

**SECURITY MEASURES AND BORDER SECURITY AT NAMANGA ONE STOP  
BORDER POST, KAJIADO COUNTY, KENYA**

**ERICK OCHIENG OYOSI  
S201/OL/CTY/21697/2020**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF MASTER OF SECURITY SCIENCE AND  
MANAGEMENT STUDIES IN THE SCHOOL LAW, ARTS AND SOCIAL SCIENCES  
OF KENYATTA UNIVERSITY**

**November 2024**

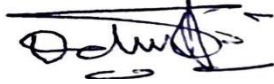
## DECLARATION

This project is my own original work and has not been submitted for a degree at any other university.

**Erick Ochieng Oyosi**

**Reg, No.: S201/OL/CTY/21697/2020**

**Signature:**



**Date: 26/11/2024**

This project has been submitted for evaluation with my endorsement as the University Supervisor.

**Dr. George Oyombra**

**Department of Security, Diplomacy and Peace Studies**

**Signature** \_\_\_\_\_

**Date** \_\_\_\_\_

## **ACKNOWLEDGEMENT**

I would like to start by thanking the almighty God for his blessings and the favor that He has shown me throughout my studies in this institution of higher learning. I also wish to express my sincere gratitude to Dr. Oyombra who guided me from the beginning to the completion of this project for his unwavering support. His availability throughout the project was helpful in shaping my work and spearheaded completion of the project within time frame. I Can't forget to mention my reader Dr, Mutonyi for the necessary corrections he made to better my project and his endless support throughout this academic journey. My appreciation also goes to all the lecturers from the department of Security, Diplomacy and Peace Studies for their input during my class work. Lastly, I also wish to acknowledge my family members who gave me ample time, peace of mind and moral support during my study, My wife, Irine Auma Oyugi, Children- Jayden Jean Oyosi and Grace Amanda.

## **DEDICATION**

My appreciation goes out to everyone who has helped me along the way, from parents and teachers to friends and family. My parents, Joseph Ayugi and Grace Oyosi for always praying for me and their financial support. Thank you for being part of my life throughout this challenging time; I really appreciate you more than beyond words. This research study is dedicated to you all.

## TABLE OF CONTENTS

DECLARATION.....	i
TABLE OF CONTENTS.....	ii
LIST OF TABLES.....	v
LIST OF FIGURES.....	v
ABBREVIATIONS AND ACRONYMS.....	vi
OPERATIONAL DEFINITION OF TERMS.....	vii
ABSTRACT.....	viii
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	7
1.3 General Objective.....	8
1.3.1 Specific Research Objectives.....	8
1.4 Research Questions.....	9
1.5 Significance of the Study.....	9
1.6 Scope of the Study.....	10
1.7 Limitations and Delimitations of the Study.....	11
CHAPTER TWO.....	12
LITERATURE REVIEW AND THEORETICAL FRAMEWORK.....	12
2.1 Introduction.....	12
2.2 The Effects of The Implementation of Physical Patrol on Border Security Management.....	12
2.3 The Effects of Integrated Scanners on Border Security Management.....	14
2.4 The Effects of Electronic Surveillance Systems on Border Security Management.....	16
2.5 Theoretical Framework.....	20
2.5.1 The Panic Theory of Border Control Management.....	20

<b>2.5.2 The Segmentation Theory of Border Control</b> .....	21
<b>2.6 Conceptual Framework</b> .....	23
<b>CHAPTER THREE</b> .....	25
<b>RESEARCH METHODOLOGY</b> .....	25
<b>3.1 Research Design</b> .....	25
<b>3.2 The Study Area</b> .....	25
<b>3.3 Target Population</b> .....	26
<b>3.4 Sampling Technique and Sample Size</b> .....	26
<b>3.5 Instruments of Data Collection</b> .....	27
<b>3.6. Pilot Testing</b> .....	27
<b>3.6.1 Testing for Reliability</b> .....	27
<b>3.6.2 Testing Validity</b> .....	28
<b>3.7 Data Collection Techniques and Procedure</b> .....	28
<b>3.8 Data Analysis and Presentation</b> .....	29
<b>3.9 Ethical Considerations</b> .....	29
<b>CHAPTER FOUR</b> .....	30
<b>DATA ANALYSIS AND DISCUSSION OF FINDINGS</b> .....	30
<b>4.1 Introduction</b> .....	30
<b>4.2 Response Rate</b> .....	30
<b>4.3 The Reliability Test</b> .....	30
<b>4.4 Analysis of the Demographic Data of the Participants</b> .....	31
<b>4.4.1 Gender Distribution</b> .....	31
<b>4.4.2. Educational Background</b> .....	32
<b>4.4.3 Age Distribution of the Participants</b> .....	33
<b>4.4.4 Years of Service</b> .....	34
<b>4.4.5 Designation of Personnel</b> .....	35
<b>4.5 Descriptive Analysis</b> .....	35
<b>4.5.1 Physical Patrols</b> .....	35
<b>4.5.2 Integrated Scanners</b> .....	37
<b>4.5.3 Electronic Surveillance</b> .....	40
<b>4.6 Multiple Regression Data Analysis</b> .....	43
<b>4.6.1 Normality Test</b> .....	43

<b>4.6.2 Correlation Analysis</b> .....	44
<b>4.6.3 Regression Analysis</b> .....	45
<b>CHAPTER FIVE</b> .....	48
<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS</b> .....	48
<b>5.1 Summary of Findings</b> .....	48
<b>5.2 Conclusion</b> .....	49
<b>5.3 Recommendations</b> .....	50
References .....	51
<b>APPENDICES</b> .....	55

## LIST OF TABLES

<b>Table 4. 1: Response Rate</b> .....	30
<b>Table 4. 2: Cronbach’s Alpha Analysis Outcome</b> .....	31
<b>Table 4. 3: Normality Test</b> .....	43
<b>Table 4. 4: Correlation Matrix</b> .....	44
<b>Table 4. 5: Model Summary</b> .....	45
<b>Table 4. 6 Analysis of Variance</b> .....	45
<b>Table 4. 7: Regression of Coefficient</b> .....	46

## LIST OF FIGURES

<b>Figure 1: Conceptual Framework</b> .....	23
<b>Figure 2: Gender Distribution of the Participants.</b> ....	31
<b>Figure 3: Educational Qualification of the Participants.</b> ....	32
<b>Figure 4: Age Distribution of Participants</b> .....	33
<b>Figure 5: Years of Service in the station</b> .....	34
<b>Figure 6: Designation of Service</b> .....	35
<b>Figure 7: Physical Patrol and Security Mitigation</b> .....	36
<b>Figure 8: Physical Patrol and Reduction in Insecurity Incidences</b> .....	36
<b>Figure 9: Integrated Scanners and Identification of Breaches in Cargos</b> .....	37
<b>Figure 10: Integrated Scanners and Improvement of Security</b> .....	38
<b>Figure 11: Integrated Scanners and Reduction of Security Breaches and Smuggling</b> .....	39
<b>Figure 12: Electronic Surveillance and Deterrence of Security Threats</b> .....	40
<b>Figure 13: Surveillance Cameras and Reduction of Security Breaches and Illicit Activities.</b> .....	41
<b>Figure 14: Electronic Surveillance and Enhancement of Customs and Immigration Personnel</b> .....	42

## **ABBREVIATIONS AND ACRONYMS**

**EAC:** East African Community

**OSBP:** One Stop Border Post

**KRA:** Kenya Revenue Authority

**ISM:** Integrated Security Management

**KDF:** Kenya Defense Forces

**NACADA:** National Authority for the Campaign against Alcohol and Drug Abuse

**UNICEF:** United Nations International Children's Emergency Fund

**UNODC:** United Nations Office on Drugs and Crime

## **OPERATIONAL DEFINITION OF TERMS**

**Security:** These are the procedures put in place by an organization to safeguard the border post and its surroundings from a variety of hazards.

**National Security:** This is the preservation and defense against internal and external threats of a country`s interests, sovereignty, and citizens.

**Border Security:** This pertains to the strategies and protocols used to safeguard the border region.

**One Stop Border Post:** This refers to a location where various activities such as immigration, customs procedures, and other related processes are conducted.

## ABSTRACT

The border administration policies emphasize the necessity for all participants in border management to be engaged to enhance the effectiveness of border operations. Security measures are normally enhanced along the border posts to improve on the national security of a given country by preventing entrance of terrorists, illegal goods and human trafficking. These security measures ensure safety at the border. The primary objective was to evaluate the efficacy of security strategies and border security management at Namanga OSBP. The specific objectives were as follows: to determine the effects of physical patrol on border security management at the Namanga one stop boarder post, Kajiado county, Kenya, to investigate the effects of integrated scanners on border security management at the Namanga one stop boarder post, Kajiado county, Kenya, and to examine the effects of electronic surveillance systems on border security management at the Namanga one stop boarder post, Kajiado county, Kenya. The research utilized Panic Theory of Border Management and the Segmentation Theory of Border Control. A descriptive survey research design was utilised. The population comprised of the employees at the Namanga OSBP, including police officers, customs officials, immigration officers, and National Intelligence Service employees, among others. The research used stratified random sampling. The data was collected via the use of questionnaires. Data analysis was done with the help of SPSS and then presented using tables, percentages, graphs and pie charts. This study found out that border security is complex and it requires various interventions, which entails a combination of technology and human security personnel for effective operations. In regard to objective one, the researcher finds that physical patrol emerges as a fundamental border security management measure, and is considered essential in enhancing security at the border point by minimizing insecurity incidents and eliminating potential of border security breaches. In regard to objective two, the researcher finds that integrated scanners have been critical in the management or improvement of security at the border points. For the third objective, the researcher also finds a positive correlation between the electronic surveillance and effective border security management, hence observing that electronic surveillance is critical in the management of border security and in the improvement of services. Based on the findings, this study concluded that various security measures, including physical patrols, integrated scanning, and electronic monitoring, are essential in the management of border security and in enhancing services. A major recommendation of the study is to promote greater multi-agency and multi-stakeholder collaboration as a means of detaining individuals attempting to enter a country illegally and effectively seizing any contraband goods. This necessitates more efficient border patrols and surveillance strategies. Additionally, the study suggests exploring technologies such as Big Data and the Internet of Things to improve security, as well as examining cross-border politics in relation to border security management.

# CHAPTER ONE

## INTRODUCTION

This chapter outlines the background, the general and particular objectives of the study, the research questions, and the significance of the study, the area/scope of the study, the limitations of the study and the assumptions of the study.

### 1.1 Background to the Study

Border administration encompasses all legal and administrative measures a sovereign state implements to secure, protect, and strengthen the sovereignty, security, safety, and integrity of its territory. Consequently, it is essential to any national migration strategy.

The concept of border security management as complex, which suggest the reason for the existence of the various definitions. According to the Homeland Security Department of the United States, securing the borders means policing the borders on the prohibition of the unauthorized movement of goods, especially arms, drugs substance, prohibited goods and persons while simplifying the movement of legal merchandise and people. According to Manjarrez (2015) border security can be defined as a situational awareness of the border that hinders the competence of the criminal operatives to complete their strategies. The idea here is to avoid making the border sentry uncontrolled so as to make the quality of life for the residents and the legal businesses better, while at the same reducing the threat that the same border poses to the economic health of that country. As a result, Manjarrez (2015) pointed out that absence of lethal force is not sufficient to achieve border security management; they opined that no one gets into the country unless there is a legal right to do so. Those who violate the provided regulations must face the repercussions attached to the breaches. Border security management, from time memorial, has been ensured through

ensuring physical border security, which entails the deployment of security personnel. However, this has been enhanced through the adoption of technologies such as electronic surveillance and the use of integrated scanners at the various entry points. Fundamentally, such measures are critical in enhancing border security management in various countries around the world.

Border security varies from country to country due to historical, socio-cultural, political, and geographical differences. According to historical accounts, mountain ranges, rivers, and deserts predominantly defined territorial boundaries. Globally, countries confront comparable difficulties as far as border security is concerned (Williams, 2019). Cross-border crimes and the criminal gangs have prompted the international community to tighten border controls and recognize the accelerating pace of change. Between October 2018 and September 2019 (the United States government's fiscal year), law enforcement personnel from Customs and border protection arrested almost one million illegal immigrants penetrating through the southwest border (Miller, 2019). In this regard, customs and border security personnel had to handle this humanitarian dilemma while enforcing their nation's laws and regulations, protecting American citizens by intercepting extremely dangerous drugs and criminals crossing their borders, and facilitating legitimate trade and movement at approximately 328 American ports of entry.

The U.S. immigration system has been under increasing duress over the past decade. After COVID-19 caused a drop in arrivals in 2020, illicit border incursions skyrocketed to record levels. During financial year 2022 (FY2022), United States immigration authorities arrested a record-breaking 2.3 million persons. Midway through 2023, this number had already surpassed 1.6 million, with roughly a quarter of all migrants hailing from the so-called Northern Triangle nations. Cuba, Haiti, Nicaragua, and Venezuela. Since May 2023, however, illicit crossings have unexpectedly decreased as a result of the Biden administration's repeal of Title 42, an emergency

public health decree implemented by Trump that permitted border authorities to expel migrants promptly. The study overlooked how targeted security measures at OSBPs could improve border management efficiency, especially in regions with complex migration dynamics and cross-border trade. It lacked focus on the effectiveness of security protocols at OSBPs in preventing illicit incursions and managing legal crossings. Addressing these gaps could reveal how specialized measures at OSBPs enhance border management while balancing security and efficient movement.

Border security concerns have also been witnessed in Colombia-Venezuela border, which has prompted the United States to issue a number of advisories to her citizens against approaching the border area to avoid inadvertent entry into Venezuelan territory. Venezuelans migrate to Colombia and other nations due to the protracted hyperinflation, pervasive corruption, inadequate economic governance, and little economic diversification, all of which have significantly impacted Venezuela (Luibhéid & Chávez, 2020). To foster socio-economic development as well as security in border regions, the Venezuelan Government initiated a project named “Borders of Peace” in October 2015. This initiative was anticipated to also support UNHCR’s individuals of concern. The Colombia-Venezuela border has been designated as a hot spot owing to many issues including crime (such as smuggling and human trafficking), terrorism, among other concerns. The existing analysis did not explore how the OSBP framework might enhance border management efficiency, reduce crime, and facilitate legal crossings in such complex settings. A study that addresses these aspects could provide valuable insights into the role of OSBPs in managing security and promoting stability in high-risk border areas like the Colombia-Venezuela region.

The Brazilian border serves as a significant locus for unauthorized immigration and serves as a gateway for many illicit acts (Lytvynov et al., 2021). In response the, the government of Brazil has deployed a multi-agency approach with the primary aim of eliminating border intrusion and illegal

immigration. For instance, in 2019, the government of Brazil through its security agencies apprehended a suspected smuggler, who was implicated in several criminal complaints. Some of the complaints alleged that the suspect was involved in the transportation of numerous individuals from Somalia and other countries in the Horn of Africa, potentially including extremists, across Africa, Latin America, and ultimately to the borders of California and Texas. Through a multi-agency approach, the government of Brazil have been able to enhance its border security, hence, enabling effective detection and prevention of cross-border and trans-national criminal activities. The study lacked a focus on how targeted security measures at an OSBP could streamline operations, improve coordination among agencies, and enhance the efficiency of border management. Addressing this gap could provide insights into how an OSBP model might further strengthen border security while facilitating legitimate cross-border movement in complex regions like Brazil's border areas.

In African countries such as Nigeria, border security has become a significant challenge and a significant issue to address (Ikeanyibe et al., 2023). The current circumstances have given birth to transnational criminal activities, including the illicit trafficking of products and narcotics, unauthorized movement of individuals, human trafficking, money laundering, theft, abduction, and even acts of terrorism, as shown by the Boko Haram group. These activities pose a significant danger to the national security of Nigeria. The United Nations Office on Drugs and Crime (UNODC) in Nigeria is actively assisting the government in the implementation of the National Action Plan on Human Trafficking (Drumond & Rebelo, 2020). There was a gap in understanding how OSBPs could streamline border security measures, enhance coordination among security agencies, and improve the detection and prevention of illicit activities at border crossings.

Addressing this gap could provide valuable insights into how OSBPs might strengthen Nigeria's border management while balancing the need for efficient legal cross-border movement.

Tjaden et al. (2019) reported that Africa exhibits notable migratory trends, including internal displacement, forced migration, and refugee mobility, as shown by statistical data. For instance, with regard to the Morocco-Spain border incident in 2021, over the course of time, African migrants and those seeking asylum have increasingly engaged in efforts to collectively climb the walls around the enclaves. This behavior is primarily driven by the absence of secure and legal migratory pathways, as well as the many impediments encountered while attempting to access official border stations. In this incidence, repercussions were not favorable as it forced 470 migrants to be returned to Morocco thereafter (Swan, 2023). African nations are becoming increasingly aware of the significance of collective efforts to combat insecurity and cultivate regional integration. The study by Tjaden et al. (2019) and Swan (2023) does not explore how OSBPs can be used to streamline border management in regions facing similar migration pressures, nor does it examine their effectiveness in balancing security concerns with the need for safe, legal migration. Addressing this gap could provide insights into the potential of OSBPs to mitigate illegal crossings and improve border security while supporting orderly migration and regional integration efforts in Africa.

Kenya has experienced border security challenges in her border with Somalia. Terrorist attacks have been a significant concern for Kenya's national security, particularly over the last two decades. The underlying issue of insecurity stems from the collapse of Somalia in 1991, which has led to cross-border crime and illegal migration posing threats to Kenya's security (Horn Policy Brief, 2017). After 2006, the Somalia-based terrorist group al Shabab began to infiltrate the porous Kenya-Somalia border, recruiting locals for radicalization, training, and deployment to carry out

attacks within Kenya. The escalation of lethal assaults prompted the Kenyan government, on October 14, 2011, to deploy its troops into Somalia to diminish the insurgents' capacity to execute attacks in Kenya. Simultaneously, specialized security units, supported by the Kenya Defense Force (KDF), were stationed along the border to prevent further incursions. These security forces and innocent civilians have increasingly become targets for al Shabab.. Fundamentally, the Kenya-Somalia border insecurity incidences are not isolated cases and the African countries' borders are often plagued by various insecurity issues. In response, just like Kenya in her border and Somalia, states are endeavoring to synchronize their border management practices in light of the aforementioned common challenges with the aim of fostering economic progress and integration (Zanker, 2019). Kenya has established One Stop Border Posts (OSBPs), such as the Namanga OSBP, which is designed not only to support and facilitate cross-border trading activities, but also to serve as a border security management point. The OSBP serves as a hub for cross-border commerce, and this research contributes to our understanding of how to enhance and legitimize such economic activities while also resolving security concerns (Mutua & Felix, 2023). The African borders are often plagued by various insecurity issues. African states are endeavoring to synchronize their border management practices in light of the aforementioned common obstacles, with the aim of fostering economic progress and integration (Zanker, 2019).

Kenya has experienced border security challenges along its border with Somalia. Terrorist attacks have been a major concern for Kenya's national security, particularly over the last two decades. The root of this insecurity lies in the collapse of Somalia in 1991, which has resulted in cross-border crime and illegal migration posing threats to Kenya's security (Horn Policy Brief, 2017). After 2006, the Somalia-based terrorist group al Shabab began to infiltrate the porous Kenya-Somali border, recruiting locals for radicalization, training, and deployment to execute attacks on

Kenyan territory. The escalation of lethal assaults prompted the Kenyan government to respond on October 14, 2011, by deploying its troops into Somalia to diminish the insurgents' ability to carry out attacks in Kenya. Concurrently, specialized security units, backed by the Kenya Defense Force (KDF), were stationed along the border to avert further incursions. Despite these measures, both security personnel and innocent civilians have increasingly become targets of al Shabab.

Fundamentally, the insecurity incidents at the Kenya-Somalia border are not isolated cases; many African countries' borders are plagued by similar security issues. In response, just like Kenya's approach with its border with Somalia, states are striving to synchronize their border management practices in light of these shared challenges, aiming to enhance security while fostering economic progress and regional integration (Zanker, 2019). Kenya has established One Stop Border Posts (OSBPs), such as the Namanga OSBP, which is designed not only to support and facilitate cross-border trading activities but also to serve as a border security management point. The OSBP acts as a hub for cross-border commerce, contributing to the understanding of how to enhance and legitimize economic activities while addressing security concerns (Mutua & Felix, 2023). These efforts align with broader regional initiatives to tackle insecurity and promote economic growth across Africa. However, there is limited exploration of the specific security challenges faced at the Namanga OSBP in Kajiado County and how these measures directly impact border security management in that context. Additionally, while regional synchronization of border practices is discussed, there is a gap in understanding how localized security strategies at Namanga OSBP address unique threats, such as cross-border crime or terrorism, compared to other borders like the Kenya-Somalia frontier.

## **1.2 Statement of the Problem**

Safeguarding a nation's borders is crucial for ensuring the security of its populace and fostering economic progress inside a state. As a result, all countries throughout the globe have implemented measures and diverse legislative frameworks to prohibit the importation of illegal weapons, contraband goods, human trafficking, illegal immigration, and terrorism, among other issues. Kenya has implemented the Kenya Citizenship and Immigration Act 2011 and the Kenya Citizenship and Immigration Act Regulations 2012 to address border control issues.

Despite all these regulations and other measures put in place, the country continues to experience cases of illegal immigrants, illicit firearms, contraband products and human trafficking activities in some of her critical border points. For instance, the National Authority for the Campaign against Alcohol and Drug Abuse (NACADA) has identified the Namanga OSBP as one of the main entry points for drugs. In 2016, the officers from the Anti-Narcotics Unit nabbed two women with eight kilograms of suspected heroin along the Nairobi-Namanga road which was suspected to have passed through the Namanga One Stop Border Point (Ombati, 2016). In 2019, the law enforcers seized consignment of different types of gemstones including Tanzanite at the Namanga OSBP that was in the process of being smuggled out to the neighboring Kenya (The Citizen, 2019). These two examples are clear pointer to the fact that Namanga One Stop Border Point continues to act as a conduit point to illicit drugs and other contrabands that could pose security risk to Kenya. The problem therefore resided in the fact that despite all the measures put in place to ensure border security, there are still several cases of security lapses at the Namanga One Stop Border point. Further, there has been limited evaluation on the effectiveness of the measures put in place. The aim of this research was to evaluate the efficacy of measures implemented at the Namanga OSBP in boosting border security.

### **1.3 General Objective**

The aim of this study was to evaluate the effectiveness of the various security measures insofar as the border security management is concerned, within the context of the Namanga One Stop Border Post, Kajiado County, Kenya.

#### **1.3.1 Specific Research Objectives**

The study was guided by the following specific objectives;

1. To determine the effects of physical patrol on border security management at the Namanga one stop boarder post, Kajiado county, Kenya.
2. To investigate the effects of integrated scanners on border security management at the Namanga one stop boarder post, Kajiado county, Kenya.
3. To examine the effects of electronic surveillance systems on border security management at the Namanga one stop boarder post, Kajiado county, Kenya.

#### **1.4 Research Questions**

1. What are the effects of physical patrol on border security management at the Namanga One Stop Border Post in Kajiado County, Kenya?
2. How do integrated scanners impact border security management at the Namanga One Stop Border Post in Kajiado County, Kenya?
3. What are the effects of electronic surveillance systems on border security management at the Namanga One Stop Border Post in Kajiado County, Kenya?

## **1.5 Significance of the Study**

The emergence and advancement in transnational criminal activities, especially in this era of globalization, border security and management has become more important not only for individual countries but also for the global community. Therefore, this research recognizes these developments and security concerns, observing that there is needs for countries to continuously and consistently enhance their border security management strategies to sustain safety and security as well as seamless flow of trade. Through strategies such as the One-Stop Border Posts (OSBPs), countries aim to streamline trade processes while simultaneously requiring the implementation of robust security measures. Therefore, this study challenges policy makers to pursue ways of creating policies that encourage open but safe borders, which must recognize the current cross-border trade trends as well as transitional criminal trends.

This research had significant value for immigration officials. Gaining a deeper understanding of efficient security measures and management practices significantly augmented their capacity to regulate and oversee cross-border movements, therefore guaranteeing that immigration procedures are comprehensive and streamlined. Therefore, the acquisition of this information therefore resulted in enhanced border control tactics, optimized processing procedures, and a heightened level of security within which immigration officials proficiently executed their duties.

This research aimed to provided strategic recommendations on border security management for officials representing the KRA and NPS. The study provided suggestions for enhancing cooperation, deployment of technology, and executing customized training initiatives. The acquisition of this information was of utmost importance in optimizing the collaboration between these principal actors, resulting in heightened efficacy of border control strategies, enhanced ability to address security risks, and the promotion of lawful cross-border endeavors. Ultimately,

this research empowered the authorities involved at the Namanga One Stop Border Post in Kajiado County, Kenya, enabling them to make significant contributions towards enhancing the security and efficiency of its operations.

### **1.6 Scope of the Study**

This is a significant aspect in any research, and it influences the criteria such a study are determined by the aspect (Simon and Goes, 2013). Therefore, scope of study entails the permissible bounds and the essential factors that were to be put into consideration throughout the process of the study. In the context of this study, the focus was primarily on the staff working at the Namanga OSBP. The population category in the scope of this study included immigration officers, KRA Customs Officials, and National Police Service Officers, and the border management security measures throughout the period of 2023 to 2024, with the aim of enhancing productivity. The Namanga OSBP was the location of this study, and its purpose was to evaluate the efficiency of the many safety precautions that had been put that that border point for purpose of border security management.

### **1.7 Limitations and Delimitations of the Study**

The fact that this study was on security in nature and majority of the respondents were from government security agencies, getting information was very difficult due to the need to keep certain information confidential in line with their professional call. However, this was overcome by producing authorization documents from Kenyatta University Graduate School and NACOSTI as a confirmation.

## **CHAPTER TWO**

### **LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

#### **2.1 Introduction**

It can be recalled that the study purposed to research on the relationship between security measures and border security management at Namanga one stop boarder post, Kajiado county, Kenya. This chapter reviewed literature led by three objectives of the research. In addition, the theoretical approach to the study is discussed, which involved the the Panic Theory of Border Management and the Segmentation Theory of Border Control, selected to guide the study. Lastly, it outlined the conceptual tool that was utilized in this study.

#### **2.2 The Effects of The Implementation of Physical Patrol on Border Security Management**

Coole & Brooks (2021) analyses the best practices of physical security in the context of the 9/11 attack in the United States. The researchers demonstrate that physical security, as a best practice, must put into professional use systems approach, which entails assessment of threats and risks, available protection strategies, as well as mitigation systems that align with operational requirements in accordance with legislation, standards, and engineering practices to safeguard

assets, information, and personnel from damage, loss, or unauthorized access due to internal and external threats. As a strategy of risk and threat diagnosis, Coole & Brooks (2021) identify that the use of professional security personnel is an essential and common practice in physical security. Within the realm of border security management, physical security patrols include the systematic movement of personnel around the border region with the purpose of detecting any indications of unlawful entry, criminal behavior, or other potential risks to security. The deployment of troops to actively monitor and examine the region is a crucial aspect of border security, with physical security patrols playing a critical role in this regard. However, in the view of Coole & Brooks (2021), the use of technology is becoming a significant component of physical security deployment, the challenges notwithstanding.

Alden (2017), in his analysis, provides evidence supporting the notion that deterrence is a very effective approach in eliminating transnational criminal components and activities, including but not limited to malicious and criminal operations. Alden (2017), conducted a study in the context of America's border security issues, and he demonstrated that the implementation of efficient border patrol measures and enforcement has resulted in a substantial reduction in illegal immigration over the southern border. The number of unlawful border crossings reduced considerably from over 1.8 million in 2008 to roughly 200,000 in 2015. The decline, as stated by Alden (2017), has resulted in a reduction in unlawful activities, such as the illegal transportation of drugs, within Southern communities. However, it focuses primarily on the American experience and does not address the specific dynamics of physical patrol's impact on border security management at the Namanga One Stop Border Post in Kajiado County, Kenya. This creates a gap in understanding how similar measures might influence transnational crime and border security

challenges in the East African context, where different socio-political and geographical factors are at play.

Simiyu (2013) conducted research which highlights the significance of border enforcement in the improvement of Kenya's border safety strategies. Simiyu (2013) asserts that the Border Patrol actively upholds the preservation of secure borders via cooperative efforts with law enforcement personnel. This approach aims to facilitate lawful immigration while concurrently mitigating the unlawful transportation of individuals and illicit goods. Nonetheless, Simiyu does not acknowledge that as the different policies in combating various flows of illegality whether of people, drugs or arms have some of these characteristics in common, each of these security tasks may thus require different combinations of policy instruments and legislators may have different expectations for effective policy implementation in each of these areas. According to the principles of enforcement the idea isn't to detain prospective migrants and send them back but to make the attempt so expensive that other would-be crossers do not even bother to attempt it. However, it does not explore how different aspects of border security, such as managing the flow of people, drugs, or arms, might require varied combinations of policy tools and enforcement strategies. This leaves a gap in understanding the specific effects of physical patrols on border security management at the Namanga One Stop Border Post, where tailored approaches might be needed to address diverse security challenges.

The results of a research that was carried out by Musalli, Harun, and Zainuddin (2015) indicate that the presence of security experts plays an essential part in guaranteeing the effective execution of measures for border management and security. This is particularly important in the context of preventing and combating the movement of individuals suspected of engaging in terrorist activities. This leaves a gap in understanding the direct impact of physical patrols on managing

security challenges, particularly at the Namanga One Stop Border Post in Kajiado County, Kenya, where the dynamics of cross-border movement may require more nuanced approaches beyond expert presence alone.

### **2.3 The Effects of Integrated Scanners on Border Security Management**

Koslowski (2014) analyzed the creation of smart borders through international cooperation. In the study, he demonstrated that integrated scanners is a significant component of smart borders, and it entails sophisticated technology such as X-ray and other imaging systems, which are essential elements within contemporary border security infrastructure. These scanning devices enable comprehensive examinations of automobiles, shipments, and persons, assisting in the identification of hidden risks such as illegal merchandise or prohibited items. The integration of biometric detectors into Border security is becoming a necessity. Koslowski (2014) notes that administering and safeguarding borders has been and remains a global priority and challenge. This highlights a gap in understanding the effectiveness of integrated scanners at this border post, particularly regarding local security challenges and their operational efficiency. Additionally, the role of biometric detectors alongside scanning technologies in improving border security management requires further investigation.

Labati et al. (2016) conducted a survey and analyzed the use of biometric recognition in automated border control. In the survey, they demonstrated that the implementation of biometric systems is crucial in ensuring precise and effective identification protocols in contexts where the establishment or verification of identity is of utmost importance. The United States Customs and Border Protection (CBP) employs various technologies at over 5,000 workstations located at Ports of Entry around the nation, including air, land, and sea points of entry. These systems have been widely used by countries worldwide for the purpose of border control. However, there is a gap in

understanding how such biometric systems, when integrated with scanners, function within the specific context of the Namanga One Stop Border Post. Further research is needed to assess their effectiveness in enhancing border security management and addressing local security challenges unique to this border post.

Abomhara et al. (2021) conducted research whereby they ascertained that the main aim of using these systems is to attain automation and security. Abomhara et al. (2021) have identified e-Gates and automated biometric terminals as the principal components or types of integrated scanners often used at border checkpoints. According to researchers the E-Gate system has the capability to independently perform traveler verification and ensure safe border passage. The researchers posit that a kiosk has the capability to do biometric pre-enrollment, execute document checks, and generate transaction receipts. During a subsequent stage, it is possible to do a secondary verification of this ticket, using various processes and programs. The adoption of integrated detectors plays a key role in border control, as shown by several researches. However, there is a gap in understanding how these systems specifically impact border security management at the Namanga One Stop Border Post. Further investigation is needed to evaluate their effectiveness in addressing local security challenges and their overall contribution to improving border operations in this particular context.

#### **2.4 The Effects of Electronic Surveillance Systems on Border Security Management**

Tsakanikas and Dagiuklas (2018) analyzed the various electronic surveillance technologies, including cameras, sensors, and monitoring systems, which are essential for the ongoing monitoring and collection of data. However, they do not anchor their study in the field of security, which then limits the extent of application of their findings in the border security management context.

Oyeke (2021) also conducted an analysis of security surveillance systems, especially as strategies of enforcing security measures and deterring potential dangers. According to Oyeke (2021), security surveillance systems have been designed with the objective of monitoring and recording behaviors inside designated locations, hence making it easier to analyze and store the data that has been obtained (Oyeke, 2021). Several variables impact the efficacy of security surveillance systems; the equipment, the level of expertise of staff, and a number of other factors, to effectively respond to occurrences in a timely manner. However, the study fails to recognize the operation of security systems is not solitary. In this regard, the surveillance system must be continuously monitored so that security personnel can quickly detect and respond to potential threats. Various scholars have pointed out that monitoring in real-time helps deter incidents from escalating and allow for prompt intervention. Integration with other security measures increases the effectiveness of security surveillance systems. There is a gap in understanding how electronic surveillance integrates with other security measures in this context and the importance of real-time monitoring in responding to potential threats. Further research is needed to evaluate the effectiveness of these systems in enhancing border security and their operational dynamics in Kajiado County.

The objective of Dođru's (2021) paper was to investigate the influence of electronic monitoring on job stress, task performance, and employees' confidence in the organization. Survey research was utilized as a quantitative approach for data collection. Surveys were developed using Likert-type scales and administered in person, as the in-person survey method was applied throughout the study. The research sample was constructed using a purposive sampling technique, consisting of 228 participants from fifteen different branches of one of Turkey's largest private banks. Electronic monitoring in the workplace has been found to have positive effects on job stress and task performance, while negatively influencing organizational trust. The study concluded that as the

level of electronic monitoring rises, employees' job stress levels tend to increase as well. Moreover, task performance improves with heightened electronic monitoring. However, this does not apply to organizational trust, which is adversely impacted by electronic monitoring. Nevertheless, this study does not address the implications of electronic surveillance systems on border security management at the Namanga One Stop Border Post. There is a gap in understanding how these systems affect security personnel's performance, decision-making, and trust in the technology. Further research is needed to examine these dynamics and their impact on border security effectiveness in Kajiado County.

Burkom et al. (2021) outlined the evolution of a bio-surveillance system integrating all-hazards health monitoring and infectious disease tracking for various health departments. The study focused on key features and lessons learned, highlighting the achievements of local epidemiologists. It emphasized enhanced visualization, data stratification, customization, and user-sharing capabilities, allowing users to analyze data through geographic representations, time series, and reports. The system's adaptability has led to its adoption by the CDC, state and local health departments, and the Department of Defense. An open-source version is available for resource-limited settings. ESSENCE has been used to monitor various health concerns, including infectious diseases, natural disasters, and mental health. The study concludes that user-driven improvements make ESSENCE adaptable to public health needs. However, it does not address the role of electronic surveillance systems in border security, particularly at the Namanga One Stop Border Post in Kajiado County, Kenya. Further research is needed to explore how such systems can enhance border security, manage cross-border activities, and support decision-making for security personnel.

Chourasia's (2024) investigation concentrated on the impact of electronic monitoring systems on book theft and damage in Central Universities. In this study, electronic monitoring denoted the application of sophisticated technological security tools to oversee book safety and avert theft in these institutions. The research utilized a descriptive survey methodology. The study population comprised library users from libraries in four Central Universities in U.P., with the entire population serving as the sample size. Data collection instruments included a questionnaire and interview guide formulated by the researchers. The study suggested, among other recommendations, the establishment of a policy on theft and vandalism, the provision of barcode scanning devices, and the installation and maintenance of electronic surveillance systems. But it did not explore the specific effects of these systems on border security management at the Namanga One Stop Border Post. There is a gap in understanding how electronic surveillance systems influence border security operations, personnel performance, and decision-making in this unique setting. Further research is needed to examine these dynamics and their implications for enhancing border security in Kajiado County.

## **2.5 Theoretical Framework**

This section provides a fundamental basis for the study linking to past knowledge and guiding the thrust of the study. Below is the summary of the two theories that were used in analyzing the focus of this study;

### **2.5.1 The Panic Theory of Border Control Management**

The Panic Theory was developed by Michael Tye in the early 1990s (Kriegel, 2002). The Theory emerged after the development of the moral panic theory developed by Stanley Cohen in the 1970s. According to the Panic Theory the policies find themselves caught in a predicament characterized by two distinct concerns: the perceived inadequacy of security measures and the prevailing

economic crisis. Okumu and Ikelgbe (2011) posit that the Panic theory of border control revolves on the notion that governments or states are compelled to take into account external dangers and hazards in order to shape their remedy to border insecurity and the mechanisms used to regulate cross-border mobility. The methods and actions used by nations or governments are indicative of their underlying anxieties and aspirations. The 9/11 assault in the U.S, the 2015 attack in Paris, and the London Bridge attack, together with other well acknowledged acts of terrorism like the Westgate Mall attack in Kenya, have significantly heightened worldwide consciousness of the potential magnitude of terrorist incidents. The increased level of risk awareness rapidly encompassed the cross-border transportation of individuals and commodities. UNICEF (2017) reports that the border operations professionals became increasingly concerned about the potential infiltration of undesired individuals and goods into nations and urban areas. This apprehension stemmed from the possibility of terrorists entering countries and executing their schemes prior to being detected. Vietti and Scribner (2013) contend that in light of the pervasive global insecurity, several national, regional, and worldwide initiatives have arisen to promote international commerce and the facilitation of human mobility, while simultaneously safeguarding the security of persons and states.

In the context of this study, in order to maintain safety, border security services have used a number of techniques, according to Okumu (2011). Neglecting or disregarding these strategies might result in significant political, economic, and social ramifications. According to Heseler (2012), some nations have implemented effective border security management strategies to help secure their borders. This framework aimed to facilitate the smooth and synchronized flow of people and goods across borders, while simultaneously mitigating the presence of malicious activities. The use of this theory influenced the research by placing emphasis on the effects of reactive and crisis-driven

reactions to perceived threats. This research examined the intricacies of intensified reactions in the context of security emergencies, assessing the efficacy and durability of measures prompted by fear. The examination of resource allocation, long-term strategic planning, and public communication is crucial in assessing the alignment of the panic-oriented strategy with the larger aims of border security in Kajiado County. This theoretical perspective provided useful insights that assisted policymakers in formulating a comprehensive and proactive approach to border control. By considering these insights, policymakers can build strategies that extend beyond addressing acute crises and instead contribute to long-term security and stability.

### **2.5.2 The Segmentation Theory of Border Control**

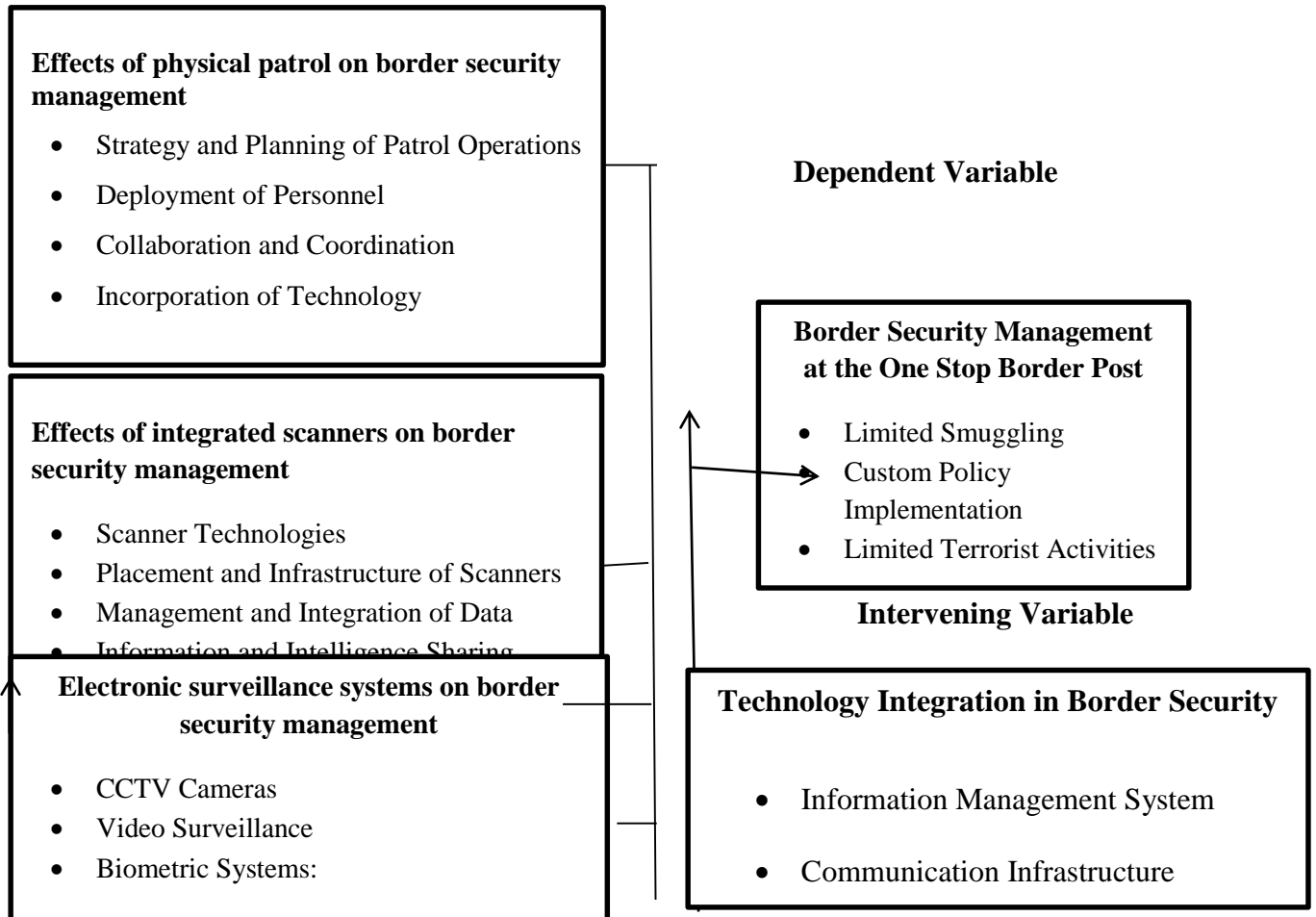
This theory posits that complex tasks are more effectively managed by segmentation, wherein they are separated and assigned to individuals with diverse skill sets, according to their areas of specialization. Bailey et al. (2016) used a theoretical framework to assess the security measures established at the southern parts of the U.S border in their research. The authors noted that the segmentation of consumers allows border safety stakeholders to efficiently use specialized data and resources that are customized for each customer category. Comerio et al. (2021) use the segmentation theory as a framework for examining the optimal management strategies for cross-border commuters. The authors highlighted that the use of intelligence-driven risk management allows border authorities to effectively undertake pre-arrival or departure identification and qualification verifications, as well as conduct targeted interventions on trusted merchants or passengers.

Comerio et al. (2021) highlight the potential use of a segmentation technique by border control authorities to effectively manage individuals at border access points. This approach may greatly expand their skills and allow them to allocate limited resources towards more valuable information

and risk-driven behavior. According to Fine and Lyon (2017), the authors highlight that the shared data portal, often referred to as a single window, facilitated the accessibility of pertinent border control agencies, stakeholders, and consumers to a unified repository of regulatory. Trusted clientele, such as Authorized Economic Operators and Trusted Traveler Program participants, have the potential to deploy regulated and automated border clearing services. The use of this theory contributed to the shaping of the research via the adoption of a systematic and distinct strategy towards the issue of border security. This theoretical framework aimed to support the advocacy for the categorization and targeted mitigation of various kinds of hazards via the implementation of customized tactics. The study further evaluated the suitability of this theory in addressing various security concerns in Kajiado County. It aimed to determine if a more specific and risk-based strategy is compatible with the distinctive characteristics of the border area. Insights derived from this particular standpoint provided policymakers with valuable information on the practicality and efficacy of using a segmented method to bolster the overall security protocols at the One Stop Border Post.

## Conceptual Framework

### Independent Variable



While many studies have been done on security measures and border security management, there aren't many that go in-depth on the potential and difficulties that are unique to border security management in the Namanga setting. There is a knowledge gap about the particulars of security management at this OSBP due to the lack of such targeted research. Creating tactics that work required an understanding of how security measures affected commerce, cross-border relationships, and local populations. The balance between enabling lawful activity and strict security measures was not well explored in the literature currently in publication. In order for the research study to provide fresh perspectives and address the particular requirements and

difficulties of border security management in Namanga, Kajiado County, Kenya, it was imperative that these gaps in the literature be examined. Border security management is examined as the dependent variable within the framework of this research. The effectiveness in the management of border security is influenced by independent variables, which in this study include physical security such as the deployments of patrol and control officers, the use of integrated scanners, and the use of electronic surveillance. The three security management strategies, in the context of this study, are considered essential in designing and instituting effective border security management. Adoption of such measures reduced or eliminated instances of contraband smuggling, human trafficking, and terrorist activities.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

This chapter simply described how the study was undertaken. These were the nature and type of the study, population and sample, method and sample size, instruments for data collection, pilot-testing of the instruments, method and procedure, method of analysis of the data and ethical issues.

#### **3.1 Research Design**

Descriptive survey research design was adopted since it was the most suitable for questions like 'how' or 'why.' Blumberg et al. (2014) noted that in descriptive research, the desire was to describe the subject of this research through representing the collection of issues, people or occurrences. Descriptive survey research design also assisted in the evaluation of various measures and border security at Namanga OSBP, Kajiado County, Kenya. It is appropriate because the study will not alter or control any variable of the study but shall aim at describing the current status concerning the borders security measures at the Namanga Border Point.

#### **3.2 The Study Area**

The research was based in Namanga OSBP as the geographical study area. The Namanga OSBP is located in Kajiado County, Kenya which borders Longido District in (Tanzania). The border is approximately 174Kms from Nairobi-KE and 100Kms from Arusha-TZ. Namanga OSBP was chosen for this study because most studies related to border security have paid more attention to other border points such as Kenya-Somalia which was viewed to be more hostile while ignoring the Namanga border which has also continued to experience serious security risks. Additionally, the Namanga OSBP was of interest to the researcher since it had had various incidences of

insecurity and criminal activities such as drug trafficking and smuggling which formed the basis of this study.

### 3.3 Target Population

This is a subset of the overall group that aligns with the researcher's objectives (Creswell, 2002). In this study, the target population was 140, comprising of immigration officers, KRA Customs officials, National Police Service Officers and the National Intelligence Personnel. Table 3.1 below shows the target population distribution.

*Table 3.1: Target Population Distribution.*

Population Category	Population
National Police Officers	41
Immigration Personnel	37
KRA Customs officials	47
National Intelligence Personnel	15
<b>Sum</b>	<b>140</b>

### 3.4 Sampling Technique and Sample Size

In this study, both the stratified and simple random sampling techniques were employed. The study established strata by categorizing the different departments participating in the investigation. Thereafter, the researcher went ahead and conducted simple random sampling from the different strata.

The study used a sample of 133 respondents as shown:

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

Where: **n**= Sample size, **N**= Population Size **e**= Margin of Error (At a 98% confidence level)

$$n = 135 / 1 + 135 (0.02)^2 = 133$$

*Table 3. 1: Sampling Size*

<b>Participants</b>	<b>Population</b>	<b>Sample</b>
<b>National Police Officers</b>	41	39
<b>Immigration Personnel</b>	37	35
<b>KRA Customs officials</b>	47	45
<b>National Intelligence Personnel</b>	15	14
<b>Sum</b>	<b>140</b>	<b>133</b>

**Source: Survey from Namanga OSBP 2024**

### **3.5 Instruments of Data Collection**

Beginning with questionnaire surveys, the researcher administered questionnaires physically to the participants since the researcher was there in person. The transmission of data took five days. In order to enhance the process of analysis and minimize potential errors, it is advisable to include closed-ended questions into the questionnaire. This facilitated efficient collection of data within a condensed timeframe. Secondary data was extracted from admissions records as required.

### **3.6. Pilot Testing**

The research instruments were piloted on samples that are similar to the actual sample used in the research, although these samples were not an actual sample. Piloting was critical in enabling the researcher to make some adjustments in the instruments during pilot testing.

#### **3.6.1 Testing for Reliability**

Mugenda and Mugenda (2003) point out that reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials. According to Baghaei (2019), reliability refers to the degree of consistency and stability shown by a research instrument

in its measurement of a certain construct, regardless of variations in time and circumstances. To determine reliability of the research tools, the study used Test-retest. Two samples comprising of two units or groups like those in the target population of this researcher were used and the research instrument administered. For data collection, the step of re-test was taken after one week of collection of samples. Comparison of results obtained in both occasions was done using the Pearson product movement correlation coefficient formula. The correlation coefficient was 0.70 indicating reliability of the research instrument was deduced.

### **3.6.2 Testing Validity**

The concept of validity has significant importance in the realm of research studies, as it applies to the degree to which a study accurately and successfully assesses the targeted construct or phenomenon. Content validity was employed by the researcher (Kim & Nofsinger, 2020). To establish the validity and comprehensiveness of the questionnaire, a thorough assessment and analysis was conducted.

### **3.7 Data Collection Techniques and Procedure**

Data was obtained from participants using questionnaires. Some of the benefits of using questionnaires includes; ease of development of questionnaires, there exists a wide variety of questionnaires available for use with some being available freely to researchers, they are flexible in that they can be easily transported or made available online, they are easy to use in compiling large data sets with ease, either personally, through mail systems, the internet or emails, the data collected through questionnaires is also relatively easy to analyze compared to Questionnaires shall be used because;- Questionnaires enable the researcher to collect data easily and also analyze it easily.

### **3.8 Data Analysis and Presentation**

This research entailed a thorough assessment and purification of the dataset to rectify any inaccuracies, discrepancies, or missing data points. Furthermore, the researcher appropriately structured the data. The researcher thereafter examined the qualities, factors, and distribution of the data. Descriptive statistics was employed. Upon gathering data, it was then analyzed. In relation to this matter, Statistical tests were executed alongside the computations with the help of SPSS.

### **3.9 Ethical Considerations**

The researcher got a letter of reference from Kenyatta University Graduate School learning institution and also from NACOSTI. This letter served as evidence for the designated organizations responsible for data collection, confirming that the data that was gathered was intended for academic purposes. The study strictly adhered to the principles of confidentiality throughout. The participants voluntarily participated in this research. Strict adherence to anonymity was maintained at a high level. The surveys only served the goal of academic research.

## CHAPTER FOUR

### DATA ANALYSIS AND DISCUSSION OF FINDINGS

#### 4.1 Introduction

This chapter focused on the analysis and presentation of data collected from the respondents in this study. The analysis attempted to answer the questions about the security measures put in place at the Namanga OSBP, primarily guided by the specific objectives.

#### 4.2 Response Rate

The initial sample size for this study was 133 participants; however, at the end of the data collection exercise 104 responses were returned. This represented 78.20% rate of response, which was sufficient for analysis. Creswell (2014) suggests that a response rate must exceed 70% to be deemed valid in research. The analysis of this response rate is presented in Table 4.1 below.

*Table 4. 1: Response Rate*

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Responded	104	78.20%
No Response	29	21.80%
<b>Total</b>	<b>133</b>	<b>100%</b>

#### 4.3 The Reliability Test

The SPSS software was employed to perform the reliability analysis using Cronbach's alpha. Each variable in this study, including physical security patrols, the implementation of integrated scanners, and the implementation of electronic surveillance, was assessed separately. As stated by Taber (2017), the alpha value of a research instrument should be 0.70 or higher for it to be

considered reliable. The reliability test results, shown in the table below, indicated values ranging from 0.712 to 0.800.

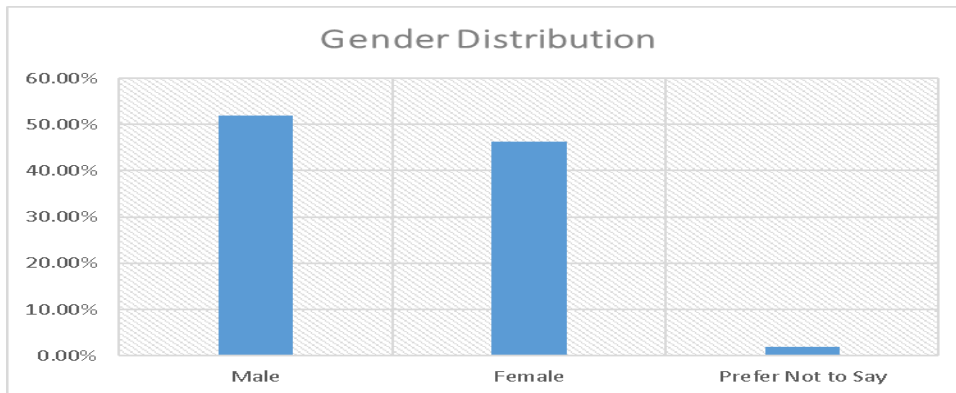
**Table 4. 2: Cronbach’s Alpha Analysis Outcome**

Questions	Cronbach’s Alpha	No. of Items
Physical Patrols affect border security management at the Namanga OSBP	0.712	7
Integrated scanners affect border security management at the Namanga OSBP	0.817	7
Electronic surveillance systems affect border security management at the Namanga OSBP	0.800	7

Based on the results in Table 4.2, the values obtained were more than 0.70; hence, the instrument applied in this study was viewed as reliable.

#### 4.4 Analysis of the Demographic Data of the Participants

##### 4.4.1 Gender Distribution

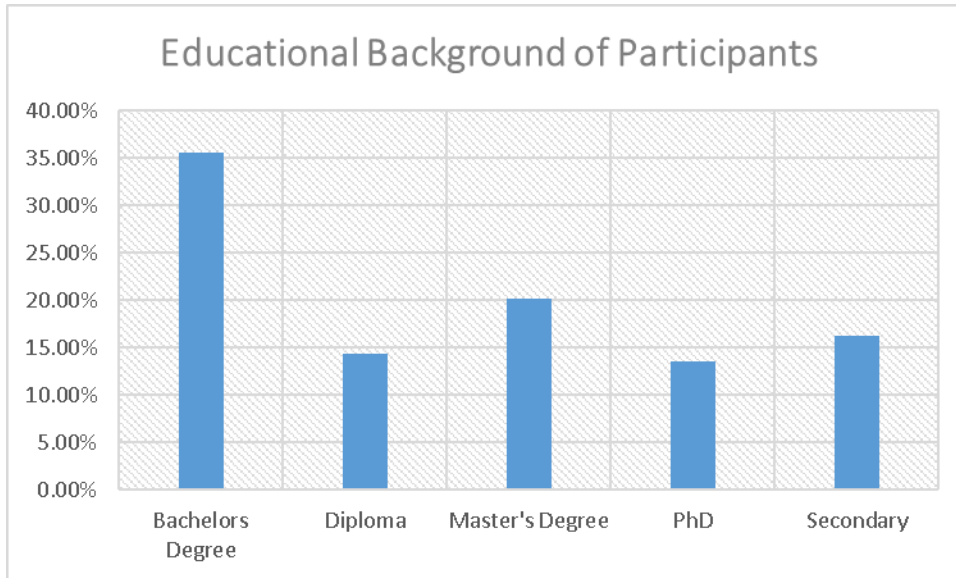


**Figure 2: Gender Distribution of the Participants.**

In terms of gender distribution, 51.90% of the participants were male, 46.20% of the participants were female, and 1.9% of the participants decided not to state their gender orientation. Based on these findings, there was an equivalent representation of men and women among the respondents.

Determining gender representation was essential in ensuring that there was no gender bias in the outcome. This is captured in Figure 2 above.

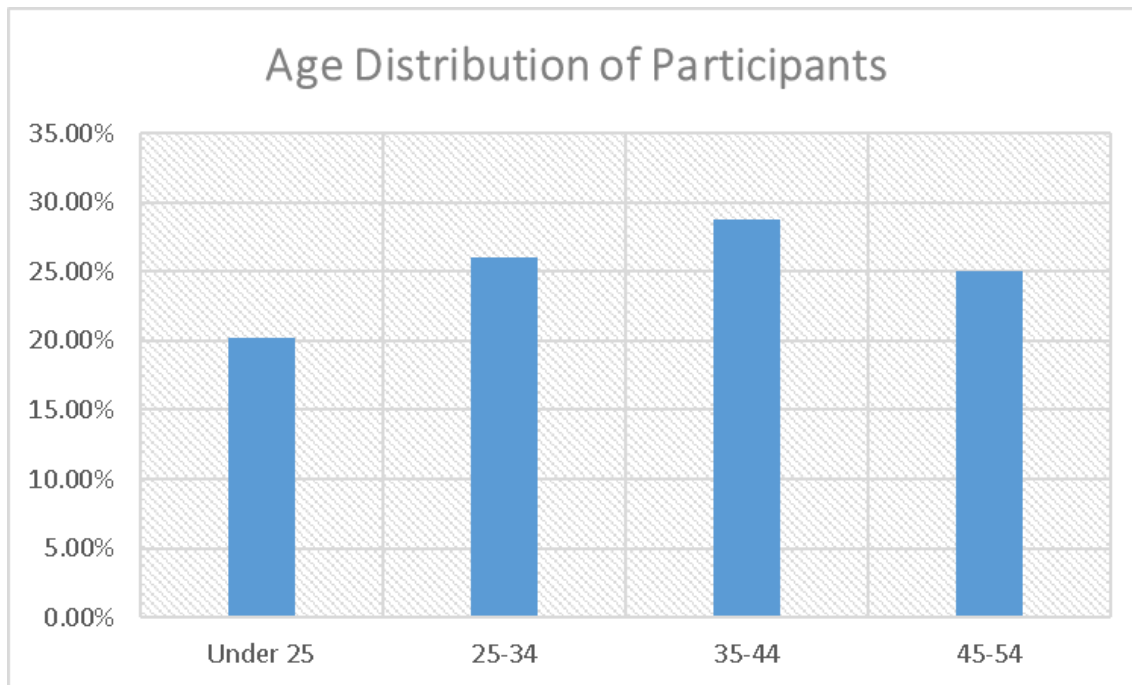
#### 4.4.2. Educational Background



**Figure 3: Educational Qualification of the Participants.**

The participants were also asked to specify their educational level. 35.60% of the respondents reported that they hold bachelor's degrees; master's degree holders were at 20.20%; PhD holders stood at 13.50%; diploma holders stood at 14.40%, while secondary qualification stood at 16.30%. It is important to determine the level of education of the participants, since the level of education influence how participants perceive issues and respond to questions. The respondents in the research were fairly balanced in terms of educational level. Figure 3 illustrates the educational qualification of the participants.

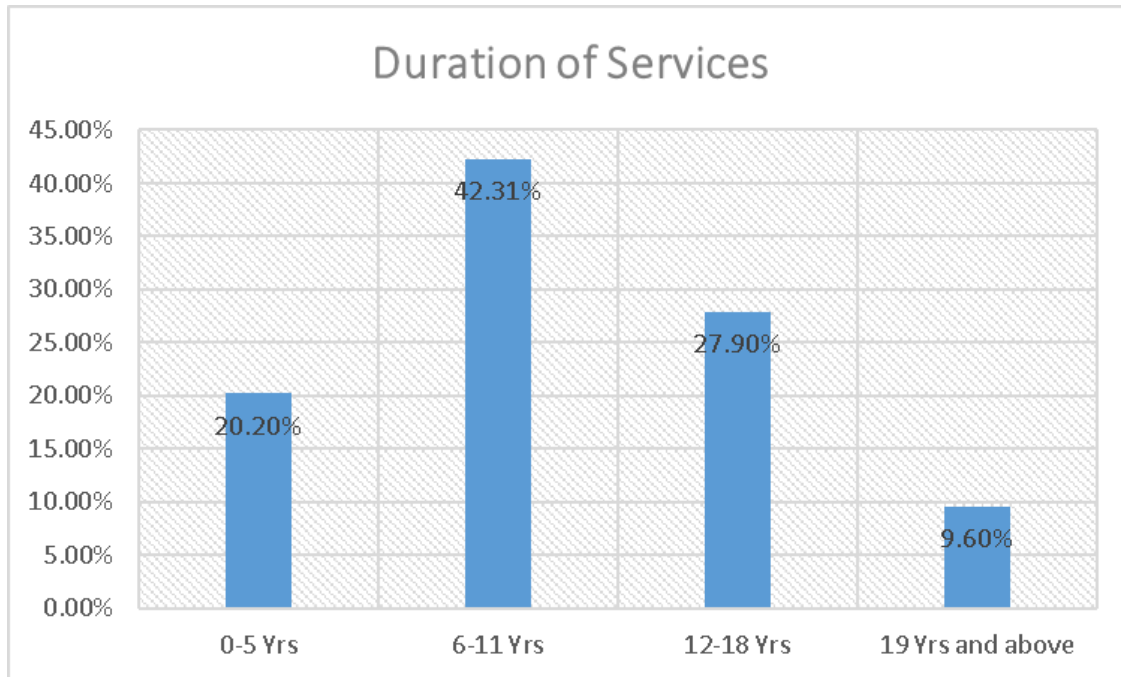
#### 4.4.3 Age Distribution of the Participants



**Figure 4: Age Distribution of Participants**

The participants were also asked to specify their ages. The majority of the participants belonged to the 35-44 age group, making up 28.80% of the respondents. Participants aged 25-34 accounted for 26%, while those in the 45-55 age range represented 25%. Below 25 years stood at 20.20%. Primarily, age is consistent with experience. A balanced age composition is important in ensuring that there is balance in views in relation to the problem under research. Figure 4 above illustrates these findings.

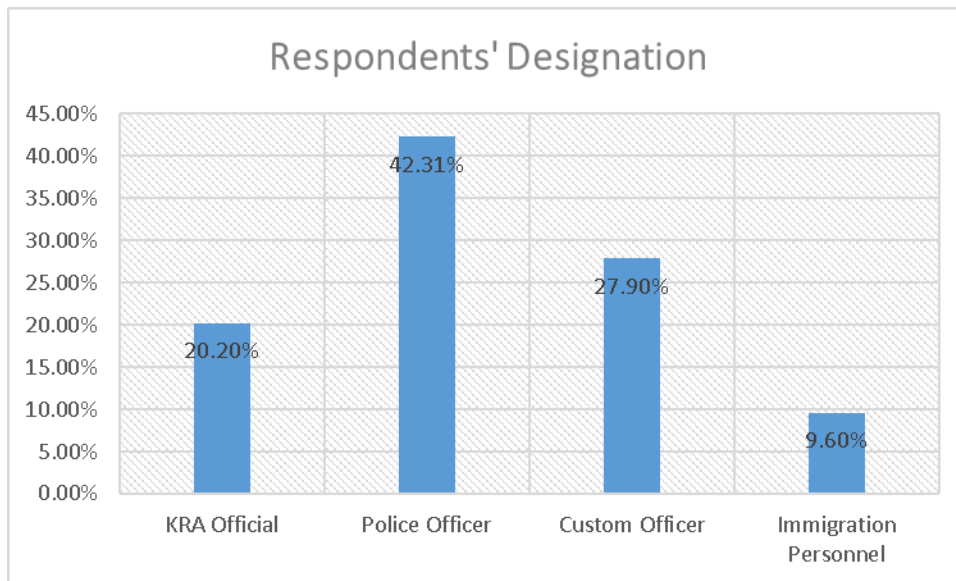
#### 4.4.4 Years of Service



**Figure 5: Years of Service in the station**

The participants were also requested to state the duration they have served in the station. From the data, 20.20% of the participants had been in the sector for not more than 5 years, while those who had been in service for between 6 and 11 years constituted 42.31%. Furthermore, 12-18 Years and 19 years and above constituted 27.90% and 9.60% respectively as shown in figure 5 above.

#### 4.4.5 Designation of Personnel



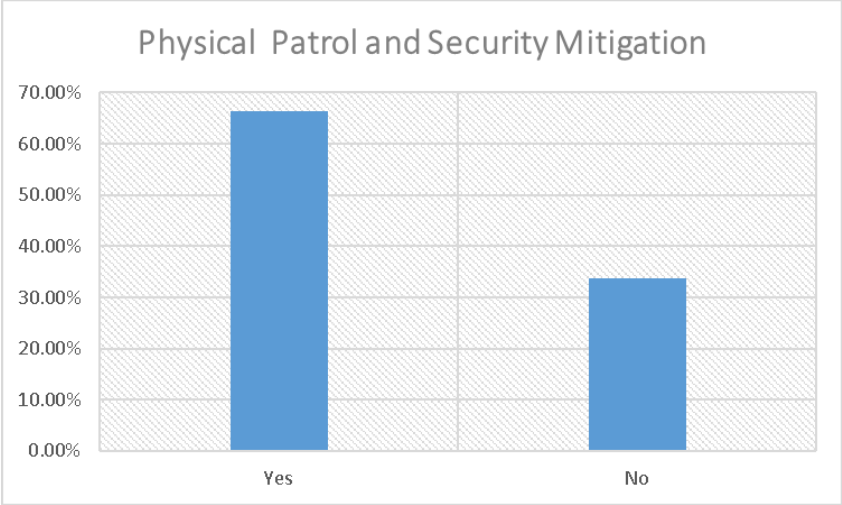
**Figure 6: Designation of Service**

The participants were also requested to state their designation at the Namanga OSBP station. From the data, 20.20% of the participants were KRA officials, while those serving at the station as police officers constituted 42.31% of the participants. Furthermore, custom officers and immigration personnel constituted 27.90% and 9.60% of the participants respectively as shown in figure 6 above.

#### 4.5 Descriptive Analysis

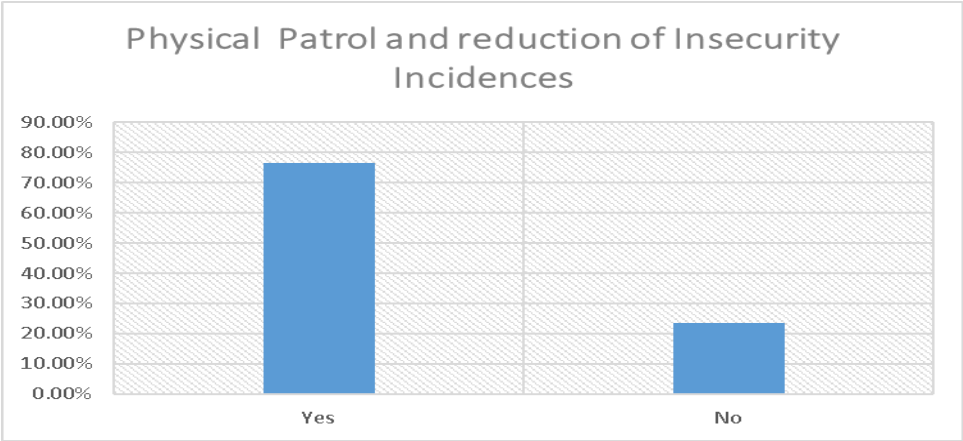
##### 4.5.1 Physical Patrols

The participants were requested to state whether frequent physical patrols at the Namanga OSBP have significantly mitigated the security risks along the border. From the analysis, 66.36% of the participants confirmed that frequent physical patrols had mitigated security risks, while 33.64% were of a different view. Figure 7 below illustrates these findings.



**Figure 7: Physical Patrol and Security Mitigation**

The participants were requested to state whether regular physical patrols at the Namanga OSBP have significantly reduced the rate of insecurity incidences within the place. From the analysis, 76.36% of the participants confirmed that insecurity incidences have reduced around the OSBP due to the regular patrols, while 23.64% were of a different view. Figure 8 below illustrates these findings.



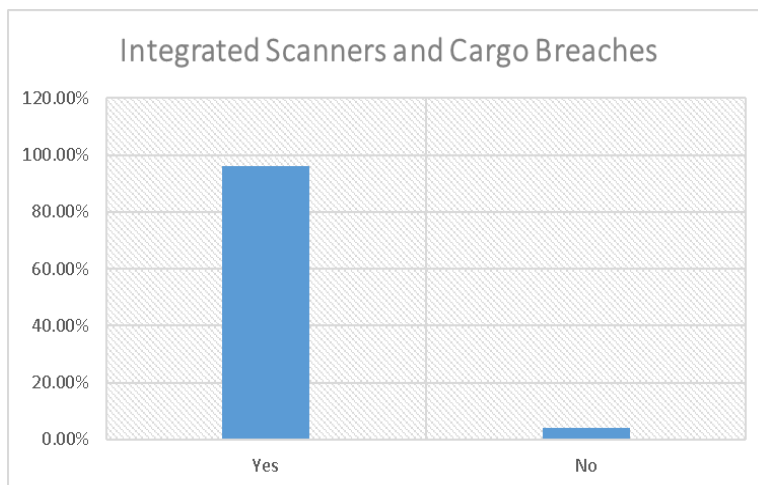
**Figure 8: Physical Patrol and Reduction in Insecurity Incidences**

Figure 8 demonstrate that physical patrols are critical mitigating security risks along the border, as well as in the reduction of insecurity incidences and threats, which in the long run has improved

the operations of customs and immigration personnel stationed at the Namanga OSBP. These findings are in tandem with studies of various scholars such as Coole & Brooks (2021), Alden (2017) and Rosenblum and Hipsman (2016), among others. Coole & Brooks (2021) demonstrate in his study that the practice of physical security patrol involves the deployment of individuals to conduct physical inspections and monitoring of a specific area with the aim of ensuring the security and safety of the place. Alden (2017) and Rosenblum and Hipsman (2016) concur that physical security patrol is a critical tool in criminal deterrence, hence an effective approach in eliminating transnational criminal components and activities, including but not limited to malicious and criminal operations. Therefore, physical patrols along the OBSP are critical in improving security and enhancing operations.

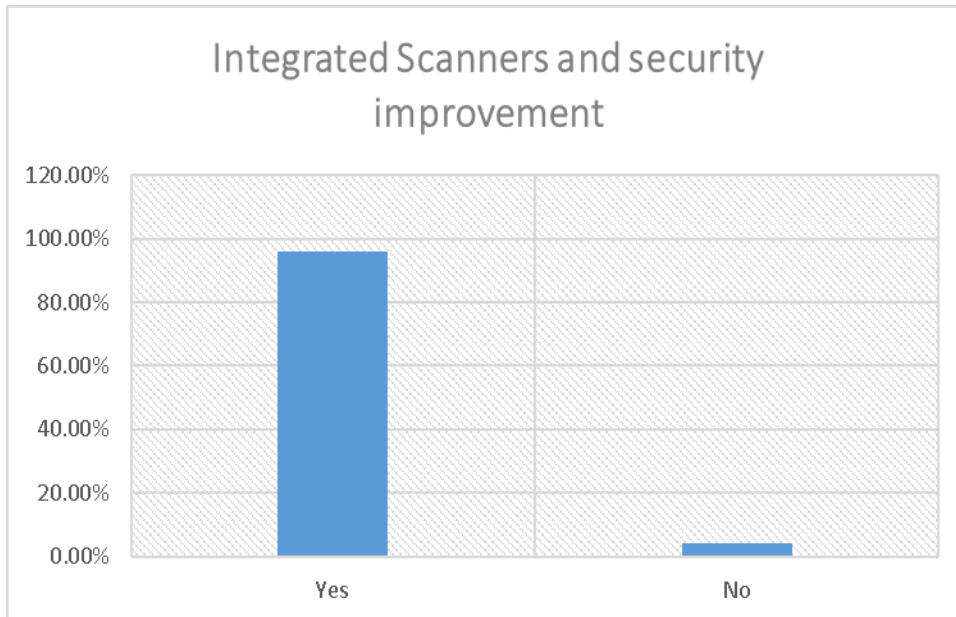
#### 4.5.2 Integrated Scanners

The participants were requested to state whether the integrated scanners have shown efficacy in identifying hidden objects inside cargo. They were to mark either Yes or No. From the analysis, 95.96% of the participants confirmed that the integrated scanners have been efficient, while 4.04% were negative. Figure 9 below illustrate these findings.



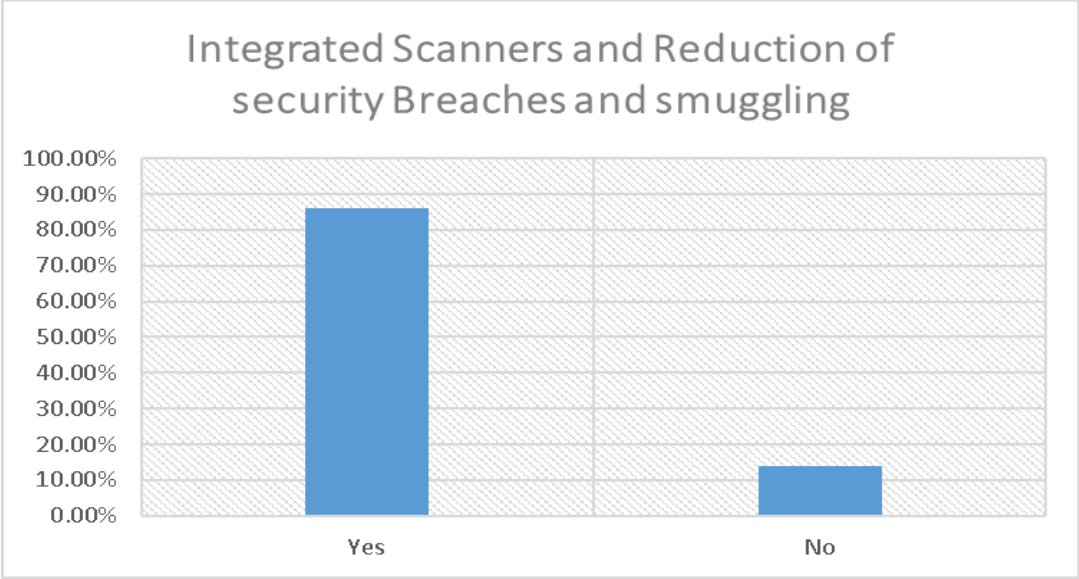
**Figure 9: Integrated Scanners and Identification of Breaches in Cargos.**

Furthermore, the participants, to confirm whether the stakeholders at this OSBP are of the opinion that the use of integrated scanners has resulted in enhanced security levels at the border crossing. From the analysis of the data, 95.96% of the participants confirmed that stakeholders believe that integrated scanners have been critical in enhancing security, while 4.04% were negative. This is captured in Figure 10 below.



**Figure 10: Integrated Scanners and Improvement of Security**

Also, the participants were requested to specifically state whether the adoption of integrated scanners has been critical in reducing security breaches and incidences of contraband smuggling at this OSBP. From the analysis of the data, 85.96% of the participants confirmed that stakeholders believe that integrated scanners have been critical in enhancing security, while 14.04% were negative. This is captured in Figure 11 below.



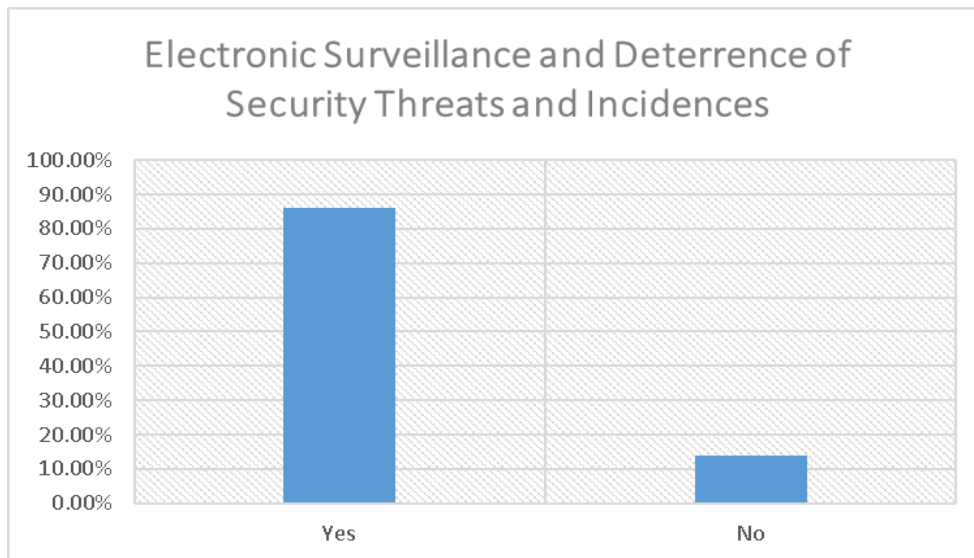
**Figure 11: Integrated Scanners and Reduction of Security Breaches and Smuggling**

Figures 9, 10 and 11 demonstrate that integrated scanners have been critical in enhancing the efficacy in the identification of hidden objects inside cargo, improving general security and enhancing the effectiveness of the custom and immigration personnel at the Namanga OSBP. The adoption of integrated scanners has also been critical in reducing security breaches and incidences of contraband smuggling at the Namanga One-Stop Border Post. These findings resonate with the finding of scholars such as Koslowski (2014); Labati et al. (2016) and Abomhara et al. (2021). Koslowski (2014) asserts that integrated scanners include sophisticated technology such as X-ray and other imaging systems, which are essential elements within contemporary border security infrastructure. These scanning devices enable comprehensive examinations of automobiles, shipments, and persons, assisting in the identification of hidden risks such as illegal merchandise or prohibited items. The implementation of these systems is crucial in ensuring precise and effective identification protocols in contexts where the establishment or verification of identity is of utmost importance (Labati et al., 2016). Abomhara et al. (2021) conducted research whereby they ascertained that the main aim of using these systems is to attain automation and security. The

adoption of integrated detectors plays a key role in border control, as shown by several researches and this study.

### 4.5.3 Electronic Surveillance

The participants were requested to state whether the stakeholders at this OSBP are of the opinion that the surveillance systems have successfully acted as a deterrent against security threats and events at the border crossing. From the analysis, 85.96% of the participants confirmed that stakeholders believe electronic surveillance has been effective in deterring security threats and events at the border, while 14.04% were negative in their responses. Figure 12 below illustrates these findings.

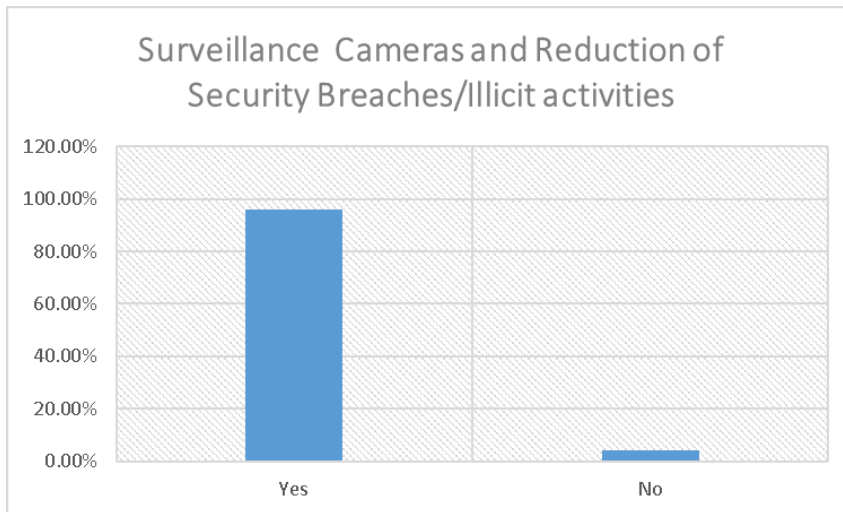


**Figure 12: Electronic Surveillance and Deterrence of Security Threats**

Also, the participants were asked to state whether the installation of surveillance cameras at this OSBP has led to a discernible decrease in security breaches and illicit activities. From the analysis, 95.96% of the participants confirmed that the installation of surveillance cameras at this OSBP has

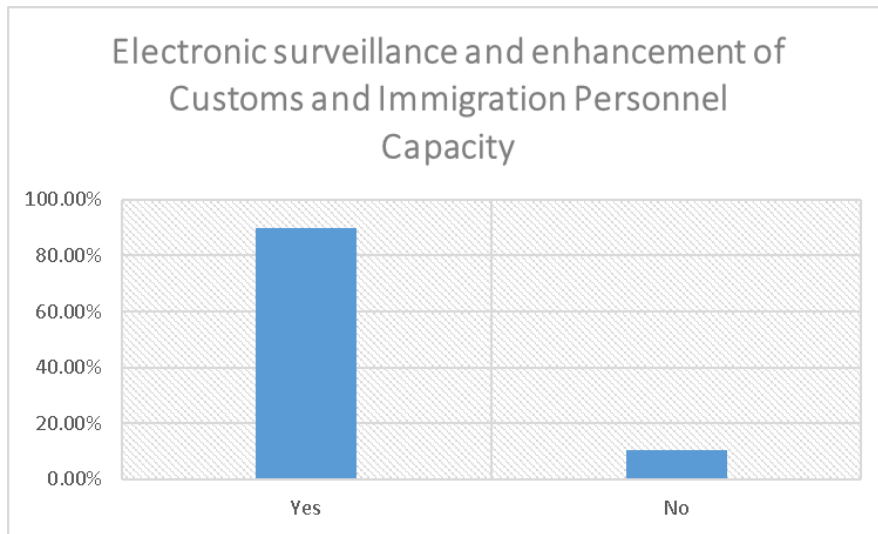
led to a discernible decrease in security breaches and illicit activities, while 4.04% were negative.

Figure 13 below illustrates these findings.



**Figure 13: Surveillance Cameras and Reduction of Security Breaches and Illicit Activities.**

Furthermore, the participants were asked to state whether the customs and immigration personnel stationed at this OSBP have benefited from the installation of surveillance technologies, through the improvement of their capacity to observe and address security incidents. From the analysis 89.78% reported that the capacity of the customs and immigration officials have improved due to the installation of surveillance technologies, while 10.22% reported no impact. Figure 14 below illustrates these findings.



**Figure 14: Electronic Surveillance and Enhancement of Customs and Immigration Personnel**

Figures 12, 13 and 14 demonstrate that the adoption of electronic surveillance is essential in enhancing security at the OSBPs by acting as an effective deterrent against security threats and events at the border crossing. For instance, installation of surveillance cameras at this OSBP has been singled out as has been effective in decreasing security breaches and illicit activities. As such, electronic surveillance has been essential in enhancing the effectiveness of customs and immigration personnel stationed at this OSBP have benefited, through the improvement of their capacity to observe and address security incidents. These findings are in tandem with the finding of scholars such as Tsakamiskas and Dagiuklas (2018), who argued that electronic surveillance essential for the continuous monitoring and collection of data related to security incidences. In order to reinforce security measures and deter potential dangers, security surveillance systems have been designed with the objective of monitoring and recording behaviors inside designated locations, hence making it easier to analyze and store the data that has been obtained (Oyeke, 2021). The operation of security systems is not solitary. In this regard, the surveillance system

must be continuously monitored so that security personnel can quickly detect and respond to potential threats. Therefore, electronic surveillance is critical in improving border security.

#### 4.6 Multiple Regression Data Analysis

##### 4.6.1 Normality Test

In testing normality distribution, Skewness and Kurtosis were used. Skewness and kurtosis readings that are above certain critical thresholds indicate a departure from normal distribution. The crucial values most often used are  $\pm 2.58$  for a significance level of 1% and  $\pm 1.96$  for a significance level of 5%. The research's normalcy distribution test indicated that the skewness and kurtosis values do not surpass the crucial levels. Hence, it signified that the data was both typical and dependable for analysis.

**Table 4. 3: Normality Test**

	<b>Pr (Skewness)</b>	<b>Pr (Kurtosis)</b>
Implementation of Physical security patrol	0.0000	0.0331
Implementation of Integrated Scanners	0.0016	0.6447
Implementation of electronic surveillance.	0.7469	0.0000
Improvement of Security at the OSBP	0.0269	0.0000

#### 4.6.2 Correlation Analysis

This assesses the relationship between the variable factors. Therefore, a comprehensive analysis was performed to ascertain the intrinsic associations between the independent and dependent variables or factors, and the findings are shown in Table 4.4. The results of the Pearson correlation analysis shown in Table 4.4 indicated a favorable and statistically significant relationship between physical patrol and the enhancement of security at the Namanga OSBP. ( $r=0.199$ ,  $\rho<0.05$ ). Thus, security patrol had a 19.9% positive relationship with perceived improvement in OSBP security. Integrated scanners adoption was the second component to be positively related to security improvement at the OSBP ( $r= 0.262$ ,  $\rho<0.05$ ), an indication that implementation of integrated scanners had a 26.2% significant positive relationship with improvement in security. Finally, electronic surveillance was positively and significantly correlated to security improvement at the OSBP ( $r=0.269$ ,  $\rho<0.05$ ). Thus, electronic surveillance adoption had a 26.9% positive relationship with tax compliance.

**Table 4. 4: Correlation Matrix**

	<b>Physical Patrol</b>	<b>Integrated Scanners</b>	<b>Electronic Surveillance</b>	<b>Improvement of Security</b>
Physical Patrol	1 0			
Integrated Scanners	.613** 0	1		
Electronic Surveillance	.675** 0	.664** 0	1	
Improvement of Security	.269** 0	.199** 0.001	.262** 0	1

### 4.6.3 Regression Analysis

This section presented an inferential analysis, model fitness, ANOVA and coefficients of regression.

**Table 4. 5: Model Summary**

Model	R	R Square	Adjusted Square	R	Std. Error of the estimate
	.860 <sup>a</sup>	.740	.715		.38207
a. Predictors: (constant); physical patrol, integrated scanners, and electronic surveillance					

Based on this study, physical patrol, integrated scanners, and electronic surveillance emerged as fundamental factors in improving security at the OSBP as shown by the coefficient of determinant R 0.74. This signified that 74.0% of the variability in the dependent variable of security improvement is attributed to measures such as physical patrol, integrated scanners, and electronic monitoring. The analysis of variance is shown in Table 4.6.

**Table 4. 6 Analysis of Variance**

Model		Sum of Squares	df	Mean of Square	F.	Sig.
	Regression	17.448	4	4.362	29.881	.000 <sup>b</sup>
	Residual	6.131	42	.146		
	Total	23.579	46			
a. Dependent Variable: Effectiveness of Security Measures at the Namanga OSBP						
b. Predictors (Constant): physical patrol, integrated scanners, and electronic surveillance						

The analysis revealed that the whole model had statistical significance. The notation was justified by the observation that the F statistics of 29.881 exceeded the F-statistics of 3.21, and the p-value of 0.000 was below the significance level of 0.005, which is the customary probability threshold. The F computed value of 29.88 was compared to the F critical value of 3.21, which was obtained from F tables. The model was considered important due to the higher value of the estimated F statistic compared to the crucial F value. The table 4.6 displays the outcomes of the regression coefficients. When analyzing the regression coefficients, the obtained p-value was compared to the significance threshold of 0.05. If the value is below 0.05, there exists a statistically significant link between the variables. If not, then they demonstrate a negligible correlation.

**Table 4. 7: Regression of Coefficient**

Model	Unstandardized Coefficients		Standardized coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	0.940	0.426		2.208	0.033
Physical Patrol	0.303	0.080	0.289	3.101	0.003
Integrated Scanners	0.358	0.118	0.347	3.046	0.004
Electronic Surveillance	0.256	0.119	0.259	2.146	0.038

a. Dependent variable: Effectiveness of Security Measures at the Namanga OSBP

**Optimal Model of Security Improvement**

$$Y=0.940 +0.256X_1+ 0.358X_2+-0.303X_3$$

Where;

$X_3$ = physical patrol

$X_2$ = integrated scanners

$X_1$ = electronic surveillance

$Y$ = Effectiveness of Security Measures at the Namanga OSBP

In table 4.7, the relationship between variables was analyzed. The 0.940 constant value denotes that with the implementation of physical security, integrated scanners, and electronic surveillance, the level of security at the OSBP is likely to improve. The study results highlighted the fact that the Effectiveness of Security Measures at the Namanga OSBP was statistically and positively related to the aspect of electronic surveillance, with a p-value of 0.038 and a beta coefficient of 0.256. The regression coefficient demonstrated that for every one-unit increase in electronic monitoring, there is a corresponding rise of 0.256 units in security at the Namanga OSBP. It is also illustrated that OSBP security and integrated scanners are positively and significantly related ( $p=0.004$ ,  $\beta=0.358$ ). This denotes that improving integrated scanners by a unit will definitely improve security at the OSBP by 0.358 units. Improvement of security at OSBP and physical patrol are significantly and positively related ( $p=0.003$ ,  $\beta=0.303$ ). Meaning if there is an improvement in physical patrol by a unit, then the level of security at OSBP improves by 0.303 units.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Summary of Findings

The purpose of the study was to evaluate security measures put in place at the Namanga OSBP, purposely designed to improve security. The study specifically sought to assess the effect of implementing physical patrols on border security management at the Namanga one stop boarder post, Kajiado county, Kenya, the implementation of integrated scanners on border security management at the Namanga one stop boarder post, Kajiado county, Kenya, and examine the implementation of electronic surveillance systems in promoting border security management at the Namanga one stop boarder post, Kajiado county, Kenya,. From this study, it is evident that security is a critical component in the border operations of custom and immigration officials; hence every strategy must be put in place to enhance and maintain recommended levels of security.

Analysis of the collected data based on the various objectives suggest that various security strategies are critical in the enhancement of border security management at the Namanga one stop boarder post, Kajiado county, Kenya. The Namanga OSBP has significantly adopted physical patrol as a security management measures, which about 95% of the respondents, believe has been critical in enhancing border security management at the border point by minimizing insecurity incidents and eliminating potential of border security breaches. Therefore, there is a collective agreement that physical security patrol, other than improving border security management has been essential in improving the effectiveness of customs and immigration officials.

Furthermore, the research shows that integrated scanners have been critical in the management or improvement of security at the border points, which is supported by 95% of the participants in this

research. Integrated scanners such as X-ray and other imaging systems are essential elements within contemporary border security infrastructure, based on this study. These scanning devices enable comprehensive examinations of automobiles, shipments, and persons, assisting in the identification of hidden risks such as illegal merchandise or prohibited items. The implementation of these systems is crucial in ensuring precise and effective identification protocols in contexts where the establishment or verification of identity is of utmost importance. Therefore, integrated scanners have been critical in enhancing the efficacy in the identification of hidden objects inside cargo, improving general security and enhancing the effectiveness of the custom and immigration personnel at the Namanga OSBP. Cumulatively, more than 90% of the participants agree that adoption of electronic surveillance in border security operations is essential in the management of border security and improvement of the operations of custom and immigration personnel. Electronic surveillance, for instance surveillance cameras, as considered effective in deterring security threats and events at the border crossing. For instance, installation of surveillance is considered effective in decreasing security breaches and illicit activities, which in the long run enhances the effectiveness of customs and immigration personnel stationed at the Namanga One Stop Border Post, by improving their capacity to observe and address security incidents.

## **5.2 Conclusion**

Various strategies of security management exist, and security experts agree that a single strategy is not sufficient in the management of security at border entry points due to the evolvement of crime and criminals. Therefore, diverse security measures must continuously be adopted to improve security and enhance the operations of customs and immigration officials at the OSBPs. Security management approaches such as physical patrol, the adoption of integrated scanners, and the adoption of electronic surveillance systems such as cameras have been considered effective in

improving security at the border points as well as in improving the effectiveness of the immigration and customs personnel at the border points, such as the Namanga OSBP.

### **5.3 Recommendations**

- i. It is recommended that the custom administration authorities should continuously strive to embrace practices that make the process of cross-border trade simple, safe, secure and efficient; fundamentally embedded in technology. The study also recommends that the government of Kenya should consider digging tunnels around the porous border. This will help in the elimination of security threats and in enhancing the effectiveness of custom and immigration officials.
- ii. For further research, it is recommended that scholars should consider investigating how the cross-border politics hamper the adoption of modern technologies such as big data and Internet of Things in the management of border security. Furthermore, the researcher recommends how factors such as corruption and ineffective technologies, may moderate the effectiveness and efficiency of the border security management measures, especially in the context of the continuously changing world.
- iii. The result of this study would be critical in enriching existing researches relating to customs administration, especially in relation to the role of technology in the modern security complexities.

## References

- Abomhara, M., Yayilgan, S.Y., Nweke, L.O. & Székely, Z., (2021). A comparison of primary stakeholders' views on the deployment of biometric technologies in border management: Case study of SMart mobilLity at the European land borders. *Technology in Society*, 64, p.101484.
- Akhter, S. (2022). Key informants' interviews. In *Principles of Social Research Methodology* (pp. 389-403). Singapore: Springer Nature Singapore.
- Akinyemi, O., (2019). Porous borders and increasing human trafficking in West Africa: issues and challenges. *International Journal of Social Science Research*, 7(2), pp.1-52.
- Alden, E., (2017). Is border enforcement effective? What we know and what it means. *Journal on Migration and Human Security*, 5(2), pp.481-490.
- Bailey, J.W., Burns, S.K., Eisler, D.F., Fletcher, C.C., Frazier, T.P., Gould, B.R. and Whitley, J.E., (2016). Assessing southern border security. *Institute for Defense Analyses, IDA Paper NS P-5304*.
- Biden, J. R. (2021). Interim national security strategic guidance. The White House, 8.
- Binder, S., Iannone, A. and Leibner, C., (2021). Biometric technology in “no-gate border crossing solutions” under consideration of privacy, ethical, regulatory and social acceptance. *Multimedia Tools and Applications*, pp.1-14.
- Burkom, H., Loschen, W., Wojcik, R., Holtry, R., Punjabi, M., Siwek, M., & Lewis, S. (2021). Electronic surveillance system for the early notification of community-based epidemics (ESSENCE): Overview, components, and public health applications. *JMIR Public Health and Surveillance*, 7(6), e26303. <https://doi.org/10.2196/26303>
- Cheruiyot, E. K. (2019). Effects of customs enforcement techniques on revenue collection by Kenya revenue authority: a case study of Jomo Kenyatta International Airport and Namanga border post.
- Chourasia, S. (2024). Effects of electronic surveillance system on security and theft in four central university libraries in U.P. *International Journal of Finance and Management Research*, 6(4), 1-10. <https://doi.org/10.36948/ijfmr.2024.v06i04.25151>
- Comerio, N., Minelli, E., Sottrici, F. and Torchia, E., (2021). Cross-border commuters: How to segment Them? A Framework of Analysis. *International Migration*, 59(1), pp.74-88.
- Coole, M. P., & Brooks, D. J. (2021). Physical Security: Best Practices. In *Encyclopedia of Security and Emergency Management* (pp. 730-737). Cham: Springer International Publishing.
- Coole, M. P., & Brooks, D. J. (2021). Physical Security: Best Practices. In *Encyclopedia of Security and Emergency Management* (pp. 730-737). Cham: Springer International Publishing.

- Dođru, Ç. (2021). The Effects of Electronic Surveillance on Job Tension, Task Performance and Organizational Trust. *Business Systems Research Journal*, 12. 125-143. 10.2478/bsrj-2021-0023.
- Drumond, P., & Rebelo, T. (2020). Global pathways or local spins? National action plans in South America. *International Feminist Journal of Politics*, 22(4), 462-484.
- Fine, J. and Lyon, G., (2017). Segmentation and the role of labor standards enforcement in immigration reform. *Journal on Migration and Human Security*, 5(2), pp.431-451.
- Ganguly, S., Smetana, M., Abdullah, S. and Karmazin, A., (2019). India, Pakistan, and the Kashmir dispute: Unpacking the dynamics of a South Asian frozen conflict. *Asia Europe Journal*, 17, pp.129-143.
- Homeland Security, n.d. Border Security. Retrieved from <https://www.dhs.gov/publications-library/border-security#:~:text=Protecting%20our%20borders%20from%20the,economic%20prosperity%2C%20and%20national%20sovereignty>.
- Horn Policy Brief (2017). Counter Terrorism and Security Strategies along the Kenya-Somalia border. Retrieved from <https://horninstitute.org/wp-content/uploads/2019/02/Counter-Terrorism-and-Security-Strategies-along-the-Kenya-Somalia-Border.pdf>
- Ikeanyibe, O. M., Olise, C. N., Abdulrouf, I., & Emeh, I. (2023). Interagency collaboration and the management of counter-insurgency campaigns against Boko Haram in Nigeria. In *Ten Years of Boko Haram in Nigeria: The Dynamics and Counterinsurgency Challenges* (pp. 123-143). Cham: Springer Nature Switzerland.
- Koslowski, R. (2004, April). International cooperation to create smart borders. In *Conference on North American Integration: Migration, Trade and Security, Ottawa, Canada* (Vol. 1, No. 2).
- Kriegel, U., (2002). PANIC theory and the prospects for a representational theory of phenomenal consciousness. *Philosophical Psychology*, 15(1), pp.55-64.
- Labati, R.D., Genovese, A., Muñoz, E., Piuri, V., Scotti, F. & Sforza, G., (2016). Biometric recognition in automated border control: a survey. *ACM Computing Surveys (CSUR)*, 49(2), pp.1-39.
- Luibhéid, E., & Chávez, K. R. (2020). *Queer and Trans Migrations*. University of Illinois Press.
- Lytvynov, O. M., Orlov, Y. V., Yashchenko, A. M., & Yurtayeva, K. V. (2021). Criminogenic risks of irregular migration in conditions of armed conflict in Ukraine.
- Machold, R., (2017). Militarising Mumbai? The ‘Politics’ of Response. *Contexto Internacional*, 39, pp.477-498.

- Manjarrez Jr, V. M. (2015). Border security: Defining it is the real challenge. *Journal of Homeland Security and Emergency Management*, 12(4), 793-800.
- Maobe, D. (2020). Enforcement of Kenya Immigration Laws: a case of the Directorate of Immigration Services (Doctoral dissertation, University of Nairobi).
- Masika, B. B., Mulu, F., & Kakai, P. (2023). An Analysis of the Impact of Kenya's Protectionist Laws on the Implementation of the East African Community (EAC) Common Market Protocol. *Journal of African Interdisciplinary Studies*, 7(5), 5-14.
- Miller, T. (2019). More than a Wall. *Transnational Institute*, 16.
- Moraa, O. C. (2021). Coordinated Border Management and trade facilitation at Namanga Border Post, Kenya (Doctoral dissertation, Kenya School of Revenue Administration\_Moi University).
- Musalli, N. M., Harun, A., & Zainuddin, R. (2015). Performance of border management personnel and its security implications in Northern Nigerian Borders: A pilot study for reliability and validity of instruments. *Public Policy and Administration Research*, 5(4), 7-11.
- Mutua, D., & Felix, K. (2023). Effects of Coordinated Border Management Techniques on Trade Facilitation in Kenya. *African Tax and Customs Review*, 6(2), 25-25.
- Nascimento, D. R. (2017). Securitization and the Construction of Security. *International Studies Review*, 19(4), 574-596.
- Nzioka, P. S. (2021). National security implications of human trafficking and migrant smuggling in Kenya (2009-2019) (Doctoral dissertation, Strathmore University).
- Okumu, W., (2011). Border management and security in Africa. *Concordis Briefing*, 4(4), pp.1-18.
- Ombati. C. (2016). Two women arrested with an estimated 8kg of heroin at Isinya. The Standard Newspaper. <https://www.standardmedia.co.ke/kenya/article/2000195454/two-women-arrested-with-an-estimated-8kg-of-heroin-at-isinya>
- Opon, D.O., Okoth, P.G. and Onkware, K., (2015). Immigration Border Control Human Resource Challenges and Opportunities Affecting Counter-terrorism Strategies in Kenya. *International Journal of Education and Research*, 3(5), p.301.
- Oyieke, K. (2021). *Effect of Customs Modernization Initiatives on Customs Performance at Key one Stop Border Posts in Kenya* (Doctoral dissertation, Kenya School of Revenue Administration\_Moi University).
- Reuben, A., Kigen, M. and Stephen, H., (2022). Border Security Challenges: a Case Study of Kenya and Somalia Border Relations (1991-2017). *Path of Science*, 8(5), pp.2001-2006.

- Rosenblum, M.R. and Hipsman, F., (2016). Border metrics: How to effectively measure border security and immigration control. *Migration Policy Institute*. [Online]. Available at: <https://www.migrationpolicy.org/research/border-metrics-howeffectively-measure-border-security-and-immigration-control>
- Shafiq, N., (2011). India versus China: A review of the Aksai Chin border dispute. *Journal of Political Studies*, 18(2), p.207.
- Sim, J., & Waterfield, J. (2019). Focus group methodology: some ethical challenges. *Quality & quantity*, 53(6), 3003-3022.
- Simiyu, R. E. (2013). *Factors Influencing the Effectiveness of Border Control Systems in Controlling Illegal Immigrants: a Case Study of Jomo Kenyatta International Airport, Nairobi Kenya* (Doctoral dissertation, University of Nairobi,).
- Swan, E. (2023). EU Migration Policy: Analyzing the Coercive Responses of Transit Countries Within the EU's Framework of Externalization. Available at SSRN 4541019.
- Temba, G.L., (2018). Challenges Facing the Implementation of One Stop Border Posts by The Kenya Revenue Authority.
- The Citizen (June, 2019). A consignment of assorted gemstones seized at Namanga border. The Citizen. <https://www.thecitizen.co.tz/tanzania/news/national/-a-consignment-of-assorted-gemstones-seized-at-namanga-border-2685464>
- Tjaden, J., Auer, D., & Laczko, F. (2019). Linking migration intentions with flows: Evidence and potential use. *International Migration*, 57(1), 36-57.
- Tsakanikas, V., & Dagiuklas, T. (2018). Video surveillance systems-current status and future trends. *Computers & Electrical Engineering*, 70, 736-753.
- Williams, W. (2019). *Shifting Borders: Africa's Displacement Crisis and Its Security Implications*. Washington, DC: Africa Center for Strategic Studies.
- Zanker, F. (2019). Managing or restricting movement? Diverging approaches of African and European migration governance. *Comparative Migration Studies*, 7(1), 1-18.

## APPENDICES

### APPENDIX I: KENYATTA UNIVERSITY GRADUATE SCHOOL RESEARCH APPROVAL



#### KENYATTA UNIVERSITY GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 8710901 Ext. 57530

Our Ref: S201/CTY/PT/21697/2020

DATE: 30<sup>th</sup> January, 2024

Director General,  
National Commission for Science, Technology  
and Innovation  
P.O. Box 30623-00100  
**NAIROBI**

Dear Sir/Madam,

**RE: RESEARCH AUTHORIZATION FOR ERICK OCHIENG OYOSI REG.NO. S201/OL/CTY/21697/2020**

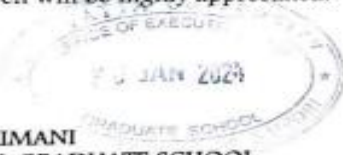
I write to introduce Mr. Erick Ochieng Oyosi who is a Postgraduate Student of this University. He is registered for M. A degree programme in the Department of Security, Diplomacy & Peace Studies.

Mr. Oyosi intends to conduct research for a M.A Project Proposal entitled, "Security Measures and Border Security at Namanga one Stop Border Post, Kajiado County, Kenya".

Any assistance given will be highly appreciated.

Yours faithfully,

  
**PROF. ELISHIBA KIMANI**  
**EXECUTIVE DEAN, GRADUATE SCHOOL**



EK/nn

**APPENDIX II: NACOSTI CERTIFICATE**

**Research\_Permit\_NACOSTI-P-24-33053 PDF**



**REPUBLIC OF KENYA**



**NATIONAL COMMISSION FOR  
SCIENCE, TECHNOLOGY & INNOVATION**

Ref No: **567211** Date of Issue: **14/February/2024**

**RESEARCH LICENSE**



**This is to Certify that Mr.. ERICK OCHIENG OYOSI of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kajiado on the topic: SECURITY MEASURES AND BORDER SECURITY AT NAMANGA ONE STOP BOARDER POST, KAJIADO COUNTY, KENYA for the period ending : 14/February/2025.**

License No: **NACOSTI/P/24/33053**

567211

Applicant Identification Number

**Director General  
NATIONAL COMMISSION FOR  
SCIENCE, TECHNOLOGY & INNOVATION**

Verification QR Code



**NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.**

**See overleaf for conditions**

---

**THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)**  
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

**The National Commission for Science, Technology and Innovation**, hereafter referred to as the Commission, was established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

**CONDITIONS OF THE RESEARCH LICENSE**

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
  - i. Endanger national security
  - ii. Adversely affect the lives of Kenyans
  - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
  - iv. Result in exploitation of intellectual property rights of communities in Kenya
  - v. Adversely affect the environment
  - vi. Adversely affect the rights of communities
  - vii. Endanger public safety and national cohesion
  - viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and  
Innovation(NACOSTI),  
Off Waiyaki Way, Upper Kabete,  
P. O. Box 30623 - 00100 Nairobi, KENYA  
Telephone: 020 4007000, 0713788787, 0735404245  
E-mail: dg@nacosti.go.ke  
Website: www.nacosti.go.ke

**APPENDIX III: MAP OF NAMANGA OSBP AREA**



## APPENDIX IV: QUESTIONNAIRE

### Part 1: Demographics

(Please tick ✓ the correct option)

#### 1. Gender:

Male

Female

#### 2. Age bracket:

25 years and below

25-34 years

35-44 years

45-55 Years

#### 3. Designation:

KRA Official

Police Officer

Custom officer

Immigration Personnel

#### 4. Duration of Service:

0-5 years

6-11 years

12- 18 years

19 years +

**Part 2: Specific Information**

**The effects of physical patrol on border security management at the Namanga one stop boarder post, Kajiado county, Kenya.**

- 1. Are the stakeholders at the Namanga OSBP of the opinion that frequent patrols have successfully mitigated security risks along the border?

Yes  No

Explain.....  
.....

- 2. Has there been a reduction in the frequency of security incidents at the Namanga One-Stop Border Post (OSBP) subsequent to the installation of regular patrols?

Yes  No

Explain.....  
.....

- 3. Are customs and immigration personnel stationed at the Namanga OSBP of the opinion that patrols have improved their capacity to identify and address security breaches?

Yes  No

**The effects of integrated scanners on border security management at the Namanga one stop boarder post, Kajiado county, Kenya.**

- 1. Have the integrated scanners at the Namanga One-Stop Border Post (OSBP) shown efficacy in identifying hidden objects inside cargo?

Yes  No

- 2. Are stakeholders at the Namanga One-Stop Border Post of the opinion that the use of integrated scanners has resulted in enhanced security levels at the border crossing?

Yes  No

- 3. Has there been a reduction in security breaches and incidences of contraband smuggling at the Namanga One-Stop Border Post (OSBP) subsequent to the introduction of integrated scanning technology?

Yes  No

Explain.....  
.....

**The effects of electronic surveillance systems on border security management at the Namanga one stop boarder post, Kajiado county, Kenya.**

1. Are the stakeholders at the Namanga One-Stop Border Post (OSBP) of the opinion that the surveillance systems have successfully acted as a deterrent against security threats and events at the border crossing?

Yes  No

Explain.....

2. Has the installation of surveillance cameras at the Namanga One Stop Border Post (OSBP) led to a discernible decrease in security breaches and illicit activities?

Yes  No

Explain.....

3. Are customs and immigration personnel stationed at the Namanga One Stop Border Post of the opinion that surveillance technologies have improved their capacity to observe and address security incidents?

Yes  No

Explain.....

What suggestions would you make to the frontier authorities at Namanga for enhancing national security?.....

.....  
.....  
.....  
.....  
.....  
.....  
.....

***#THANK YOU FOR YOUR PARTICIPATION#***

## APPENDIX V: WORK PLAN

ACTIVITY	MONTH	DURATION
Preliminary Survey	February 2023	Two Weeks
Survey (Chapters 1, 2 and 3)	March-September 2023	6 Months
Chapters 4 and 5	December 2023	30 days

## APPENDIX VI: RESEARCH BUDGET

ITEM	QUANTITY	COST (KSH)	TOTAL (KSH)
<b>Pens and Pencils</b>	10	20/-	200/-
<b>FoolsCaps/Photocopying</b>	3 Reams	1000/-	3,000/-
<b>Papers</b>			
<b>Typesetting, Binding, and Printing</b>	Typesetting: once Binding: once Printing: twice	10,000/-	10,000/-
<b>Meals</b>	Breakfast Lunch Supper	10,000/-	10,000/-
<b>Internet Expenses</b>	Safaricom Modem and WIFI	15,000/-	15,000/-
<b>Bus fare (For the Entire Duration)</b>		12,000/-	12,000/-
<b>Miscellaneous Expenditure</b>			15,000/-
<b>GRAND TOTAL</b>			<b>65,200</b>

To undertake this study successfully, the total sum of KSH. 65,200 was spent.