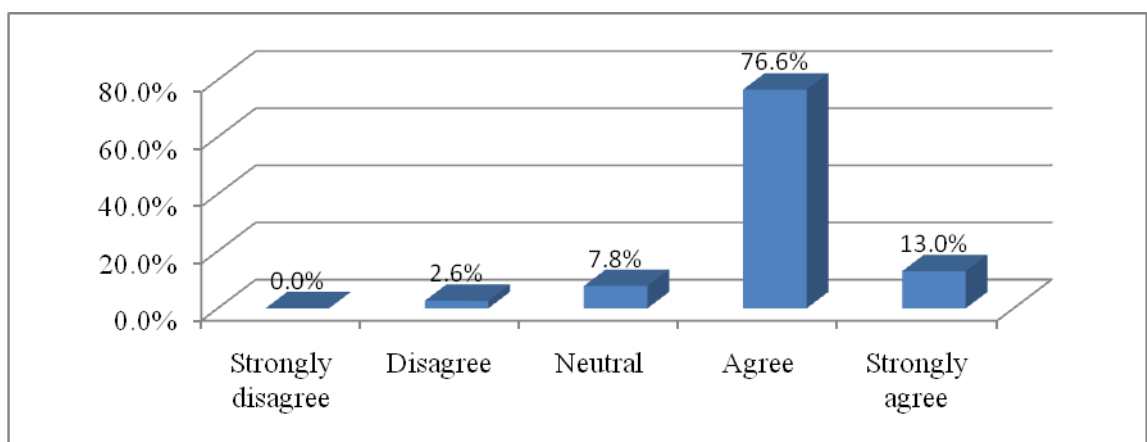
The findings agree with those in Westat (2009) who estimated that the e-verification system allowed employers to screen over 166,000 unauthorized workers in 2009. The system's ability to successfully identify a large number of unauthorized immigrants has strengthened the ability to ensure legal workforce and is a major step toward reducing the job magnet that motivates most illegal immigration



**Figure 4.21: Computer Literate Employees**

#### 4.9.4 Staff Rotation

The respondents were asked to indicate whether the department conducts staff rotations every year to minimize system and control compromises arising from employees. Results in Figure 4.22 indicate that 89.6 of the respondents agreed, 2.6 disagreed and 7.8 were neutral. The findings imply that the department practiced staff rotation to ensure that the employee did not compromise the systems in any way.



**Figure 4.22: Staff Rotation**

#### 4.9.5 System Compromise

The respondents were asked to indicate if it is not possible for fraudsters to compromise their migration systems because they have level control parameters. Results revealed that 77.9 agreed that it is not possible for fraudsters to compromise their migration systems because they had level control parameters. Thirteen percent of the respondents disagreed and 9.1 were neutral. The findings are presented in Table 4.11 below.

The findings agree with those in Seifert (2008) and Napolitano (2010) who asserted that data collected on individual travelers is only as valuable as the accuracy of the information presented; use of fraudulent identities is a continual weakness and as a result industrialized countries are adopting new methods for identifying travelers, through biometric data, such as finger prints, photographs and retinal scans.

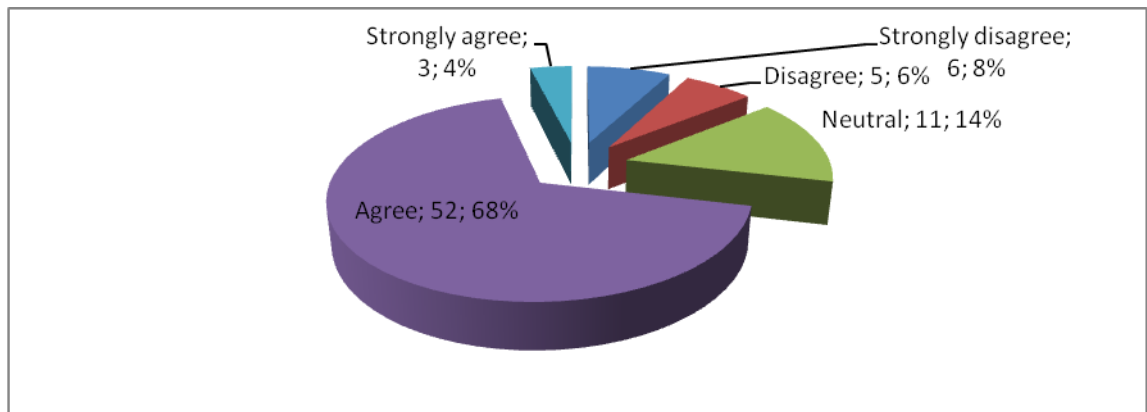
**Table 4.11: System Compromise**

| <b>Statement</b>   |                   | <b>Frequency</b> | <b>Percent</b> |
|--|-------------------|------------------|----------------|
| It is not possible for a fraudsters to compromise our migration systems because they have level control parameters | Strongly disagree | 2                | 2.6            |
|  | Disagree          | 8                | 10.4           |
|  | Neutral           | 7                | 9.1            |
|  | Agree             | 57               | 74.0           |
|  | Strongly agree    | 3                | 3.9            |
|  |                   | <b>77</b>        | <b>100.0</b>   |
| <b>Total</b>   |                   |                  |                |

#### **4.9.6 Integration Plans for Migration Controls**

The respondents were asked to indicate whether there are advanced plans to integrate the Kenyan migration controls with those of other East African states in readiness for the East African common market. Results in Figure 4.23 indicate that majority (71.4) agreed while 14.3 disagreed and 6.5 were neutral. The findings imply that East African states are working together in achieving the migration controls.

The findings agree with those in MPI (2011) who posts that the Australian entry-exit system that monitors travelers' arrival and departure has become the standard for other immigration regions to emulate as it's the most advanced system of its kind, for United States they have also invested deeply in technology to monitor entry to the country.



**Figure 4.23: Integration Plans for Migration Controls**

#### 4.10 Inferential Statistics

This section has analysis of the questionnaire responses using inferential statistics like correlation and regression.

##### 4.10.1 Bivariate Correlation

Table 4.12 displays the results of correlation test analysis between the dependent variable (cross border control) and independent variables and also correlation among the independent variables themselves. Results on Table 4.12 show that cross border control was positively correlated with all the independent variables. This reveals that any positive change in Electronic visa, E-verification systems, Entry and exit system and advanced sharing systems led to increased cross border migration control at the immigration department in Kenya. The bivariate correlation reveals a high and positive correlation between cross border migration control and all the predictors' variables. This shows that a unit change in any of the predictor variable caused a significant change in the cross border migration controls.

**Table 4.12: Bivariate Correlations**

| Variable | Cross border control | Electronic visa | E-verification systems | Entry and exit system | Advanced sharing systems |
|----------|----------------------|-----------------|------------------------|-----------------------|--------------------------|
|          |                      |                 |                        |                       |                          |

|                                |                        |       |       |       |       |   |
|--------------------------------|------------------------|-------|-------|-------|-------|---|
| Cross<br>border<br>control     | Pearson<br>Correlation | 1     |       |       |       |   |
|                                | Sig. (2-tailed)        |       |       |       |       |   |
| Electronic<br>visa             | Pearson<br>Correlation | 0.930 | 1     |       |       |   |
|                                | Sig. (2-<br>tailed)    | 0.000 |       |       |       |   |
| E-<br>verification<br>systems  | Pearson<br>Correlation | 0.957 | 0.977 | 1     |       |   |
|                                | Sig. (2-<br>tailed)    | 0.000 | 0.000 |       |       |   |
| Entry and<br>exit system       | Pearson<br>Correlation | 0.849 | 0.96  | 0.933 | 1     |   |
|                                | Sig. (2-<br>tailed)    | 0.000 | 0.000 | 0.000 |       |   |
| Advanced<br>sharing<br>systems | Pearson<br>Correlation | 0.861 | 0.966 | 0.944 | 0.969 | 1 |
|                                | Sig. (2-<br>tailed)    | 0.000 | 0.000 | 0.000 | 0.000 |   |

---

#### 4.10.2 Regression Analysis

In order to establish the statistical significance of the independent variables on the dependent variable (cross border migration controls) regression analysis was employed. The regression equation took the following form.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where

Y = border migration control

X<sub>1</sub> = Electronic visa

X<sub>2</sub> = E-verification systems

X<sub>3</sub> = Entry and exit system

X<sub>4</sub> = Advanced sharing systems

In the model,  $\beta_0$  = the constant term while the coefficient  $\beta_i = 1 \dots 4$  was used to measure the sensitivity of the dependent variables (Y) to unit change in the predictor variables.  $\mu$  is the error term which captures the unexplained variations in the model.

**Table 4.13: Regression Model Fitness**

| Indicator                  | Coefficient |
|----------------------------|-------------|
| R                          | 0.971       |
| R Square                   | 0.943       |
| Adjusted R Square          | 0.939       |
| Std. Error of the Estimate | 0.13865     |

Table 4.13 shows that the coefficient of determination also called the R square is 94.3. This means that the combined effect of the predictor variables (Electronic visa, E-verification systems, Entry and exit system and advanced sharing systems) explains 94.3 of the variations in cross border migration controls in immigration department in Kenya. The correlation coefficient of 97.1 indicates that the combined effects of the predictor variables have a strong and positive correlation with cross border migration controls. This also meant that a change in the drivers of cross border migration controls has a strong and a positive effect on border migration controls in immigration department in Kenya.

**Table 4.14: Analysis of Variance (ANOVA)**

| <b>Indicator</b> | <b>Sum of Squares</b> | <b>df</b> | <b>Mean Square</b> | <b>F</b> | <b>Sig.</b> |
|------------------|-----------------------|-----------|--------------------|----------|-------------|
| Regression       | 22.695                | 4         | 5.674              | 295.13   | 0.000       |
| Residual         | 1.384                 | 72        | 0.019              |          |             |
| Total            | 24.079                | 76        |                    |          |             |

Analysis of variance (ANOVA) on Table 4.14 shows that the combined effect of Electronic visa, E-verification systems, Entry and exit system and advanced sharing systems was statistically significant in explaining changes in border migration control. This is demonstrated by a p value of 0.000 which is less than the acceptance critical value of 0.05.

Table 4.15 displays the regression coefficients of the independent variables. The results reveal that Electronic visa, E-verification systems, Entry and exit system and advanced sharing systems are statistically significant in explaining e-strategies on border migration control in immigration department in Kenya.

**Table 4.15: Regression Coefficients**



| <b>Variable</b>          | <b>Beta</b> | <b>Std. Error</b> | <b>t</b> | <b>Sig.</b> |
|--------------------------|-------------|-------------------|----------|-------------|
| Constant                 | -0.213      | 0.365             | -0.585   | 0.561       |
| Electronic visa          | 0.769       | 0.243             | 3.162    | 0.002       |
| E-verification systems   | 0.933       | 0.12              | 7.794    | 0.000       |
| Entry and exit system    | -0.297      | 0.131             | -2.265   | 0.027       |
| Advanced sharing systems | -0.306      | 0.106             | -2.891   | 0.005       |

Based on the analysis, the regression equation for the independent variable on the dependent variable resulted to

$$Y = 0.933X_1 + 0.769X_2 - 0.297X_3 - 0.306X_4$$

Where;

Y = Border migration control

X<sub>1</sub> = E-verification systems

X<sub>2</sub> = Electronic visa

X<sub>3</sub> = Advanced sharing systems

X<sub>4</sub> = Entry and exit system

The resulting conceptual model indicates that e- verification systems considered in the study had the most significant influence on border migration control

The relationship between cross border migration control and electronic visa was positive and significant (b1=0.769, p value, 0.002), implying that an increase in the effectiveness of electronic visa by 1 unit leads to an increase in effectiveness of cross border migration control by 0.769 units.

Further results also indicated that the relationship between cross border migration control and E-verification systems was positive and significant (b1=0.933, p value,

0.000). This implies that an increase in the effectiveness of e-verification systems by 1 unit leads to an increase in effectiveness of cross border migration control by 0.933 units.

However the results indicated that entry and exit systems and advanced passenger sharing systems were negatively related with cross border migration controls hence not significant ( $b_1 = -0.297$ , p value, 0.027) and ( $b_1 = -0.306$ , p value, 0.005).

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### **5.1 Introduction**

This chapter finalizes the study by providing the summary of key findings, conclusions and recommendations. The summary, conclusions and recommendations are aligned to the specific objectives of the study.

#### **5.2 Summary of the Findings**

The general objective of the study was to study is to establish the role of electronic strategies on effective border migration control in Kenya One of the key findings was that employees at immigration department were concerned with the cross border migration controls. This was demonstrated by the extent of agreement with the statements in the questionnaire in support of cross border migration controls in immigration department in Kenya.

##### **5.2.1 Electronic Visa Application and E-strategy on Migration Control**

One of the objectives of the study to find out the extent in which the Kenya Immigration Authority offers electronic visa application as an e-strategy on migration control. The findings indicated that the department had electronic methods of verification of visa; Electronic methods of visa processing were more reliable than semi manual or fully manual processes. The findings also revealed that it is easier to track passports and visa utilization. The results revealed that electronic visa application was a key determinant of cross border migration control. This was demonstrated by the regression coefficient. The correlation between electronic visa application and cross border migration control was also found to be strong and positive.

### **5.2.2 E-verification Systems and E-strategy on Migration Control**

The second objective of the study was to investigate the e-verification systems established in Kenya Immigration Authority as an e-strategy on migration control. Results showed that e-verification systems influenced cross border migration control in Kenya. This was evidenced by the responses from respondents that all documents processed at the department of immigration are scanned for verification purposes, visitors who enter immigration offices have to pass through scanners for security verification and verification systems in the departments were meant to detect and control fraud. The correlation between e-verification systems and cross border migration controls was found to be statistically significant and positive.

### **5.2.3 Entry and Exit Recording Systems and Migration Control**

The third objective of the study was to establish the extent to which Kenya Immigration Authority have implemented entry and exit recording systems as an e-strategy on migration control. This was supported by respondents indicating that the departments had records in databases where passports used at the points of entry and exit, all the entry and exit points have document verification scanners and document verification scanners are important in monitoring usage of passports and movement of persons to and from the country. The correlation between entry and exit recording systems and cross border migration controls was found to be statistically significant but negative.

### **5.2.4 Advanced Sharing of Passenger Information and Migration Control**

The fourth and last objective of the study was to identify the extent to which best technology has been implemented in Kenya Immigration Authority has systems that allow advanced sharing of passenger information as an e-strategy on migration control. The study findings showed that advanced sharing of passenger information have contributed to cross border migration control in Kenya immigration authority. The correlation between advanced sharing of passenger information and cross border migration control was found to be statistically significant but negative.

### **5.3 Conclusions**

Based on the objectives and the findings of the study the following conclusion can be made. Electronic visa application is a key determinant of cross border migration control at Kenya immigration authority. This kind of finding is a familiar as it has been supported by other scholars and hence highlighting the intensity of technology change in determining cross border immigration controls.

E-verification systems influenced cross border migration controls in Kenya. It was possible to conclude that all departments had e-verification systems and the systems were capable of verifying all passports. The correlation between e-verification systems and cross border migration controls was found to be statistically significant and positive.

The entry and exit recording systems influenced cross border migration controls. It was possible to conclude that there were effective strategies put in place at entry and exit points of cross border to curb movement of persons to and from the country

Advanced sharing of passenger information has contributed to cross border migration control in Kenya immigration authority. It can be concluded that employees were well informed about the control systems and they knew the loopholes hence effective in verifying the passports and data given.

### **5.4 Recommendations**

Based on the results, findings and conclusions the following recommendations have been deciphered. It is recommended to the immigration department management to ensure that all the electronic visa application system is upgraded with the technological changes taking place in the whole world. It is recommended that the management conducts a market survey of the technological facilities in use in other public institutions so as to minimize corruption and fraudulent activities.

It is recommended to the management that they ensure the staff are competent enough and have the technical knowledge on the use of verification systems and

machines. It is also recommended that all employees should have a sense of urgency in attending to visitors who enter immigration offices and ensure they pass through scanners for security verification. The study also recommends that the management ensures that the employees are well paid and remunerated to curb corruption and fraud cases.

The study further recommends to the management to ensure that the systems are upgraded and ensure they have various internal control practices to ensure that there are no fraudsters are allowed in the country. It is also recommended that the management should ensure that all entry and exit points are under CCTV surveillance at all times.

The study also recommended that the management should ensure that they employ workers who can follow orders with minimum supervision and reward them well in terms of salary payment to avoid cases of theft, bribery, complaints from passengers and endorse a heavy penalty for any employee who provide inaccurate service.

## **5.5 Areas for Further Study**

The study can be extended further by having a replica research on whether the Kenya integrated population database has adequate capabilities for citizen identification. It is also recommended that an integrated study be done on the integration potential of all the citizen registration systems with an objective of exploring strategies for harmonizing and integrating the various databases.

There is also further room for research by the academia where by scholars can do an analysis of different border management policies for countries within the East African region. Border policies and procedures keep changing from time to time, hence need for scholarly attention.

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## APPENDICES

### **Appendix I: Letter of Introduction**

Date.....

The Permanent Secretary,

Ministry of State for Immigration of Persons and Registration

P.O Box 56780- 00100

Nairobi

Dear Sir,

#### **RE: RESEARCH PROJECT**

I am a Masters student at Jomo Kenyatta University of Science and Technology. I am undertaking a research as part of my requirements for to successfully complete my Masters in ICT Policy and Regulation degree. My research topic is *“The role of electronic strategies on effective border migration control adopted by immigration authority in Kenya”* and the Ministry of State for Immigration for persons and registration has been sampled to facilitate the collection of the necessary information for the success of the study.

I kindly request you to grant me permission to administer a research questionnaire to various staff randomly selected in all the departments in the Ministry. Any information provided will be treated in strict confidence and used solely for academic purpose. Your cooperation will be greatly appreciated.

Thank you in advance.

Yours faithfully,

**Mercy Wanjiku Mau**

## **Appendix II: Questionnaire**

This questionnaire has statements regarding electronic strategies adopted by the immigration department for management of cross border migration. Kindly take few minutes to complete the questionnaire as guided. Your responses will be handled confidentially and ethically.

Thank you for agreeing to participate in this academic study.

### **SECTION A: BASIC INFORMATION**

- 1) Kindly indicate your gender

Male..... Female.....

- 2) Kindly indicate the period you have worked within the immigration department

1 to 5 years                      ☐                      6 to 10 years                      ☐

11- 15 years                      ☐                      Over 15 years                      ☐

- 3) Please indicate your education level

High School                      ☐                      College Certificate                      ☐

Diploma                      ☐                      Bachelors Degree                      ☐

Post-Graduate Education                      ☐

- 4) Please indicate the department you are currently under in the Ministry

Immigration Department                      ☐

National Registration Bureau                      ☐

Civil Registration                      ☐

Refugee Affairs                      ☐

Population Registration Services                      ☐

- 5) Please indicate current area of specialization

Customer Service [ ]

Finance and Accounts [ ]

ICT [ ]

Operations and Logistics [ ]

### **ELECTRONIC VISA APPLICATION**

| <b>No</b> | <b>Statement</b>  | <b>Strongly disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
|-----------|---|--------------------------|-----------------|----------------|--------------|-----------------------|
| 1         | Our department has electronic methods of verification of visa   |                          |                 |                |              |                       |
| 2         | Electronic methods of visa processing are more reliable than semi manual or fully manual processes      |                          |                 |                |              |                       |
| 3         | It is easy to track passport and visa utilization using electronic means as compared to manual methods  |                          |                 |                |              |                       |
| 4         | Visa and passport data is highly integrated in order to control all manner of misuse                    |                          |                 |                |              |                       |
| 5         | The Government should integrate registration of person and the passport and visa processing departments |                          |                 |                |              |                       |
| 6         | The department has a way of tracking passports which are invalid for whatever reason                    |                          |                 |                |              |                       |

### **E-VERIFICATION SYSTEMS**

| <b>No</b> | <b>Statement</b>  | <b>Strongly disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
|-----------|---|--------------------------|-----------------|----------------|--------------|-----------------------|
| 1         | All documents processed at the department of immigration are scanned for verification purposes  |                          |                 |                |              |                       |
| 2         | Visitors who enter immigration offices have to pass through scanners for security verification  |                          |                 |                |              |                       |
| 3         | It is not possible to produce a fake passport in Kenya because the department has high level security inscriptions which are not easy replicate by fraudsters |                          |                 |                |              |                       |
| 4         | Our systems are capable of verifying foreign passports  |                          |                 |                |              |                       |
| 5         | Verification systems in our department are meant to detect and control fraud  |                          |                 |                |              |                       |

### **ENTRY AND EXIT RECORDING SYSTEMS**

| <b>No</b> | <b>Statement</b>             | <b>Strongly disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
|-----------|------------------------------|--------------------------|-----------------|----------------|--------------|-----------------------|
| 1         | The department has data base |                          |                 |                |              |                       |

| No | Statement  | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|----|--|-------------------|----------|---------|-------|----------------|
|    | that records where passports used and the points of entry and exit   |                   |          |         |       |                |
| 2  | All our entry and exit points have document verification scanners  |                   |          |         |       |                |
| 3  | Document verification scanners are important in monitoring usage of passports and movement of persons to and from the country    |                   |          |         |       |                |
| 4  | The authenticity and integrity of our verification systems is checked every year and where necessary it they are improved        |                   |          |         |       |                |
| 5  | There are some entry and exit point which have manual processes of verification and they pose a risk to the verification process |                   |          |         |       |                |

#### **ADVANCED PASSENGER INFORMATION SHARING SYSTEMS**

| No | Statement                     | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|----|-------------------------------|-------------------|----------|---------|-------|----------------|
| 1  | Our entry and exit points are |                   |          |         |       |                |



| No | Statement   | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|----|---|-------------------|----------|---------|-------|----------------|
|    | able to track and end passport details to the immigration of the of origin  |                   |          |         |       |                |
| 2  | All passengers who cross our border have their records scrutinized for risk purpose and when fraudulent detections are found action is taken within the immigration laws  |                   |          |         |       |                |
| 3  | All flights and water vessels dropping passengers in Kenya must liaise with the department of immigration to ensure that illegal immigrants are detected and action taken |                   |          |         |       |                |
| 4  | Most of our data bases are manually maintained and pose challenges when tracking passenger information  |                   |          |         |       |                |
| 5  | Our systems is able to detect a passengers who uses multiple passports or a fictitious one  |                   |          |         |       |                |

## CROSS BORDER MIGRATION CONTROL

| No | Statement   | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|----|---|-------------------|----------|---------|-------|----------------|
| 1  | All our cross border processes are computerized   |                   |          |         |       |                |
| 2  | In the past five years the departments has upgraded ICT capacity of employees   |                   |          |         |       |                |
| 3  | All our employees are computer literate   |                   |          |         |       |                |
| 4  | The department conducts staff rotations very year to minimize system and control compromises arising from employees   |                   |          |         |       |                |
| 5  | It is not possible for a fraudsters to compromise our migration systems because they have level control parameters  |                   |          |         |       |                |
| 6  | There are advanced plans to integrate the Kenyan migration controls with those of other East African states in readiness for the East African common market |                   |          |         |       |                |