DETERMINANTS OF LEVEL OF ILLICIT TRADE ACROSS SELECTED BORDER STATIONS IN KENYA

BY

ZUBERI ISSA MWANGI

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS AND ECONOMICS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTERS IN TAX AND CUSTOMS ADMINISTRATION

MOI UNIVERSITY

2022

DECLARATION

Student's Declaration

This research project is my original work and has not been presented for a degree in any other university. No part of this project may be reproduced without prior written permission of the author and/ or Moi University.

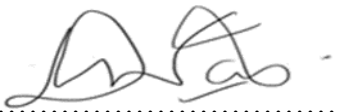
Sign……..Date……

ZUBERI ISSA MWANGI

MU/KESRA/105/0018/2016

Supervisors' Declaration

This research project has been submitted with our approval as University Supervisors.

Sign  ……Date……

DR. DORIS GITONGA, PHD

KESRA/Moi University.

Sign……Date……

DR. KIPRUTO KEMBOI, PHD

Department of Economics

School of Business and Economics

Moi University

DEDICATION

This research project is dedicated to my family members for their love, support, patience, encouragement and understanding.

No words can express my feeling for them for the sacrifice they have made but this token gesture is the least I can do.

ACKNOWLEDGMENT

I give thanks to God for giving me the gift of life and the chance to come this far. I also want to express my gratitude to Dr. Kipruto Kemboi and Dr. Doris Gitonga, my supervisors, for their guidance during the whole study writing process. I really appreciate their help. I also want to acknowledge the dedication and comfort provided by my colleagues and friends, for their notable assistance in making this research process a success.

ABSTRACT

Illicit trade poses a serious socio-economic challenge to Kenya, just like other countries across the globe. Illicit trade undermines the concept of a free and open market, which is fundamental to improving competitiveness, increasing investment, creating jobs and improving the economic situation of Kenya and other trading partner states. Illicit trade undermines industries in the region, poses health risks to consumers, sabotages tourism, stunts innovation and breeds lawlessness. This study broadly sought to explore the factors influencing the level of illicit trade across selected boarder stations in Kenya focusing on Mombasa port, Namanga and Taveta borders in, Kenya. The study specific objectives were to investigate how consumer tolerance, trade networks and porous borders influence the level of illicit trade across selected boarder stations in Kenya. The study was anchored on theory of marketing ethics, institutional theory and theory of reasoned action. The study adopted an explanatory design on cross border station is Kenya with a population of 516 officers of state agencies working at the port of Mombasa, Namanga border and Taveta border. A sample of 225 officers was selected based on a Yamane formula. The study was carried out between the months of May and June 2022 at Mombasa port, Namanga and Taveta borders. The study used a questionnaire to collect data, then collated, cleaned and sorted before analysis. A descriptive statistics was performed on response and data collected to validate the data for representation. Inferential statistics involved correlation and regression analysis to establish the relationship between the determinants and the illicit trade using ordinary least square (OLS) technique. The correlation results revealed that consumer tolerance, trade networks and porous borders have a strong, positive and significant association with the level of level of illicit trade. From the OLS results; model summary revealed that consumer tolerance, trade networks and porous borders explain 62.5% of the variations in level of illicit trade with the difference being explained by other factors beyond the study. The ANOVA results also revealed that the overall model was significant with $p=0.000<0.05$. The model coefficient revealed that consumer tolerance ($\beta=0.285$, $0.00< 0.05$), trade networks ($\beta=0.172$, $0.016<0.05$), porous borders ($\beta=0.379$, $0.000<0.05$) has a positive significant effect on illicit trade respectively. The study concludes that consumer tolerance, trade networks and porous borders have a significant effect on the level of illicit trade and therefore the null hypotheses were rejected. The study recommends that the government should conduct sensitization programs to educate consumers on the harm associated with illicit trades and the role they play in encouraging illicit trade, invest in advanced technologies that will enable its officials curb the levels of illicit trade and invest more resources in the border stations to curb illicit trade. The study recommends the need for future studies to focus on other determinants of illicit trade in Kenya.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACCRONYMS

ACA	Anti-Counterfeit Agency
AG	Attorney General
BASCAP	Business Action to Stop Counterfeiting and Piracy
CV	Coefficient of Variation
COD	Coefficient of Determination
CPC	Criminal Procedure Code
EABC	East African Business Council
EAC	East African Community
GDP	Gross Domestic Product
GFI	Global Financial Integrity
GI	Geographical Indication
ICC	International Chamber of Commerce
ICCPR	International Convention on Civil and Political Rights
IP	Intellectual Property
KAM	Kenya Association of Manufacturers
KMO	Kaiser-Meyer-Olkin
NCRC	National Crime Research Center
OECD	Organisation for Economic Co-operation and Development
SME	Small and Medium Enterprises
UN	United Nations
UNODC	United Nations Office on Drugs and Crime
WCO	World Customs Organization
WEF	World Economic Forum
WHO	World Health Organization
WIPO	World Intellectual Property Organization
KESRA	Kenya School of Revenue Administration

OPERATIONAL DEFINITION OF TERMS

Consumer Tolerance - This refers to a situation when buyers unknowingly purchase contraband or any other type of illicit goods or knowingly seeking status and recognition by buying fake well-known brands at cheaper prices (Chavarria *et al.*, 2020).

Illicit trade - any practice or behavior that is legally prohibited in relation to the manufacture, delivery, receipt, possession, distribution, sale or purchase, including any practice or behavior intended to facilitate such activity (WHO, 2020)

Porous Borders - Refers to ease of entry in a country border and are mostly associated with laxity in the manner of handling activities at the borders especially by the various agencies and systems at the borders (Dhaouadi, 2019).

Select Border Stations- Refers to the Namanga, Mombasa and Taveta borders. These three have been selected as they have been identified as the leading borders in terms of illegal activities such as smuggling of illicit goods, illicit drug trafficking, illegal migration, border point corruption, cross-border robbery and theft of motor vehicle/cycle and cross-border stock theft/cattle rustling (NCRC, 2017).

Trade Networks - Refers to increasingly sophisticated networks of traffickers, complicit corrupt officials, and their facilitators dealing in everything from narcotics, people, arms, and endangered wildlife to counterfeits including illicit tobacco and alcohol goods (Veríssimo, & Glikman, 2020)

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter covers the background of the study, statement of the problem, research objectives, research hypotheses, significance of the study and the scope of the study.

1.2 Background of the Study

According to OECD (2015), illicit trade is a growing security issue around the world, and its convergence poses great damage and threat to communities and society as a whole. It threatens the health and safety of people with lethal drugs or consumers with substandard and counterfeit products such as counterfeit drugs, food, alcohol and damaged car and airplane parts. “It also brings endangered wildlife to the brink of extinction; Endangering tropical forests and planet earth from illegal logging, illegal fishing and other environmental crimes. It also takes advantage of the most vulnerable and desperate who seek forced labor or human trafficking into cross-border slavery; and securing lucrative illegal empires that finance crime and terrorism and cause greater instability and violence around the world.

Globally, criminals have built their illegal empires on dirty money and laundered funds to infiltrate and undermine government agencies (WHO, 2020). In this slum dark economy, drug lords and lords act as CEOs and venture capitalists as they build their empires of destruction, endangering public health, draining society's human resources, undermining our collective security, and destabilizing fragile governments. The extent and breadth of this illegal market is enormous; The scale of the illicit trade is growing rapidly at hundreds of billions of dollars in illicit trade, drug trafficking, human trafficking, endangered wildlife, illegally harvested timber, counterfeit consumer goods

and drugs, hazardous and toxic waste, stolen antiques, and illegally traded works of art, cigarettes and other illegally traded goods and services (WHO, 2020).

In Italy, organized criminal groups are now involved in the commodity value chain of many Italian food products exported abroad. The Italian Agromafia has been known to copy fine olive oil, wine and cheese, fueling an explosion of food crime in Italy. This activity has spread to the US market where 75-80 percent of the extra virgin olive oil imported from Italy is not extra virgin. Economic activities in the Italian agri-food sector managed by criminal organizations have nearly doubled from €12.5 billion in 2011 to more than €22 billion in 2018, growing at an average of 10 percent a year (UNCTAD, 2019).

Sugar smuggling has been a problem in Myanmar, India, Sri Lanka, Vietnam, Guatemala and Mexico. For example, in South East Asia sugar smuggling not only deprives governments of revenue, but also threatens local industries on which local farmers depend for their livelihoods. Confed, the largest organization of local sugarcane farmers in the Philippines, argued that continued illegal entry of cheap sugar would ultimately gobble up the sugar industry (Robles-Avila & Vasquez-Parraga, 2018).

Tea smuggling represents a major strain on Pakistan's finances, one of the world's largest importers and consumers of tea. Reports indicate that the illicit tea business in the country accounts for more than a third of the total market. Consequently, Unilever Pakistan Limited has reported that, business operations and profitability of legitimate commercial importers and packers have been severely curtailed (OECD, 2015).

In Africa, the mining sector is vulnerable to illicit trade targeting minerals with valuable resources such as precious stones, precious metals and rare earths (African Natural Resources Center, [ANRC], 2016). Within the gem industry, the illegal diamond trade

is widespread, for example in the Marange diamond fields in Zimbabwe, the Central African Republic, the Democratic Republic of the Congo (DRC) and Sierra Leone. Among the rare earths, cassiritite, which is used to make tin, is the largest illegally traded mineral in Africa in terms of volume. In 2013, some 7,000 tonnes of the substance were smuggled out of the Democratic Republic of the Congo at an estimated cost of $29 million.

The Ivory Coast lost an estimated 125,000 tons of cocoa to smuggling in the 2017- 2018 season, equivalent of 9 percent of the harvest. These losses are significant in a country where cocoa accounts for roughly 20 percent of exports and where, according to the IMF, a 1 percent change in revenue from exports of the beans can lead to a 0.63 percent shift in government spending. Existing routes and markets for cross-border smuggling of foodstuffs are exploited by criminal groups, including non-state armed actors, for trafficking in high profile illegal goods, such as drugs and arms. Examples include the lucrative sugar smuggling business in the Kenya–Somalia borderlands, which have been linked to Al-Shabaab militants, and smuggling of subsidized foodstuffs in the Maghreb that finances organized crime and supports global illicit trade networks (WHO, 2020).

Cross-border beer smuggling undermines revenue collection in Uganda and Kenya and, according to local authorities, has disrupted the provision of adequate social facilities essential for community development (Nkoroi, 2015). Research has shown that crimes that have occurred over the years have increased despite little attention from both countries, leading to significant consequences such as reported underdevelopment in the communities of the two countries' neighbors. Locals note that Ugandan beer is preferred over Kenyan beer because it is much cheaper. Sometimes some Kenyans

travel to Uganda to drink this beer before returning to Kenya. As a result, Kenya lost up to $3.6 million in tax evasion through illegal trade (Nkoroi, 2015).

Kenya and Ethiopia are still trying to streamline legal trade and curb illegal trade in Moyale, a large city that straddles the border between the two countries (Little *et al.,* 2015). Over the past decade, the government has pursued joint infrastructure initiatives to develop Moyale's co-city status and upgrade it to a joint city. The aim is to create a jointly managed cross-border East African trade center and the surrounding area as an economic zone in accordance with the special status agreement. Two achievements emerged from this agreement. On the one hand, the 895-kilometer highway corridor between Kenya and Ethiopia places Moyale in a coveted shopping mall and economic zone. The highway reduces traffic between the two countries. This easy accessibility also makes the Moyale toll road attractive to drug dealers and a hotspot for trafficking in people and goods. The second milestone was the inauguration of the first one-stop border crossing at Moyale in 2018 to streamline and curb illegal trade. However, the facility remains largely unused because traders pass through it and pass-through unofficial border crossings (WHO, 2020).

According to the Anti-Counterfeits Authority (ACA), Kenya loses more than Sh153 billion in tax revenue annually to illicit trade. ACA also notes that Kenya has one of the largest markets for fake goods and contraband in East Africa, ranging from alcohol, electronics and pharmaceuticals to food, clothing and tobacco. The country is also losing between Sh85 billion and Sh100 billion annually to counterfeiting activities alone. According to African Development Bank (2016), illicit trade and counterfeit goods will be the biggest impediments to Kenya achieving its economic goals. To state simply that illicit trade affects mainly businesses and customs revenue, is to understate

the extent to which the vice permeates and degrades all levels of our society and threatens the future of this country.

1.2.1 Level of Illicit Trade

Illegal trade is defined as any practice or behavior that is legally prohibited in relation to the manufacture, delivery, receipt, possession, distribution, sale or purchase, including any practice or behavior intended to facilitate such activity (WHO, 2020). Assessment of the economic impact of illegal trade not only takes into account the direct loss of income, but also the indirect loss of opportunity for the economy as a whole through the multiplier effect (Allen, 2012). This effect manifests itself in the form of losses in direct income, employment and unpaid tax income. The wider economic impact of illicit trade is estimated at US$ 120 billion per year, which is 5% of Africa's GDP. Around 24 million jobs have been lost, which is about 6% of the total jobs in Africa. Limiting illegal activities like this could create another 25 million jobs in Africa. The loss of tax revenue was about US$3.6 billion (UNCTAD, 2019).

Illicit trade also has a social and sustainable impact. Minerals, oil-related conflicts and fishing-related piracy fuel conflict and crime. Examples are conflicts in the Niger Delta in Nigeria, civil wars in Angola, Liberia and Sierra Leone or piracy in Somalia. Wildlife trade crimes often result in the deaths of conservationists. Illegal trade has also caused environmental damage due to illegal mining (Efthymiou, Mavragani & Tsagarakis, 2016). This has a negative impact on biodiversity by destabilizing ecosystems, particularly in the forestry, oil and mining sectors. Pollution and waste disposal in mines pose health and safety concerns.

In most instances, illicit trade manifests itself in four major forms smuggling, counterfeiting, piracy and substandard goods, transit fraud/dumping and trade in

prohibited goods or products. Smuggling refers to the illegal trading of products across borders (Foltea, 2020). Smuggling of goods is conducted by perpetrators because of varied reasons. Some of reasons include avoiding paying taxes at entry points; the goods are illegal, prohibited or substandard and are ware will not be allowed into the country or territory. Smuggling has also been defined to include human smuggling and trafficking. Human smuggling and trafficking the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control of another person, for the purpose of exploitation.

Product counterfeiting is defined as the unauthorized manufacturing of items which mimic the characteristics of genuine goods and which may pass themselves off as registered products of licit firm or entities (Champeyrache, 2019). Pirated goods are products that are reproduced and used without the necessary authorization from the owner. The trade of pirated and counterfeit goods massively affects industries and can also compromise standards and endanger people depending on the product. Trade in counterfeit and pirated goods has developed into a substantial threat for many industries. Today counterfeiting affects pharmaceuticals, electronic components, fast moving consumer goods and cigarettes. Based on their findings, the international trade in counterfeit and pirated products could have amounted to as much as $509 billion in 2016, estimated to be 3.3% of world trade – up from $461 billion in 2013, representing 2.5% of world trade. A new report released by International Chamber of Commerce (2020) indicates that the global economic value of counterfeiting and piracy could reach US$4.2 trillion by 2022.

Transit fraud involves the evasion of customs duties and taxes. It may also involve the avoidance of existing restrictions or prohibitions through abuse of the transit regulations governing the passage of goods through specific customs territories. These activities normally include the diversion of goods into the local commerce, the substitution of inferior and lower quality goods or the use of substituted and false documents (Basu, 2014).

Prohibited or illegal goods refer to goods and services that are unlawful products like narcotic drugs and animal products. A distinction must be made between smuggling and trade in prohibited goods. Smuggling refers to illegal trade across borders (Arroyave *et al.,* 2020). Trade in prohibited or illegal goods or products refer to trade within the borders of a country, of goods the possession of which is prohibited (Basu, 2014). In Kenya, there exists a comprehensive legal framework which regulates the possession and trade of goods that are prohibited or illegal. These include the Narcotics Drugs and Psychotropic Substances Act, the Penal Code and The Trading in Prohibited Goods Act amongst others. However, illicit trade continues to drive despite presence of these laws and regulation resulting to inquiry of existence of other factors that promote illicit trade (Letete & Sarr, 2017).

Measuring illicit trade, or illicit activity, is very challenging. Consequently, most estimates are open to debate, and the wide range of total estimates itself suggests that they are anything but accurate. However, focusing at the developing world as a whole it is safe to assume that the problem of illicit trade in goods that displace legitimate goods (including counterfeit products, contraband excise goods and improperly obtained natural resources) constitute by far the largest category. The scale of illicit trading can be illustrated through an estimation of total direct revenue lost. In 2014,

Africa lost US$60.25 billion to illicit trade, which is about 2.5% of its GDP; 151% of FDI inflows in 2015; and 120% of foreign aid (WHO, 2020).

The assessment of the economic impact of illicit trading not only considers the direct revenue losses but also the indirect loss in opportunities from the entire economy through a multiplier effect. This effect presents itself in the form of loss in direct incomes, jobs and unpaid tax revenues. For instance, in Africa, the wider economic impact of illicit trading is estimated at US$120 billion per annum, which is 5% of Africa's GDP. An estimated 24 million jobs are lost, which is about 6% of overall employment in Africa. By curbing illicit activities such as these, Africa could create 25 million more jobs. The loss in tax revenue is about US$3.6 billion and loss of over 25 million jobs (Letete & Sarr, 2017).

1.2.2 Antecedents to Illicit Trade

Consumers are driven to buying in the illicit market because they are seeking goods that fit their needs. They might be unknowingly purchasing contraband or any other type of illicit goods or knowingly seeking status and recognition by buying fake well-known brands at cheaper prices (Chavarria, Walker & Bahamon, 2020). The adoption of illicit goods falls within the realm of consumer misbehavior. The type of illicit good, purchasing situation, and the price are all significant predictors of willingness to buy.

Consumers are most willing to buy an illicit good when others are doing the same. On the other hand, consumers who are less willing to buy an illicit good if they were alone or with some who was not partaking in the illicit behavior. Some consumers also feel pleasure in response to purchasing illicit good. Consumers also experience a range of emotions when consuming illicit goods. Moreover, higher taxes and prices create greater incentives for traders to enter the illicit market or for consumers to legally avoid

taxes since the higher taxes and prices increase the rents they can achieve by evading or avoiding taxes. Tax or price increases or disposable income reduction can make the legal product unaffordable or inaccessible to addicted consumers, thus creating a market for illicit products.

Illicit trade is demand and supply driven. Illicit trade operates in the shadow of the global economy, with increasingly sophisticated networks of traffickers, complicit corrupt officials, and their facilitators dealing in everything from narcotics, people, arms, and endangered wildlife to counterfeits including illicit tobacco and alcohol goods. Illicit trade and illicit networks are a growing security concern globally, and their convergence presents great harms and wicked threats to communities and societies as a whole (Letete & Sarr, 2017).

Trade networks are what drives illicit trade. Illicit networks hijack the technological, financial, and communications advances of globalization for illicit gains, they continue to present new harms to the governance and security of all nations (Luna, 2016). The proliferation of these threatening networks and the convergence of their illicit activities threaten not only the interdependent commercial, transportation, and transactional systems that facilitate free trade and the movement of people throughout the global economy, but are jeopardizing governance structures, economic development, security, and supply chain integrity (OECD, 2015).

Porous borders encourage illicit trade and corruption by bypassing delays at customs and border posts (Gallien, 2018). Porous borders have been termed as one of factors that catalyse illicit trade. The inadequate manning of border entries facilitates illicit trade. The World Customs Organization illicit trade report, (2012), mentions porous borders (ease of entry into country) as one of the key factors influencing illicit trade.

Poor governance, corruption and porous borders are among the underlying reasons for the increase in illicit trade (Dhaouadi, 2019). Porous borders are mostly associated with laxity in the manner of handling activities at the borders especially by the various agencies and systems at the borders.

1.2.3 Selected Border Stations in Kenya

The selected border stations in Kenya are three namely; Namanga, Mombasa and Taveta Border. These three have been selected as they have been identified as the leading borders in terms of illegal activities such as smuggling of illicit goods, illicit drug trafficking, illegal migration, border point corruption, cross-border robbery and theft of motor vehicle/cycle and cross-border stock theft/cattle rustling (NCRC, 2017). The Namanga border crossing between Southern Kenya and Northern Tanzania is located about 160 km southeast of Nairobi and 100 km north of Arusha. The Kenyan side of the border is in Kajiado County, while the Tanzanian side is in Longido District. Namanga is one of the major border crossings between the two countries due to its proximity to the two major cities (EAC, 2017). The Namanga border serves as a One Stop Border Post (OSBP). The main objective of setting up the OSBP was to facilitate the ease of movement for goods and people between Kenya and Tanzania. The Namanga OSBP is manned by customs and immigration officials from both Kenya and Tanzania. However, lack of harmonized systems at the borders has been blamed for hampering smooth movement of goods, services and persons, leading to an increase in illicit trade which is denying member states billions in taxes.

The British affirmed Mombasa's importance as East Africa's most vital port when they completed a railway in 1901 stretching from Mombasa to Uganda. Today, the city remains one of Africa's major links to the rest of the world. Built on a 15 sq km island, Mombasa is surrounded by a natural harbor. The port of Mombasa is heavily relied on

for importation of goods by other East African countries; it is a gateway to the region. Sometimes, illegal imports pass off as genuine products often destined for Uganda, Democratic Republic of Congo, Rwanda, Burundi but sometimes end up being diverted to the Kenya market (Lutta, 2019).

The Border town lies at the border with Tanzania, directly across from the town of Holili, which is approximately 111 kilometres, by road, west of Voi, the nearest large town, on the Arusha–Holili–Taveta–Voi Road. This was the first town to launch the One Stop Border Post (OSBP) amongst other borders between Kenya and Tanzania. In the wake of coronavirus outbreak, the Kenyan government intensified surveillance in a bid to curb use of illegal reroutes as they placed thousands of innocent people in border villagers in mortal peril. The main challenge is that it is too porous and long to be effectively manned by the police alone. The government ought to loop in the community through sensitizations because villagers along the border are the first line of defense against illegal crossing (Mutahi, 2018).

The National Crime Research Center (NCRC, 2017) report revealed that a number of illegal activities were taking place at the Kenya borderlines including smuggling of illicit goods, illicit drug trafficking, illegal migration, border point corruption, cross-border robbery and theft of motor vehicle/cycle and cross-border stock theft/cattle rustling. Other illegal activities included: illegal possession of forest products, illegal trafficking of forest products, destruction of forest produce in borderland areas, use of unauthorized fishing techniques, cross -border kidnapping and abduction. Some of the factors attributed to increase in illegal activities along the borderland included: poverty and unemployment, corruption among the state and non-state agencies in borderlands, poor relations between the community and law enforcement agencies, political instability and weak law and order enforcement of neighboring countries, poor

coordination and information sharing among border control and management agencies, competition and conflicts over natural resources, and cultural similarities or differences across the border (NCRC, 2017).

1.2 Statement of the Problem

Over the last few decades cross-border trade has expanded significantly, supporting rising living standards across the globe. At the same time, the expansion in legal trade has been accompanied by the alarming emergence of illicit trade, with estimates quantifying it and associated transnational criminal activities at between 8 and 15 percent of global GDP (NCRC, 2017). From smuggling, counterfeiting and tax evasion, to the illegal sale or possession of goods, services, humans and wildlife, illicit trade is compromising the attainment of the sustainable development goals in significant ways, crowding out legitimate economic activity, depriving governments of revenues for investment in vital public services, dislocating millions of legitimate jobs and causing irreversible damage to ecosystems and human lives (Lutta, 2019). Consumer tolerance, trade networks and porous borders have been identified as some of the factors influencing the level of illicit trade and they were the focus of this study.

In Africa, existing routes and markets for cross-border smuggling of foodstuffs are exploited by criminal groups, including non-state armed actors, for trafficking in high profile illegal goods, such as drugs and arms. Examples include the lucrative sugar smuggling business in the Kenya–Somalia borderlands, which have been linked to Al-Shabaab militants, and smuggling of subsidized foodstuffs in the Maghreb that finances organized crime and supports global illicit trade networks (WHO, 2020).

Empirically, there exist studies in this area. Karkare *et al.,* (2021) investigated the informal cross-border trade in West Africa. The study established that knowing and

unknowing consumers are drivers of illicit trade because the products are perceived to be readily available and affordable to many consumers. However, the study focused at cross border trade in West Africa, the current study focuses at illicit trade in the context of Kenya. Beqiraj *et al.,* (2020) studied policy tolerance of economic crime in Italy. The study found shadow-network of criminal activities facilitates the transit of illegal products. The study focused at Italy where containment measures to illegal trade may differ from Kenya presenting contextual gap. Mashiri and Sebele-Mpofu (2015) study on illicit trade, economic growth and the role of customs indicated no customers influence to the growth of illicit trade. However, the study did not indicate how customers influence the growth of illicit trade that the current study proposes to do.

In Kenya, a survey conducted by the Anti-Counterfeit Authority (ACA) between October 2019 and February 2020 showed that illicit trade cost Kenya Ksh103 billion in revenue in 2018 up from Ksh101.23 billion in 2017. The food, beverage, and non-alcoholic drinks was the sector with the most government revenue loss, with a share of 23.19% of the total illicit trade, followed by textile and apparel at 20.09%. The report further indicated that between 2016 and 2018, there were 7,484 jobs lost in Kenya due to illicit trade with counterfeiting, accounting for 32.59% of the jobs lost. A report by the NCRC (2017) also confirmed that a number of illegal activities were taking place at the Kenya borderlines such as smuggling of illicit goods, illicit drug trafficking, illegal migration, border point corruption, cross-border robbery and theft of motor vehicle/cycle and cross-border stock theft/cattle rustling. According to the British American Tobacco (BAT) Kenya (2018) report, the estimated illegal tobacco trade in Kenya accounted for over 12% of the market at the end of 2017 – losing government some Ksh 2.2 billion in excise revenues and leading to less government revenue contribution from legitimate cigarette sales. The illicit trade and counterfeit goods are

the biggest impediments to Kenya achieving its economic goals as it affects mainly businesses and government revenue (Mutahi, 2018). This clearly indicates that illicit trade is a serious problem in Kenya that needs attention."

Despite numerous legislative and regulatory efforts to streamline commerce in Kenya, illicit trade continues to plague the country. There are those who choose not to play according to the rules, circumventing, infringing and violating laws, regulations, licensing regimes, taxation systems and embargoes. Illicit trade poses a serious socio-economic challenge to Kenya, just like other countries across the globe. Illicit trade undermines the concept of a free and open market, which is fundamental to improving competitiveness, increasing investment, creating jobs and improving the economic situation of Kenya and other trading partner states. Illicit trade undermines industries in the region, poses health risks to consumers, sabotages tourism, stunts innovation and breeds lawlessness. It was against this that the study sought to investigate the existence of influence factors that promote illicit trade across selected border stations in Kenya.

1.3 Objectives of the Study

The study objectives were classified into: general objective and specific objectives.

1.3.1 General Objective

The main objective of this study was to investigate the determinants of the level of illicit trade across selected border stations in Kenya.

1.3.2 Specific Objectives

a) To establish the extent to which consumer tolerance influences the level of illicit trade across selected border stations in Kenya
b) To establish the extent to which trade networks, influence the level of illicit trade across selected border stations in Kenya.

c) To determine the extent to which porous borders, influence the level of illicit trade across selected border stations in Kenya.

1.4 Research Hypotheses

a) H_{01}: There is no significant effect of consumer tolerance on level of illicit trade across selected border stations in Kenya.

b) H_{02}: There is no significant effect of trade networks on the level of illicit trade across selected border stations in Kenya.

c) H_{03}: There is no significant effect of porous borders on level of illicit trade across selected border stations in Kenya.

1.5 Significance of the Study

The findings of this study provides more reliable in-depth understanding of the factors influencing the level of illicit trade across selected border stations in Kenya and help shape the future policy formulation and implementation of the trade sector, thus facilitating the achievements of the objectives set by the country in enhancing the reliability and efficiency of cross-border trade.

The recommendations of this study if implemented will also create a friendly and fair-trading environment for traders along the borders. This will also ensure fair competition among the traders and will boost overall trade performance resulting to economic development in the respective nations.

Through this study, the researcher will be able to share a deeper and wider understanding of the factors influencing the level of illicit trade across key border stations in Kenya.; hence, gaining more knowledge in an area. To other researchers and scholars, this study will provide them with empirical literature to build further on their studies in related subjects.

1.6 Scope of the Study

This study investigated the determinants of the level of illicit trade across selected border stations in Kenya. It covered three selected entry points in Kenya: Namanga, Mombasa Port and Taveta. These three have been selected as they have been identified as the leading borders in terms of illegal activities such as smuggling of illicit goods, illicit drug trafficking, illegal migration, border point corruption, cross-border robbery and theft of motor vehicle/cycle and cross-border stock theft/cattle rustling. The study focused on the following factors: consumer tolerance, trade networks and porous borders. The study targeted officers of various state agencies working at the three entry points. Primary data was collected using questionnaires. The study was conducted between May and June 2022.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the concept of illicit trade, factors that promote illicit trade. The factors identified include consumer tolerance, trade networks and porous borders. The chapter also presents the theoretical framework, empirical review, summary of literature gaps and the conceptual framework.

2.2 Concepts of the Study

2.2.1 Concept of Illicit Trade

Illicit trade is a concept that encompasses a fairly wide number of issues. Literature on illicit trade does not contain one fixed definition. World Health Organization (WHO) defines illicit trade as practice or conduct prohibited by law and which relates to production, shipment, receipt, possession, distribution, sale or purchase including any practice or conduct intended to facilitate such activity. Illicit trade therefore is, any form of trade that infringes the rules, laws, regulations, licenses, taxation systems, embargos and all procedures that countries use to organise trade, protect citizens, raise standards of living and enforce code of ethics (Karkare *et al.*, 2021). "Illicit trade involves money, goods or value gained from illegal and otherwise unethical activity (Mutahi, 2018). Examples of illicit trade include smuggling of excisable goods, intellectual property infringements, trading with illegal weights and measures, human trafficking, environmental crime, illegal trade in natural resources, trade in illegal, harmful or substandard goods or substances that may carry serious health and safety risks, trade in illegal drugs, trade in illegal plants parts, seeds and animal material, illegal manufacturing, illicit arms trade and Illicit financial flows (Foltea, 2020). Thus the definition of illicit trade is broad enough to encompass a wide range of activities and

thus the illustrations above serve only as a guide to a developing concept and not as a limit or restraint

Illicit trade comprises both the trade in illegal goods and services, as well as instances where normally legal goods are traded illegally, affecting all aspects of global social and economic lives. Illicit trade undermines the concept of a free and open marketplace which is fundamental to improving competitiveness, increasing investment, generating jobs and improving the economic situation (Sforza, & Picard, 2017). In most instances, illicit trade manifests itself in four major forms smuggling, counterfeiting, piracy and substandard goods, transit fraud/dumping and trade in prohibited goods or products (Foltea, 2020).

2.2.2 Determinants of Illicit Trade

The channels for illicit trading in various sectors are made possible by a number of loopholes (Dewey, 2016). They include a combination of corruption, underinvoicing, theft, poor governance, porous borders, armed conflict, strong network of illegal activities and crime, inadequate monitoring, poor border controls in export and import markets, consumer demand for certain product, and inadequate enforcement capacity (Akinyem, 2019). In addition, inadequate, poorly formulated and enforced policies, laws and institutions lack which undermines the ability to contain the problem. The current study focused on consumer tolerance, trade networks and porous borders due to their wider application in previous literature.

2.2.2.1 Consumer Tolerance

Consumers are driven to buying in the illicit market because they are seeking goods that fit their needs. They might be unknowingly purchasing contraband or any other type of illicit goods or knowingly seeking status and recognition by buying fake well-

known brands at cheaper prices. This hurts businesses as illicit players seek to evade regulation, pay taxes, access liquidity and overcome supply chain disruptions (Chavarria *et al.,* 2020). Many studies have attributed the drive of illicit trade to willing and unknowing customers consuming illicit products. Of course, some consumers can be deceived and unknowingly buy fake goods. According to Markmonitor, (2018), 30 percent of shoppers had unintentionally purchased counterfeit products.

The main incentive for consumers intentionally buying fake products is lower prices. According to Oxford Economics, (2018), combatting illicit trade, 49 percent of customers indicated to buy illicit products because they are affordable and readily available. This is particularly prevalent within the luxury sector, where goods are frequently associated with sociocultural codes and status symbols that make them attractive to buyers - even if they cannot technically afford those expensive products (Karkare *et al.,* 2021). It is easy to assume that such behavior is driven by issues of income, yet the reality is more complex. Illicit products are not solely attractive to households with the lowest income, with (Oxford Economics, 2018), stating that it occurs across all levels of society. As illicit trade expands to more products, it becomes easily accessible to a wider population.

Illicit trade is affecting the economy in a huge way and despite many ways of tackling it; consumer tolerance of illicit goods is holding back the efforts by the government to curb trade in illicit goods as the consumers provide the demand and market for sale of illicit trade (Mashiri & Sebele-Mpofu, 2015). As a result, illicit trade has slowly by slowly been becoming common in the country. According to African Development Bank (2016), currently illicit trade accounts for about 40% of the goods in the country. In addition, the association also states that the government losses over Sh200 billion in revenue to illicit trade.

2.2.2.2 Trade Networks

Trade networks are what drives illicit trade. Illicit networks hijack the technological, financial, and communications advances of globalization for illicit gains, they continue to present new harms to the governance and security of all nations (Luna, 2016). The proliferation of these threatening networks and the convergence of their illicit activities threaten not only the interdependent commercial, transportation, and transactional systems that facilitate free trade and the movement of people throughout the global economy, but are jeopardizing governance structures, economic development, security, and supply chain integrity.

Illicit trade operates in the shadow of the global economy, with increasingly sophisticated networks of traffickers (Arroyave *et al.*, 2020), complicit corrupt officials, and their facilitators dealing in everything from narcotics, people, arms, and endangered wildlife to counterfeits including illicit tobacco and alcohol goods (Veríssimo, & Glikman, 2020). The criminal proceeds of these activities are intimately related to the dark side of the globalization.

Illicit trade and illicit networks are a growing security concern globally, and their convergence presents great harms and wicked threats to communities and societies as a whole: threatening the health and safety of our people with deadly narcotics or consumers with substandard products and counterfeits such as fake medicines, food, alcohol and defective automotive and aircraft parts; bringing endangered wildlife closer to the brink of extinction; endangering our rainforests and planet through illegal logging (Champeyrache, 2019), illicit fishing, and other environmental crimes; exploiting our most vulnerable and desperate into forced labor or trafficking humans across borders into slavery; and enabling lucrative illicit empires that finance acts of criminality and terrorism and create greater instability and violence around the world.

As criminal entrepreneurs and transnational illicit networks hijack the technological, financial, and communications advances of globalization for illicit gains, they continue to present new harms to the governance and security of all nations (Luna, 2016). The proliferation of these threatening networks and the convergence of their illicit activities threaten not only the interdependent commercial, transportation, and transactional systems that facilitate free trade and the movement of people throughout the global economy, but are jeopardizing governance structures, economic development, security, and supply chain integrity (Beqiraj *et al.*, 2020).

2.2.2.3 Porous Borders

Porous borders encourage illicit trade and corruption by bypassing delays at customs and border posts (Gallien, 2018). Porous borders have been termed as one of factors that catalyse illicit trade. The inadequate manning of border entries facilitates illicit trade. The World Customs Organization illicit trade report (2012), mentions porous borders (ease of entry into country) as one of the key factors influencing illicit trade. Poor governance, corruption and porous borders are among the underlying reasons for the increase in illicit trade (Dhaouadi, 2019). Porous borders are mostly associated with laxity in the manner of handling activities at the borders especially by the various agencies and systems at the borders.

The Kenya Anti-Counterfeit Agency (2019), blames the long and porous borders and the East Africa integration as the key impediment to its efforts to fight counterfeits, with majority of importers ordering goods destined for Uganda and South Sudan. According to a survey report on borderland crimes in Kenya by NCRC (2017), borderland crimes are a major security threat in Kenya, regionally and globally. The most prevalent type of borderland crimes are: smuggling of illicit goods, illicit drug trafficking, illegal migration, corruption, cross-border robbery/theft of motor

vehicle/cycle, cross-border stock theft/cattle rustling, smuggling of counterfeit goods, cross-border theft of motor vehicle/cycle parts, illegal possession of forest products (e.g. charcoal, sandal wood, etc.), tax evasion, illegal trafficking of forest products (e.g. charcoal, sandal wood, etc.) destruction of forest produce in borderland areas, use of unauthorized fishing techniques, cross-border kidnapping and/or abduction, provision of safe havens for both local and cross-border criminals, cross-border terrorism, smuggling and proliferation of arms and weapons, cross border robbery/theft of goods on transit, human trafficking, currency forgery, forgery of custom documents, border point business fraud, poaching, diversion of export goods into local market, money laundering, illegal possession of wildlife and related trophies, illicit trafficking in precious minerals, border-point false accounting, illegal trafficking of wildlife and related trophies (National Crimes research, 2017).

2.3 Theoretical Framework

Under this, existing theories that give existence to this study are discussed. The study will be anchored on the theory of marketing ethics, institutional theory and theory of reasoned action.

2.3.1 Theory of Marketing Ethics

The general theory of marketing ethics which was first published by Hunt and Vitell (1986), has been the focus of much discussion and empirical testing. As a result, the theory was modestly revised a few years later (Hunt & Vitell, 1993). The theory has also been further explicated in two subsequent articles (Hunt & Vitell 2005, 2006). The major contribution of this particular theory is its explication of the individual decision-making process in situations involving ethical issues. This decision process is comprised of both deontological, or rules-based, and teleological, or consequences-based, dimension. The deontological dimension is guided by norms or rules that one

lives by whereas the teleological dimension is guided by the likely consequences of one's actions and how good or bad those consequences may be for oneself and other important stakeholders. One then evaluates, based primarily on deontology and/or teleology, various perceived alternatives and decides which are ethical and which are not. This evaluation then leads to intentions and behavior. Of course, the theory recognizes that ethical evaluations or judgments, intentions and behavior are not always entirely consistent, and it explicates why this may sometimes be the case. Finally, the individual decision-making process is potentially influenced by various environments that include one's culture, personal experiences, organization, profession, and/or industry (Hunt & Vitell, 2006).

Consistent with general theories in consumer behavior (Engel *et al.*, 1978; Howard & Sheth, 1969; and Fishbein & Ajzen, 1980) models, the theory posits those ethical judgments impact behavior through the intervening variable of intentions. Like Petty and Cacioppo (1986) and Jones (1991), the theory proposes that both ethical judgments and intentions should be better predictors of behavior in situations where the ethical issues are central, rather than peripheral. Indeed, the issue-contingent model of Jones (1991) uses the theory as a theoretical foundation and focuses on the importance of the moral intensity of an ethical issue as key for understanding situations involving ethical content. Supporting this view, research by Newstrom and Ruch (1975) found the ethical beliefs of managers to be highly congruent with their claimed frequency of behavior.

This theory is robust enough to account for all types of consumer behavior in situations involving ethical issues. Indeed, when consumers are confronted with ethical problems in the marketplace, they form their ethical judgments on deontological and teleological evaluations, which result from applying deontological norms to perceived alternatives, and from considering the probabilities of consequences and the desirability of

consequences to stakeholders of differing levels of importance. Furthermore, consumers' ethical judgments are generally consistent with their intentions, which are generally consistent with their behaviors. Therefore, the concepts in the theory provide a useful framework for investigating consumers' ethical problems in the marketplace. This study will guide the objectives on the effect of consumer tolerance and trade networks on levels of illicit trade.

2.3.2 Institutional Theory

Institutional Theory was advanced and discussed by many scholars including Meyer and Rowan (1977), DiMaggio and Powell (1983) and DiMaggio and Powell (1991). Institutional theory is a theory on the deeper and more resilient aspects of social structure. It considers the processes by which structures, including schemes; rules, norms, and routines, become established as authoritative guidelines for social behavior (Meyer & Rowan, 1977; Deephouse & Suchman, 2008). Different components of institutional theory explain how these elements are created, diffused, adopted, and adapted over space and time; and how they fall into decline and disuse (Deephouse & Suchman, 2008). Institutions are social structures that have attained a high degree of resilience (DiMaggio & Powell, 1991). These institutions are composed of cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life.

Institutions are transmitted by various types of carriers, including symbolic systems, relational systems, routines, and artifacts (Lammers *et al.*, 2017). Institutions operate at different levels of jurisdiction, from the world system to localized interpersonal relationships (Dacin, 1997). Suddaby (2010) indicates that, in order to survive, organizations must conform to the rules and belief systems prevailing in the

environment, because institutional isomorphism, both structural and procedural, will earn the organization legitimacy. According to Scott (2005), institutional theory is a widely accepted theoretical posture that emphasizes rational myths, isomorphism, and legitimacy. DiMaggio and Powell (2004) emphasized that a key insight of institutional theory is imitation: rather than necessarily optimizing their decisions, practices, and structures, organizations look to their peers for cues to appropriate behavior.

Institutional theory is relevant in explaining both individual and organizational action. Institutional is a vibrant theory whose postulations can be employed in attending deeper and more resilient aspects of social structure. The creation of efficient and effective organizational management structure need to be anchored on appropriate schemas, rules, norms, and routines. It inquiries into how these elements are created, diffused, adopted, and adapted over space and time; and how they fall into decline and disuse. Although the ostensible subject is stability and order in social life, institutions must perforce attend not just to consensus and conformity but to conflict and change in social structures. To combat illicit trade, good viable institutional frameworks and well implemented can help. The institutional framework includes trade networks and creation of effective borders.

2.3.3 Theory of Reasoned Action

Theory of reasoned action was proposed by Ajzen and Fishbein (1980). The theory of Planned Behavior states that individuals have systematic access to knowledge and they take rational decisions solely based on the knowledge they absorb (Fishbein & Ajzen, 1980). The theory suggests that an individual's behavioral intention is a function of the individual's attitude about the behavior and subjective norm (Marcketti & Shelley, 2009). It is made up of three constructs namely behavioral intention, attitude, and subjective norm. Behavioral intention is defined as the individual's relative strength of

intention to perform a behavior (Huang, 2017). Attitude comprises of the various beliefs about the outcomes of performing the behavior multiplied by the assessments of these outcomes (Kim & Karpova, 2010). Subjective norm comprises of the perceived expectations from the individuals and the intentions to comply with these expectations (Huang, 2017). Individual's voluntary behavior is predicted by the attitude toward the behavior in question and how it is assumed that other people would view them if the behavior is performed.

According to the theory of moral reasoning and competency**,** moral reasoning comes into play when an individual is faced with an ethical dilemma. Kohlberg (1976) categorized three stages which an individual encounters when faced with ethical dilemmas. At the pre-conventional level (Stages 1 and 2) an individual's reasoning is based on expected personal consequences such as reward and punishment. Stages 3 and 4 focus on maintaining and adhering to the expectations of reference groups and societal values. At the post-conventional level (Stages 5 and 6), there is a clear effort to define moral principles and values, whilst still maintaining and adhering to the values of one's reference group and society (Nill & Scultz, 1996). This stage is about finding a balance between what is morally acceptable to the individual and which fits in with his/her social environment (Marcketti & Shelley, 2009). Moreover, using the theory of planned behaviour provided strong contributions towards explaining the demand for counterfeit drugs (Chuchu *et al.*, 2016). Moreover, the TPB made a strong contribution towards explaining the demand towards purchasing illicit drugs. Consumer choices are generally influenced by behaviors considered appropriate and therefore normatively approved, whilst others are seen as inappropriate and hence.

Theory of reasoned action is relevant to the study in understanding human behavior when it comes to creating and consuming illicit products. It is the human behavior that

pushes certain firm to manufacture items even if they are not observing standards and qualities required. The desire for profits and high revenues push to engage in illicit trade. Likewise, consumers' desire for cheap or affordable products may push them to buy illicit products. The theory anchors the variable of consumer tolerance and how it influences growth in illicit trade.

2.4 Empirical Review

This section provided studies with the empirical findings methodologies, conclusions and summary related to corporate governance and financial performance

2.4.1 Consumer Tolerance and Level of Illicit Trade

Karkare *et al.* (2021) investigated the informal cross-border trade in West Africa. The study relies on data from a survey of traders in Benin to estimate the determinants of bribe payments. They exploit variations in the trade regime across Benin's borders, as well as changes in trade restrictions over time and variations in route availability across space and time. The study established that knowing and unknowing consumers are drivers of illicit trade because the products are perceived to be readily available and affordable to many consumers. However, the study focused at cross border trade in West Africa, the current study focuses at illicit trade in the context of Kenya.

Employing literature review, Mashiri and Sebele-Mpofu (2015) conducted a study on illicit trade, economic growth and the role of customs. The study analyses the extant literature and uses cross-country data to gauge the effect of illegal imports on economic growth. In light of limited information on the value of illicit trade due to its very nature, the analysis was restricted by the availability of data. The findings of the study showed that illegal economic activity distorts local economies and reduces legitimate business and tax revenues. It was also established that illicit trade undermines the social stability

and socioeconomic welfare of consumers, preventing the equitable sharing of public goods. However, the study did not indicate how customers influence the growth of illicit trade that the current study proposes to do.

Chaudhry and Zimmerman (2012) determined the impact of plain packaging on the illicit trade in tobacco products. Loss of tax revenue is the most measurable impact of illicit trade, other negative consequences center on: harm to consumers; damage suffered by intellectual property owners and legitimate supply chain members; and profits to organized criminal groups. Factors spurring the growth of illicit tobacco trade include: affordability of unlawful cigarettes compared to lawful ones; huge profit incentives for illicit traders; low criminal penalties disproportionate to these profit incentives; and widespread consumer complicity. This trade is assisted by the geographic characteristics of some markets like destination countries with borders more conducive to receiving illicit product. Illicit traders are often nimble, adapting to changing consumer demands and the regulatory environment. The study focused at illicit trade in tobacco, the current study focuses on illicit trade in the context of all sorts of goods.

Further, Veríssimo, and Glikman (2020) conducted a study titled influencing consumer demand as vital for tackling the illegal wildlife trade. They developed a prioritization framework to focus demand management work on those products that have the highest biological impact. This involved a better understanding of prevalence, frequency of consumption, number of consumers and the extent to which the trade of that product impacts wildlife. The study revealed that tackling the illegal wildlife trade for the benefit of biodiversity conservation requires understanding and influencing consumer demand. The study focused at illicit trade in wildlife, the current study focuses on illicit trade in the context of all sorts of goods.

Allen (2012) conducted a study on illicit trade in tobacco products and how to tackle it. The study brings together facts and views from respected academics, private sector consultants, journalists, international enforcement organisations, government revenue authorities and industry. It analyses the nature of the problem, its causes and consequences, and offers authorities best practice guidance on implementing anti-illicit trade strategies. Case studies are used to provide evidence of good practice and global efforts to tackle this serious problem. The study results revealed that despite how stringent the requirements on legitimate trade may be, one thing remains certain. As long as the illicit trade in tobacco products provides high profits at low risk and there is a ready market of consumers, criminals will find a way to continue their trade. The study was however not specific to a given country or industry and therefore might not be applicable in some instances.

Foltea (2020) investigated the issue of Illicit Tobacco Trade in the UK. The study reviewed available materials on illicit tobacco trade in UK. Content analysis was used in data analysis. The study revealed that ultimately, illicit tobacco trade is the outcome of demand and supply. Consumers wish to save money, demanding cheaper or not available tobacco products, while illicit suppliers wish to make money and are thus interested in meeting demand to ensure larger sales, increased market shares, and greater profit. However, the study focused on Illicit Tobacco Trade in the UK while the current study focuses at illicit trade in the context of Kenya.

Sforza and Picard (2017) conducted a study, empowering consumers to fight illicit trade with mobile technology. Being informed that the product they intend to acquire or consume are not legitimate, consumers can put a tremendous amount of pressure on the supply chain, forcing it to self-regulate itself and to eliminate sources of illicit trade, even without the direct intervention of legal authorities. In addition, the use of digital

technology also represents an important tool for the reduction in demand for illicit products. By scanning products identification systems with their mobile phone, allowing them to be informed instantly about product authenticity and traceability. This study was conducted in France and its findings might not be applicable in the Kenyan context due to social and cultural differences.

2.4.2 Trade Networks and Level of Illicit Trade

Beqiraj et *al.* (2020) studied policy tolerance of economic crime in Italy. Using a newly built regional dataset and a dynamic panel model, the study found evidence of the dual impact of counterfeiting. The study found shadow-network of criminal activities facilitates the transit of illegal products. The study focused at Italy where containment measures to illegal trade may differ from Kenya presenting contextual gap.

Robles-Avila and Vasquez-Parraga (2018) conducted a study on consumer propensity to adopt illicit goods by employing the Theory of Planned Behavior and the Theory of Marketing Ethics. The research results suggest that subjective norms influence consumers' propensity to adopt illicit goods. Using the Theory of Marketing Ethics, research on consumers' ethical orientation found that both teleological and deontological orientations influence consumers' ethical judgement and intention. Although the study provides useful information on determinants of illicit trade, trade networks and porous borders have not been addressed.

In the same line, Champeyrache (2019) investigated how new illicit economy is threatening our future. The study adopts a multidisciplinary approach encompassing social sciences, business and economics, history, international relations, and—in a more original way—science and public health, environmental studies, and cybercrime. The wide range of the approach shows in the number and the diversity of references.

The book is based on interviews with practitioners and field-work travels. The study established that networks guide the transfer of illicit products. This study contributes significantly in understanding illicit trade but cannot be generalized to specific contexts as it lacks empiricism.

Arroyave et *al.,* (2020) explored the multiplex networks reveal geographic constraints on illicit wildlife trafficking. The study illustrates how wildlife trafficking represents a wicked problem at the intersection of criminal enforcement, cultural heritage and environmental systems management. As with similar network-based crimes, institutions are frequently ineffective at curbing wildlife trafficking, partly due to the lack of information detailing activities within illicit trading networks. Leveraging geo-spatial data, use of multiplex representation of wildlife trafficking networks can help curb illicit trade in wildlife products. The study focused at illicit trade in wildlife leaving a gap on other areas.

2.4.3 Porous Borders and Level of Illicit Trade

Basu (2014) studied on combating illicit trade and transnational smuggling: key challenges for customs and border control agencies. Maintaining the delicate balance between facilitating legitimate trade flows while concurrently deterring those that are illicit is a complex operational task. This paper identifies and delves deeper into three of those challenges: the scale of complexity of physical transportation geography in border management, adaptive capabilities of concealment, evasion, structural and operational flexibility by professional smugglers, and institutional coordination problems which may arise in customs and border control management. The study contributes significantly on understanding porous borders and illicit trade. The current study will conduct an empirical study on the effect of porous borders on illicit trade to advance knowledge in this area.

Dewey (2016) on porous borders from a sociological perspective lay out a research program for the field of sociological inquiry in facilitating the illicit trade. This short paper problematizes economic action outside the law by taking legal definitions and their effects seriously. It begins with the problem of naturalizing state definitions. This is followed by a discussion of the illegality of illegal markets, which illustrates sociological contributions. Finally, three dimensions of the study of illegal markets are suggested. Overall, the paper lays out a research program for this field of sociological inquiry. The study revealed that quantifying the impact of illicit trade was not possible. The study proposed the need for empirical studies on the effect of porous borders on illicit trade and this will be the focus of the current study.

Nkoroi (2015) assessed the informal cross border trade between Kenya and Uganda with a target 150 traders operating across the Kenya-Uganda border as well as 10 key informants who included customs officials, security and immigration personnel. The study used a mixed study utilizing both primary and secondary data. It was also reported that the lucrative markets offered by the counterparts in the bordering country promotes and attract people to engage in the trade. The study focused on only one border station leaving a gap on the other border stations and this will be the focus of the current study.

Makokha (2020) on enforcement challenges in addressing migrant smuggling into Kenya, the case of Moyale Border. Primary data was collected by interviewing key informants including high ranking officials at policy level at the Directorate of Immigration headquarters, former and current Immigration and Police officials working at Moyale border and Investigations officials from the Directorate of Immigration Services. The study revealed the presence of the vastness and porosity of the border, language barrier and the lack of translators, insecurity resulting from inter-communal conflicts, and local communities that are economically dependent on migrant

smuggling and therefore engaged in facilitating the illicit trade. The research was, however, limited to smuggling only and Moyale border.

Akinyem (2019) investigated porous borders and increasing human trafficking in West Africa: issues and challenges using content analysis with an analytical and narrative historical method. The study concludes that human trafficking can be reduced to the barest minimum in the region, if West African human and material resources are combined together to expand regional capacity for border security. Implying that the borders are free for contrabands and all kind of criminal activities without fear thus there is need to improve management and insecurity at the West African borders in order to achieve the control to the vice. The study focused at cross border trade in West Africa leaving a gap on other parts of Africa."

2.5 Summary of Literature Gaps

Although there are limited researches that have been conducted to measure the increase in cases of illicit trade in Kenya, the magnitude and effects of illicit trade are of such significance that they compel strong and sustained action from the government, businesses and consumers. While most studies have focused on how to control the supply side of counterfeits, few studies have investigated on the factors influencing the level illicit trade in Kenya. Table 2.1 provides a summary of literature gaps identified.

Table 2.1: Summary of Relevant Studies and Gaps

Author and year	Objective of the study	Findings	Research gaps	Focus of the current study
Karkare, Byiers, Apiko and Kane (2021)	To investigate the informal cross-border trade in West Africa	The study established that knowing and unknowing consumers are drivers of illicit trade because the products are perceived to be readily available and affordable to many consumers	The study focused at cross border trade in West Africa	The current study focuses at illicit trade in the context of Kenya
Mashiri and Sebele-Mpofu (2015)	Illicit trade, economic growth and the role of customs	The findings of the study showed that illegal economic activity distorts local economies and reduces legitimate business and tax revenues	The study did not indicate how customers influence the growth of illicit trade	The current study investigated how consumer tolerance influences the level of illicit trade in Kenya
Beqiraj, Fedeli, and Giuriato (2020)	Studied policy tolerance of economic crime in Italy	The study found shadow-network of criminal activities facilitate the transit of illegal products	The study focused at Italy where containment measures to illegal trade may differ from Kenya presenting contextual gap	The current study focused on trade networks and level of illicit trade in Kenya
Arroyave et al. (2020)	Multiplex networks reveal geographic constraints on illicit wildlife trafficking	The study illustrates how wildlife trafficking represents a wicked problem at the intersection of criminal enforcement, cultural heritage and environmental systems management	The study focused at illicit trade in wildlife leaving a gap on other areas	The current study focused on illicit trade in the context of all sorts of goods

Makokha (2020)	Enforcement challenges in addressing migrant smuggling into Kenya, the case of Moyale Border	The findings reveal the presence of factors that are particular to Moyale border such as the vastness and porosity of the border, language barrier and the lack of translators, insecurity resulting from inter-communal conflicts, and local communities that are economically dependent on migrant smuggling and therefore engaged in facilitating the illicit trade	The research was, however, limited to smuggling only and Moyale border	The current study focused on illicit trade as a whole and was conducted among three borders
Akinyem (2019)	Investigated porous borders and increasing human trafficking in west Africa: issues and challenges	The study finds that human trafficking can be reduced to the barest minimum in the region, if West African human and material resources are combined together to expand regional capacity for border security.	The study focused at cross border trade in West Africa	The current study focused at illicit trade in the context of Kenya

Source: Author (2022)

2.6 Conceptual Framework

In this section the conceptual framework is presented in a schematic interpretation as shown in the figure 2.1 below.

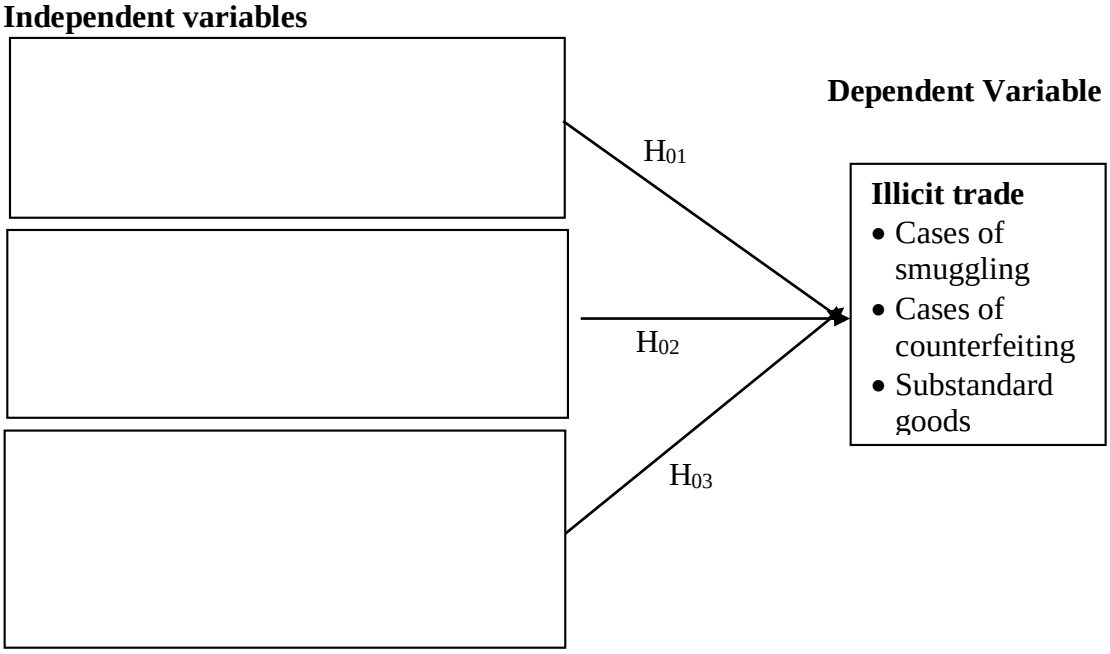


Figure 2.1: Conceptual framework

The conceptual framework identifies the variables that when put together explain the issue of concern. It is formulated from the reflection of the ideas/concepts. The conceptual framework is therefore the set of broad ideas used to explain the relationship between the independent variables (factors) and the dependent variables (outcomes). Conceptual frame work provides the link between the research title, the objectives, the study methodology and the literature review. In this study the conceptual framework was based on three independent variables namely consumer tolerance, trade networks and porous borders and the dependent variable being level of illicit trade in Kenya. The dependent variable of the study was illicit trade. The independent variables were consumer tolerance, trade networks and porous borders. It was hypothesized that consumer tolerance, trade networks and porous borders have influence on illicit trade.

CHAPTER THREE

RESERCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology of the research. It describes the research design, target population, sampling methods, data collection instruments, operationalization and measurement of variables, data analysis and presentation.

3.2 Research Design

According to Creswell and Creswell (2017), research design is a scheme, outline or plan that is used to generate answers to research problems. The design facilitates research to be as efficient as possible in yielding maximum information as it regards the research questions. The study employed an explanatory survey. According to Cooper and Schindler (2006) a study concerned with finding out who, what, which and how of a phenomenon is an explanatory study. On the other hand, Sekaran, (2006) argues that an explanatory study is a study undertaken in order to ascertain and to be able to describe the characteristics of the variable of interest in the situation. It is designed to describe the characteristics or behaviors of a particular population in a systematic and accurate fashion population. The choice of the design for this study was to obtain an unbiased view of government border enforcement agencies, within the port of Mombasa, Namanga border and Taveta border, on the factors influencing the level of illicit trade in the borders.

3.3 Target Population

The research population is always a well-defined collection of items, object or individuals known to have similar characteristics (Mugenda & Mugenda, 2003). They should have a common binding characteristic or trait. Therefore, the target population

refers to the entire group of individuals that attract the researcher interests in coming to a conclusion. Therefore, in this case the target population was the officers of state agencies working at the port of Mombasa, Namanga border and Taveta border. This population has been selected as they are expected to have information on the level of illicit trade and its determinants. The total population was five hundred and sixteen (516) as shown on table 3.1.

Table 3.1: Target Population

Source: Author (2022)

State Agency	**State agencies officers at Port of Mombasa, Namanga and Taveta borders according to seniority**			**Total Population**
	Senior Officers	**Mid-level Officers**	**Junior Officers**	
Kenya Revenue Authority	8	28	60	96
Kenya Bureau of Standards	8	16	40	64
Port Security Office	20	40	100	160
Anti-Counterfeit Agency	8	20	40	68
National Intelligence Service	4	16	40	60
Directorate of Criminal Investigation	6	18	44	68
Total	**54**	**138**	**324**	**516**

3.4 Sampling

According to Trochim (2005), sampling is the process of selecting units (e.g., people, organizations) from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen. “In the above case, the researcher employed both stratified and simple random sampling to select the sample size of 225 respondents. The strata were the various state agencies involve in curbing illicit trade. The agencies include the Kenya Revenue Authority, Kenya Bureau of Standards, Port Security Office, Anti-Counterfeit Agency, National Intelligence Service and Directorate of Criminal Investigation. Simple random

sampling was appropriate as it ensured equal representation of participants in the study by eliminating any possible bias.

3.4.1 Sample Design and Procedure

The sample size is a selected number of members or cases from the accessible population. It is referred to as a small portion of the large population (Mugenda & Mugenda, 2003). The study adopted Yamane (1967) formula to estimate the sample size (Israel, 1992). The study calculated a sample of 225 respondents using the formula;

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

Where:

n = sample size

N = population size

e = the level of precision

1 = Constant

n = 516/ 1+ 516(0.05)^2 = 225 respondents

From the target population of 516, a sample size of 44% was taken giving a respondent base of 225 respondents consisting of selected agencies officers as shown in table 3.2.

Table 3.2: Sample Size

State Agency	**State agencies officers at Port of Mombasa, Namanga and Taveta borders according to seniority**			**Total Population**
	Senior Officers	**Mid-level Officers**	**Junior Officers**	
Kenya Revenue Authority	3	12	27	42
Kenya Bureau of Standards	3	7	18	28
Port Security Office	9	17	45	71
Anti-Counterfeit Agency	3	9	18	30
National Intelligence Service	2	3	18	23
Directorate of Criminal Investigation	3	8	20	31
Total	**23**	**56**	**146**	**225**

Source: Author (2022)

3.5 Data Collection Procedures and Instrumentation

There are various types of data collection instruments which include questionnaires, interview schedules, and observation forms among others. In this research, the researcher used a structured questionnaire. Marshall and Rossman (2010) points out that, questionnaires are appropriate for studies since they collect information that is not directly observable as they inquire about feelings, motivations, attitudes, accomplishments as well as experiences of individuals. The questions in the questionnaire were in a form of a 5-point type Likert scale. Likert scale is good in measuring perceptions attitudes and values (Upagade & Shende, 2012). The questionnaires were standardized to ensure the questions presented were of the same wording and same order to allow the respondents to answer appropriately.

The questionnaire contained six sections. Section A of the questionnaire captured the general information of the respondents, section B influence of consumer tolerance influences the level of illicit trade across selected border stations in Kenya, section C influence of trade networks, influence the level of illicit trade across selected border stations in Kenya, section D influence of porous borders, influence the level of illicit trade across selected border stations in Kenya and section E level of illicit trade across selected border stations in Kenya.

Leavy (2015) define data collection procedure as the precise, systematic gathering of information relevant to the research sub-problems. The questionnaire administration was carried out by the researcher in person. The questionnaires were distributed to the respondents through Google forms. Respondents that required ample time to fill the questionnaires were granted and the questionnaires collected later.

3.6 Pilot Testing

A pilot is a small-scale research projects that collects data from respondents similar to those that will be used in the future survey. Pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample (Cooper & Schindler, 2011). Five randomly selected respondents were issued with the questionnaire to pretest it. The respondents were 5 state agency officers at the port of Mombasa. As indicated by Mugenda and Mugenda (2003) when piloting, a 1% of the target population is adequate and therefore the 5 respondents are sufficient. The researcher employed an assistant to help in administering the questionnaire. The assistant dropped and picked the questionnaire later in cases where respondents were not reachable via Google form. The respondents helped in estimating the time needed to fill the questionnaires and identified errors to be corrected before administering to the target population. The respondents that participated in the pilot study were not included in the final study.

3.6.1 Reliability and Validity Testing

Heale and Twycross (2015) defines reliability as the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. Reliability is the consistency of measurement, or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects (Cronbach, 1951).

Cronbach's alpha was used to test the reliability of the measures in the questionnaire (Sekaran & Bougie, 2016). A pilot study was undertaken on 1 percent (5 respondents) of the sample population (Creswell & Creswell, 2017). These respondents were not

included in the final study. Creswell and Creswell (2017), Gall, Gall and Borg, (2007); Tavakol and Dennick (2011) suggest that a Cronbach alpha of 0.7 and above indicates that the data is reliable.

Validity refers to whether a questionnaire is measuring what it purports to measure (Heale & Twycross, 2015). Validity is the accuracy and meaningfulness of inferences, which are based on the research results. Validity exists if the data measure what they are supposed to measure. It describes validity as the degree of congruence between the explanations of the phenomena and the realities of the world.

This study used both construct validity and content validity. For construct validity, the questionnaire was divided into several sections to ensure that each section assessed information for a specific objective, and also ensured that the same closely ties to the conceptual framework for this study. To ensure content validity, the questionnaire was subjected to thorough scrutiny by supervisors overseeing the study. They were asked to evaluate the statements in the questionnaire for relevance. On the basis of the evaluation, the instrument was adjusted appropriately before subjecting it to the final data collection exercise. Their review comments were used to ensure that content validity is enhanced. The Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy was also used to assess validity where values more than 0. 8 was considered appropriate.

3.7 Data Analysis and Presentation

Data analysis refers to the application of reasoning to understand the data that has been gathered with the aim of determining consistent patterns and summarizing the relevant details revealed in the investigation (Zikmund, Babin, Carr & Griffin, 2010). Ott and

Longnecker (2015) define data analysis as a mechanism for reducing and organizing data to produce findings that require interpretation.

The quantitative data collected using questionnaire and analyzed using SPSS software version 23.0. The statistics generated included both descriptive statistics and inferential statistics. The specific descriptive statistics included frequencies, mean scores and standard deviation.

3.7.1 Test for Regression Assumptions

To be able to check the adequacy of a selected model, researchers can utilize a range of diagnostic tests, each of which is designed to detect a particular form of model inadequacy. The following statistical tests were conducted to test for reliability of the model in order to avoid inaccurate regression results.

3.7.1.1 Normality Test

Heale and Twycross (2015) stated that the normality test is used to determine whether a data set resembles the normal distribution. A visual representation of the distribution of test results determines whether it conforms to the bell-shaped normal curve. The normality test was done using the Shapiro-wilk test. If the probability was greater than 0.05, then the data was normally distributed.

3.7.1.2 Multicollinearity

According to Creswell and Creswell (2017), it is very important to test for multicollinearity among independent variables since the presence of collinearity results in multiple errors in the results of the study. Multicollinearity occurs when the independent variables are correlated. Barnor (2014) stated that when two or more independent variables are linearly dependent on each other, one of them should be included instead of both since it increases standard errors thereby making the results

biased. Multicollinearity was assessed using correlation matrix, the rule of thumb being that a correlation value between the independent variables of more than 0.8 would be an indicator of serious multicollinearity. Variance Inflation Factors (VIF) was also utilized.

3.7.1.3 Heteroskedasticity

Heale and Twycross (2015), defined heteroskedasticity as a term used to describe the situation when the variance of the residuals from a model is not constant. Breusch-Pegan-Godfrey test (B-P-G Test) was used to test for the presence of Heteroskedasticity. If the p value was more than 0.05, then heteroskedasticity does not exist.

3.7.1.4 Linearity Test

The study ANOVA test was used to test for linearity of the data and to visually show whether there was a linear or curvilinear relationship between two continuous variables before carrying out regression analysis. The regression models can only accurately estimate the relationship between dependent and independent variables if the relationship is linear (Sekaran & Bougie, 2016).

3.7.2 Analytical Model

Multiple regression models was also used to determine the influence of consumer tolerance, trade networks and porous borders on level of level of illicit trade across selected border stations in Kenya. The specific multiple regression model was shown as;

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon}$$

Where;

Y = level of level of illicit trade across selected border stations in Kenya

X_1 = consumer tolerance

X_2 = trade networks

X_3 = porous borders

In the model, β_0 = the constant term while the coefficient $\beta_i = 1….3$ was used to measure the sensitivity of the dependent variable (Y) to unit change in the predictor variables X_1, X_2 and X_3. The error (ϵ) term capture the unexplained variations in the model. Hypothesis testing was done using p-value. The acceptance/rejection criterion was that, if the p-value calculated is less than the p-value critical of 0.05, the study rejects the Ho but if it's greater than 0.05, the study fails to reject the Ho (Sekaran & Bougie, 2016).

3.8 Measurement of Variables

Table 3.3 shows how each of the variables was measured.

Table 3.3: Variable Measurement Matrix

Variable	Variable type	Measurement/Indicators	Scale
Illicit trade	Dependent variable	• Cases of smuggling • Cases of counterfeiting • Substandard goods	Ordinal
Consumer tolerance	Independent variable	• Demand for goods • Affordability • Availability	Ordinal
Trade networks	Independent variable	• Source of funding • Networks of traffickers • Complicit corrupt officials	Ordinal
Porous borders	Independent variable	• Border security agents • Personnel to man border entries • Modern technological devices to man borders	Ordinal

3.9 Ethical Consideration

Ethical considerations relate to the moral standards that the researcher should consider in all research methods in all stages of the research design (Basit, 2013). The literature used in this study was cited appropriately to avoid plagiarism. Plagiarism level was

checked and report attached to confirm originality of the study (Appendix III). The participants in the study were asked for their consent to take part in the study. Consent letter was sought from the university before actual data collection.

Research Permit and authorization was sought from NACOSTI. All participants were requested to give their informed consent before inclusion in the study. All responses were treated confidentially and there was anonymity of responses. There were no study participant's identifiers like names that would link the participant to any data instead study numbers were created and coded information used. Only the study participants and the researcher had access to the data.

CHAPTER FOUR

DATA ANAYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

This section presents the results from the study and it includes the general information section encompassing the response rate and demographic information. The chapter also outlines the descriptive and inference statistics in line with the study objectives.

4.1 Response Analysis

Table 4.1 showcases that 225 questionnaires were issued to selected respondents in each of the 3 select border stations in Kenya. The findings exhibit that out of the 225 issued questionnaires to the target respondents, only 184 responses were made with adequate information and returned which translated to an overall 81.8% study response rate. This is in line with Creswell and Creswell (2017), who stated that a study with 50% response rate and above is sufficient for analysis and making conclusions (Sekaran & Bougie, 2016).

Table 4.1: Response Rate

Response	Sample Size	Responded	Not responded
Kenya Revenue Authority	42	37(85.7%)	5(14.3%)
Kenya Bureau of Standards	28	22 (78.6%)	5(21.4%)
Port Security Office	71	58 (81.7%)	13(18.3%
Anti-Counterfeit Agency	30	24 (80.0%)	6(20.0%)
National Intelligence Service	23	19 (82.6%)	4(17.4%
Directorate of Criminal Investigation	31	24 (77.4%)	7(22.6%)
Total	225	184 (81.8%)	41 (18.2%)

Source: (Research Data, 2022)

4.2 Reliability and Validity Test Results

Five randomly selected respondents were issued with the questionnaire to pretest it. The respondents were 5 state agency officers at the port of Mombasa. The respondents

helped in estimating the time needed to fill the questionnaires and identified errors to be corrected before administering to the target population. The respondents that participated in the pilot study were not included in the final study.

4.2.1 Reliability Results

Reliability measures if the instrument measures that which it is required to measure every time it is used. It was determined through the use of Chronbach's alpha which determines the internal consistency of the questionnaire. Data obtained yielded Chronbach alpha as follows; illicit trade (0.804 > 0.7), consumer tolerance (0.830 > 0.7), trade networks (0.783 > 0.7) and porous borders (0.842 > 0.7) which were all greater than the threshold of 0.7. Those items that had a Chronbach's alpha of less than 0.7 which is the threshold would be eliminated from the questionnaire while collecting data for the main study (Sekaran & Bougie, 2016).

Table 4.2: Reliability Test Results

Variables	Chronbach's Alpha	Critical Value	Conclusion
Illicit trade	0.804	0.7	Reliable
Consumer tolerance	0.830	0.7	Reliable
Trade networks	0.783	0.7	Reliable
Porous borders	0.842	0.7	Reliable

Source: (Research Data, 2022)

All of the variables had a Chronbach alpha of more than 0.7, as shown in Table 4.2. This means that the questionnaire used in this analysis had a high level of internal consistency. As a result, the questionnaire was reliable in determining the factors influencing the level of illicit trade across selected border stations in Kenya."

4.2.2 Validity Test Results

Construct validity is a test that finds out if an operation of a variable definition correctly portrays the actual theoretical concept's meaning. The questionnaire for this thesis was about similar previous studies, and adjustments to address objectives of the research.

The expert opinion was applied to confirm the validity of the content. This involves the supervisors, who ensured that the questionnaires address all the research factors through their scrutiny and expert comments. Double-checking was performed document to ensure that the feature of theory is shown in a way that they have been envisaged. The Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy was used to assess validity where values more than 0. 8 was considered appropriate. Table 4.3 shows the validity test results. Based on the validity test results, the instrument was adequate. Consumer tolerance attracted KMO test of 0.668 and significance of 0.000<0.05 hence valid. Likewise, the KMO tests for trade networks and porous borders were statistically significant hence valid.

Table 4.3: Validity Test Results

Variable	KMO Test	Approx. Chi-Square	Sig.
Consumer tolerance	0.668	199.285	0.000
Trade networks	0.592	192.906	0.000
Porous borders	0.668	260.943	0.000

Source: (Research Data, 2022)

4.3 Demographic Statistics

This section presents the findings on the descriptive statistics for the demographic profiles of all the respondents. The demographic characteristics considered include; years in current position, gender, highest level of education and age bracket.

4.3.1 Years in Current Position

Participants were asked how long they had worked for the company. The results in Table 4.4 reveal that the respondents had spent varied number of years with their current employer. The results indicated that 47.28% had worked with the current employer for 11-15 years, 28.26% for 5-10 years, 5.43% for less than 5 years and 19.03% for over 15 years. The results reveal that most respondents had more than ten years of service in

their current agency meaning they had adequate information about the organization based on work experience.

Table 4.4: Work Experience with Current Employer

Number of years	Frequency	Percentage
Less than 5 years	10	5.43%
6-10 years	52	28.26%
11-15 years	87	47.28%
Over 15 years	35	19.03%
Total	**184**	**100%**

Source: (Research Data, 2022)

4.3.2 Gender of the Respondents

The target respondents were requested to specify their gender. The results are as shown in Table 4.5. According to the results in Table 4.3.2, male respondents made up 51.63 percent of the total, while female respondents made up 48.37 percent. This demonstrates state agencies involved in curbing the level of illicit trade commitment to gender diversity, as the there was no huge variation in the number of male and female employees among respondents.

Table 4.5: Gender

Gender	Frequency	Percentage
Male	95	51.63%
Female	89	48.37%
Total	**184**	**100%**

Source: (Research Data, 2022)

4.3.3 Highest Level of Education

The respondents were implored to state their highest education level. Table 4.6 gives an illustration of the results. The results in Table 4.3.3 revealed that the majority of respondents (56.52 percent) had a bachelor's degree, while 36.96 percent had a master's degree. Only 6.52% had a diploma as the highest qualification. None of the respondents

had a doctorate. These results imply that most of the respondents had the requisite level of education to respond meaningfully to the questionnaire.

Table 4.6: Highest Level of Education

Education	Frequency	Percentage
Diploma	12	6.52
First Degree	104	56.52%
Masters	68	36.96%
Total	**184**	**100%**

Source: (Research Data, 2022)

4.3.4 Age of the Respondents

The researcher was also interested in establishing the age of the respondents. Table 4.7 gives an illustration of the results. It displays that the highest respondent number (40.22%) were between the ages of 41 and 50, 32.06 percent were between the ages of 31 and 40, 20.65 percent were 51 years and above, and the smallest percentage (7.07%) were below 30 years of age. “This shows most of state agency employees working at the select border stations are in midlife age and are mature enough to give required information.

Table 4.7: Respondents’ Age

Age	Frequency	Percentage
Less than 30 years	13	7.07%
31-40 years	59	32.06%
41-50 years	74	40.22%
51 and Above	38	20.65%
Total	**184**	**100%**

Source: (Research Data, 2022)

4.4 Descriptive Statistics

The subsection describes the descriptive findings for each of the variables under study, presented in terms of percentages, means and standard deviations.

4.4.1 Consumer Tolerance

The mean and standard deviation for the specific attributes of consumer tolerance are as presented in Table 4.8 Results demonstrate that the selected border stations have experienced cases of consumer tolerance to a great extent. This is supported by the fact that on a five-point likert scale, the mean scores for attributes related to consumer tolerance was greater than 3. The respondents agreed that most consumers buy fake goods knowingly (Mean=3.95, std. dev=0.93, CV=0.24, COD=0.06), consumers provide the demand and market for sale of illicit trade (Mean=3.86, std. dev=1.15, CV=0.30, COD=0.09), Higher taxes create greater incentives for traders to enter the illicit market (Mean=4.04, std. dev=1.00, CV=0.25, COD=0.06), consumers tend to prefer illicit goods as it helps them avoid taxes (Mean=3.75, std. dev=1.08, CV=0.29, COD=0.08) and that price increases creates a market for illicit products (Mean=3.52, std. dev=1.29, CV=0.37, COD=0.14).

Further, the respondents also agreed that main incentive for consumers intentionally buying fake products is lower prices (Mean=4.24, std. dev=0.55, CV=0.13, COD=0.02), consumer tolerance of illicit goods is holding back the efforts by the government to curb the trade (Mean=4.21, std. dev=0.73, CV=0.17, COD=0.03), and that illicit trade is slowly becoming common in the country (Mean=4.03, std. dev=0.63, CV=0.16, COD=0.03). The overall mean was 3.95 implying that on average, respondents agreed that consumer tolerance exists across the selected border stations in Kenya.

Table 4.8: Descriptive Statistics for Consumer Tolerance

Consumer Tolerance	N	Mean	Std. Dev	CV	COD
Most consumers buy fake goods knowingly	184	3.95	0.93	0.24	0.06
Consumers provide the demand and market for sale of illicit trade	184	3.86	1.15	0.30	0.09
Higher taxes create greater incentives for traders to enter the illicit market	184	4.04	1.00	0.25	0.06
Consumers tend to prefer illicit goods as it helps them avoid taxes	184	3.75	1.08	0.29	0.08
Price increases creates a market for illicit products	184	3.52	1.29	0.37	0.14
The main incentive for consumers intentionally buying fake products is lower prices	184	4.24	0.55	0.13	0.02
Consumer tolerance of illicit goods is holding back the efforts by the government to curb the trade	184	4.21	0.73	0.17	0.03
Illicit trade is slowly becoming common in the country	184	4.03	0.63	0.16	0.03
Average		**3.95**	**0.97**	**0.25**	**0.06**

Source: (Research Data, 2022)

4.4.2 Trade Networks

The mean and standard deviation for the specific attributes of trade networks are as presented in Table 4.9 Results demonstrate that the selected border stations are experiencing cases of trade networks. This is supported by the fact that on a five-point likert scale, the mean scores for attributes related to trade networks was greater than 3. The respondents agreed that trade networks are what drives illicit trade (Mean=4.08, std. dev=0.63, CV=0.15, COD=0.02), illicit networks utilize technological advancements for illicit gain (Mean=4.04, std. dev=0.88, CV=0.22, COD=0.05), availability of funding for illicit trade makes it difficult to curb it (Mean=3.65, std. dev=0.96, CV=0.26, COD=0.07), the traffickers operate in networks that makes it hard to curb illicit trade (Mean=3.94, std. dev=1.02, CV=0.26, COD=0.07) and that complicit corrupt officials make it easy for illicit traders (Mean=4.08, std. dev=0.93, CV=0.23, COD=0.05).

Further, the respondents also agreed that shadow-network of criminal activities facilitate the transit of illegal products (Mean=4.21, std. dev=0.69, CV=0.16, COD=0.02), networks guide the transfer of illicit products (Mean=4.03, std. dev=0.63, CV=0.16, COD=0.03), and that Institutions are ineffective at curbing wildlife trafficking, partly due to the lack of information detailing activities within illicit trading networks (Mean=4.03, std. dev=0.52, CV=0.13, COD=0.02). The overall mean was 4.01 implying that on average, respondents agreed that trade networks exists across the selected border stations in Kenya.

Table 4.9: Descriptive Statistics for Trade Networks

Trade Networks	N	Mean	Std. Dev	CV	COD
Trade networks are what drives illicit trade	184	4.08	0.63	0.15	0.02
Illicit networks utilize technological advancements for illicit gain	184	4.04	0.88	0.22	0.05
Availability of funding for illicit trade makes it difficult to curb it	184	3.65	0.96	0.26	0.07
The traffickers operate in networks that makes it hard to curb illicit trade	184	3.94	1.02	0.26	0.07
Complicit corrupt officials make it easy for illicit traders	184	4.08	0.93	0.23	0.05
Shadow-network of criminal activities facilitate the transit of illegal products	184	4.21	0.69	0.16	0.02
Networks guide the transfer of illicit products	184	4.03	0.63	0.16	0.03
Institutions are ineffective at curbing wildlife trafficking, partly due to the lack of information detailing activities within illicit trading networks	184	4.03	0.52	0.13	0.02
Average		**4.01**	**0.82**	**0.20**	**0.04**

Source: (Research Data, 2022)

4.4.3 Porous Borders

The mean and standard deviation for the specific attributes of porous borders are as presented in Table 4.10. Results demonstrate that porous borders are being experienced in the selected border stations to a great extent. This is supported by the fact that on a

five-point likert scale, the mean scores for attributes related to porous borders was greater than 3.

The respondents agreed that porous borders encourage illicit trade by bypassing delays at customs and border posts (Mean=3.43, std. dev=1.35, CV=0.39, COD=0.15), the inadequate manning of border entries facilitates illicit trade for illicit gain (Mean=4.00, std. dev=0.55, CV=0.14, COD=0.02), corruption and porous borders are among the underlying reasons for the increase in illicit trade (Mean=3.91, std. dev=0.67, CV=0.17, COD=0.03), porous borders are mostly associated with laxity in the manner of handling activities at the borders especially by the various agencies (Mean=3.82, std. dev=0.80, CV=0.21, COD=0.04) and that lack of adequate personnel to man border entries lead to an increase in illicit trade (Mean=4.08, std. dev=0.93, CV=0.20, COD=0.04).

Further, the respondents also agreed that border security agents do not have enough resources to curb illicit trade (Mean=3.97, std. dev=0.58, CV=0.15, COD=0.02), and that lack of modern technological devices to man borders make it difficult to curb illicit trade (Mean=3.82, std. dev=0.83, CV=0.22, COD=0.05). The overall mean was 3.83 implying that on average, respondents agreed that porous borders are an issue across the three selected border stations in Kenya.

Table 4.10: Descriptive Statistics for Porous Borders

Statement	N	Mean	Std. Dev	CV	COD
Porous borders encourage illicit trade by bypassing delays at customs and border posts	184	3.43	1.35	0.39	0.15
The inadequate manning of border entries facilitates illicit trade for illicit gain	184	4.00	0.55	0.14	0.02
Corruption and porous borders are among the underlying reasons for the increase in illicit trade	184	3.91	0.67	0.17	0.03
Porous borders are mostly associated with laxity in the manner of handling activities at the borders especially by the various agencies	184	3.82	0.80	0.21	0.04
Lack of adequate personnel to man border entries lead to an increase in illicit trade	184	3.85	0.78	0.20	0.04
Border security agents do not have enough resources to curb illicit trade	184	3.97	0.58	0.15	0.02
Lack of modern technological devices to man borders make it difficult to curb illicit trade	184	3.82	0.83	0.22	0.05
Average		**3.83**	**0.93**	**0.24**	**0.05**

Source: (Research Data, 2022)

4.4.4 Level of Illicit Trade

The mean and standard deviation for the specific attributes of level of illicit trade are as presented in Table 4.4.4. Results demonstrate that illicit trade is being experienced to a great extent. This can be explained by the fact that the average mean score for all the measures of level of illicit trade was more than 3.

The respondents agreed that their border experiences cases of smuggling (Mean=4.21, std. dev=0.73, CV=0.17, COD=0.03), cases of counterfeiting are common (Mean=4.03, std. dev=0.63, CV=0.16, COD=0.03), piracy cases are reported frequently (Mean=4.45, std. dev=0.50, CV=0.11, COD=0.01), there are cases of substandard goods (Mean=4.33, std. dev=0.53, CV=0.12, COD=0.01) and that transit fraud cases are experienced (Mean=3.85, std. dev=0.78, CV=0.20, COD=0.04). Further, the respondents also agreed that their border experiences cases of prohibited or illegal

goods once in a while (Mean=3.97, std. dev=0.58, CV=0.15, COD=0.02). The overall mean was 4.14 implying that on average, respondents agreed that illicit trade is common issue across the three selected border stations in Kenya.

Table 4.11: Descriptive Statistics for Level of Illicit Trade

Statement	N	Mean	Std. Dev.	CV	COD
This border experiences cases of smuggling	184	4.21	0.73	0.17	0.03
Cases of counterfeiting are common in this border	184	4.03	0.63	0.16	0.03
Piracy cases are reported frequently in this border	184	4.45	0.50	0.11	0.01
There are cases of substandard goods in this border	184	4.33	0.53	0.12	0.01
Transit fraud cases are experienced in this border	184	3.85	0.78	0.20	0.04
The border experiences cases of prohibited or illegal goods once in a while	184	3.97	0.58	0.15	0.02
Average		**4.14**	**0.68**	**0.16**	**0.02**

Source: (Research Data, 2022)

4.5 Regression Assumptions

These are tests of confirmatory, suitability and stability of the ordinary least square (Inferential statistics) properties carried out before estimation and evaluation that includes correlations, regression, test of hypothesis and analysis of variance on data and Model adopted. The outcomes of these statistical tests are showed in this section.

4.5.1 Tests of Normality

To check for normality, the Shapiro-Wilk test was used. This test was used as it is the most appropriate for samples more than 50 but less than 1000. This test determines the degree of data normalcy by detecting the presence of skewness, kurtosis, or both. The Shapiro-Wilk statistic ranges from 0 to 1, with values greater than 0.05 suggesting normal data. If it is less than 0.05, the data deviates significantly from the normal distribution. Table 4.12 displays the results of the normality test.

The Shapiro-Wilk test was used to confirm data normality, and the findings showed that all variables had a p-value greater than 0.05 ($p > 0.05$). The term normality refers to the assumption that the mean's sampling distribution is normal. Because all of the p-values are greater than the cutoff limit of 0.05, the hypothesis that the data was taken from a normally distributed population is confirmed.

Table 4.12 Test of Normality

	Shapiro-Wilk		
Study variables	Statistic	Df	Sig.
Consumer tolerance	.881	184	.723
Trade networks	.892	184	.784
Porous borders	.918	184	.822
Level of illicit trade	.874	184	.812

Source: (Research Data, 2022)

4.5.2 Tests of Multicollinearity

Multicollinearity was tested by variance inflation factors and tolerance. Multicollinearity occurs when there is a high degree of correlation between independent variables. Multicollinearity is tested using variance inflation factor (VIF). The VIF measures the factor by which the variance of estimated coefficient is inflated over the case of no correlation among the independent variables. If no two independent variables are correlated, then all the VIF's will be 1. VIF of 5 indicate there is multicollinearity and 10 show serious multicollinearity. The results show the variance inflation factor (VIF) which was used to test for multicollinearity for this study. Tolerance measures the influence of one independent variable on all other independent variables, and is an inverse of VIF. All variables had a VIF of between 1.02 and 1.30 while tolerance values were between 0.771 and 0.978. This was an indicator that there was no multicollinearity among the independent variables. The test results are shown in Table 4.13

Table 4.13: Test of Multicollinearity

Variable	VIF	Tolerance
Consumer tolerance	1.30	0.771
Trade networks	1.27	0.785
Porous borders	1.02	0.978
Mean VIF	1.20	

Source: (Research Data, 2022)

4.5.3 Tests of Heteroskedasticity

Heteroskedasticity was tested by Breusch-Pegan-Godfrey test. When the variance of the errors of the dependent variable is not the same across the data, heteroskedasticity arises. It arises when the variance of mistakes varies depending on the independent variables' values. Heteroskedasticity is a systematic shift in the spread of the residuals over the range of measured values in regression analysis. The assumption in ordinary least squares regression is that residuals are drawn from a population with a constant variance. When heteroskedasticity is high in this regression, it can cause substantial distortions in the results and weaken the analysis, raising the risk of a type 1 mistake. Breusch-Pegan-Godfrey test was used to determine homogeneity in this research. This test determines if the variation between the independent and dependent variables is the same. If the Breusch-Pegan-Godfrey test for Equality of Variances is statistically significant $\alpha = 0.05$, the variances between groups are uneven. It is a test to see if the dispersion of the scores in the variables is roughly the same. The P-values of Breusch-Pegan-Godfrey test for homogeneity of variances were greater than 0.05, as shown in Table 4.14. As a result, the test was not significant at 0.05, indicating homogeneity.

Table 4.14: Test of Heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of levels of illicit trade
chi2(1) = 0.94
Prob > chi2 = 0.3315

Source: (Research Data, 2022)

4.5.4 Linearity Test

The study ANOVA test was used to test for linearity of the data as shown in Table 4.15. The findings above revealed that the model was statistically significant since the p value of 0.000 was less than conventional p value of 0.05. The results indicated that consumer tolerance, trade networks and porous borders have a linear relationship with the level of illicit trade.

Table 4.15: ANOVA Test of Linearity

Indicator	Sum of Squares	Df	Mean Square	F	Sig.
Regression	39.046	3	13.015	152.944	0.000
Residual	23.402	180	0.085		
Total	62.448	183			

Source: (Research Data, 2022)

4.6 Inferential Analysis

The inferential statistics for all the variables are presented in this section. The inferential statistics were Pearson correlations and multiple regressions. Pearson correlations were used to establish the relation between all the variables and regression was performed to establish the relation between the determinants (consumer tolerance, trade networks, porous borders) and level of illicit trade.

4.6.1 Correlation Analysis

The correlation analysis aided in demonstrating the association between the dependent and independent variables. This entailed the r coefficient and whether the association is positive or negative. This is as illustrated in Table 4.16. The correlation results demonstrate a strong, positive and significant association between consumer tolerance and level of illicit trade as reflected by a Pearson correlation coefficient of 0.743 and a P-value of 0.000. This is an indicator that more consumer tolerance translates to increased level of illicit trade. The correlation results also demonstrate a strong, positive

and substantial association between trade networks and level of illicit trade as reflected by a Pearson correlation coefficient of 0.715 and a P-value of 0.000. This is an indicator that enhancements in trade networks translate to increased level of illicit trade. Further, the correlation results demonstrate a strong, positive and substantial association between porous borders and level of illicit trade as reflected by a Pearson correlation coefficient of 0.766 and a P-value of 0.000. This is an indicator that porous borders increase the level of illicit trade.

Table 4.16: Correlation Matrix

Variable		Level of illicit trade	Consumer tolerance	Trade networks	Porous borders
Level of illicit trade	Pearson Correlation	1			
Consumer tolerance	Pearson Correlation	0.743	1		
Trade networks	Pearson Correlation	0.715	0.386	1	
Porous borders	Pearson Correlation	0.766	0.451	0.343	1

Source: (Research Data, 2022)

4.6.2 Regression Results

The regression analysis encompasses the model fitness, the Analysis of Variance (ANOVA) and the regression coefficients. From the model results in (Table 4.17), Consumer tolerance, trade networks and porous borders explain 62.1% (Adj.R^2= 0.621) variation in the level of illicit trade with the 37.9% being un-explained factors not identified for the study as captured by the residual (RSS = 0.379). This implies that the model is robust and satisfactory in linking the predictor variables (consumer tolerance, trade networks and porous borders) and level of illicit trade.

Table 4.17: Model Fitness

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.791	0.625	0.621	0.29172

Source: (Research Data, 2022)

Results in Table 4.18 confirm the significance of the model indicating that consumer tolerance, trade networks and porous borders are significant predictors of the level of level of illicit trade (F statistic = 152.944, Sig. =0.000<0.05).

Table 4.18: Analysis of Variance

Indicator	Sum of Squares	Df	Mean Square	F	Sig.
Regression	39.046	3	13.015	152.944	0.000
Residual	23.402	180	0.085		
Total	62.448	183			

Source: (Research Data, 2022)

The regression analysis of consumer tolerance (0.285, 0.000 < 0.05), trade networks (0.172, 0.016< 0.05) and porous borders (0.379, 0.000 < 0.05) demonstrated a positive significant influence on level of illicit trade as shown in table 4.19.

Table 4.19: Regression Coefficients

Variable	B	Std. Error	Beta	T	Sig.
(Constant)	2.056	0.17		12.111	0.000
Consumer tolerance	0.226	0.057	0.285	3.938	0.000
Trade networks	0.144	0.059	0.172	2.436	0.016
Porous borders	0.168	0.037	0.379	4.559	0.000

Source: (Research Data, 2022)

Results demonstrated a positively significant relationship between consumer tolerance and level of illicit trade (β 0.285, P 0.000). This illustrate that increase in consumer tolerance by one unit would cause an increase on level of illicit trade by 0.285 units. Results also portrayed a positively significant relationship between trade networks and level of illicit trade (β 0.172, P 0.016). This point out that increase in trade networks by

one unit would cause an increase on level of illicit trade by 0.172 units. Further, results demonstrated a positively significant relationship between porous borders and level of illicit trade (β 0.379, P 0.000). This illustrates that increase in the level of porous borders by one unit would cause an increase on level of illicit trade by 0.379 units.

The resulting regression model is as follows:

$$\mathbf{Y = 2.056 + 0.285X_1 + 0.172X_2 + 0.379X_3}$$

Where

Y = Level of illicit trade,

X_1 – Consumer tolerance,

X_2 – Trade networks,

X_3 – Porous borders

4.7 Hypothesis Testing

The hypotheses were tested using multiple linear regressions. Table 4.6.2 shows multiple regression results. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the Ho_1 is not rejected but if it's less than 0.05, the Ho_1 is rejected.

4.7.1 Consumer Tolerance and Level of Illicit Trade

H_{01}: Consumer Tolerance has no significant effect on level of Illicit Trade of selected border stations in Kenya

The results in Table 4.6.2 show that the p-value was 0.000<0.05. This indicates that the null hypothesis is rejected hence there is a significant effect of consumer tolerance on the level of illicit trade of selected border stations in Kenya. Consumer tolerance was positively and significantly related with level of illicit trade of selected border stations

in Kenya (β=0.285, p=0.000). The study results show that consumer tolerance is a significant factor affecting level of illicit trade.

The findings of this study concur with those of Karkare *et al.* (2021) who investigated the informal cross-border trade in West Africa. The study established that knowing and unknowing consumers are drivers of illicit trade because the products are perceived to be readily available and affordable to many consumers. The findings are also in line with Foltea (2020) who investigated the issue of Illicit Tobacco Trade in the UK. The study revealed that ultimately, illicit tobacco trade is the outcome of demand and supply. Consumers wish to save money, demanding cheaper or not available tobacco products, while illicit suppliers wish to make money and are thus interested in meeting demand to ensure larger sales, increased market shares, and greater profit.

4.7.2 Trade Networks and Level of Illicit Trade

H_{02}: Trade networks have no significant effect on level of Illicit Trade of selected border stations in Kenya.

Results in Table 4.6.2 show that the p-value was 0.016<0.05. This indicates that the null hypothesis is rejected hence there is a significant effect of trade networks on level of illicit trade of selected border stations in Kenya. Trade networks was positively and significantly related with level of illicit trade of selected border stations in Kenya (β=0.172, p=0.016). The study results show that trade networks is a significant factor affecting level of illicit trade.

The study findings are in line with Beqiraj et *al.* (2020) who studied policy tolerance of economic crime in Italy. Using a newly built regional dataset and a dynamic panel model, the study found evidence of the dual impact of counterfeiting. The study found shadow-network of criminal activities facilitates the transit of illegal products. The

findings also concur with Champeyrache (2019) who investigated how new illicit economy is threatening our future. The study established that networks guide the transfer of illicit products.

4.7.3 Porous Borders and Level of Illicit Trade

H_{03}: porous borders have no significant effect on level of illicit trade of selected border stations in Kenya.

Results in Table 4.6.2 show that the p-value was 0.000<0.05. This indicates that the null hypothesis is rejected hence there is a significant effect of porous borders on level of illicit trade of selected border stations in Kenya. Porous borders was positively and significantly related with level of illicit trade of selected border stations in Kenya (β=0.379, p=0.000). The study results show that porous borders are a significant factor affecting level of illicit trade.

The study findings agree with Makokha (2020) who focused on enforcement challenges in addressing migrant smuggling into Kenya, the case of Moyale Border. The study revealed the presence of the vastness and porosity of the border, language barrier and the lack of translators, insecurity resulting from inter-communal conflicts, and local communities that are economically dependent on migrant smuggling and therefore engaged in facilitating the illicit trade. The study is also in line with Akinyem (2019) who investigated porous borders and increasing human trafficking in West Africa. The study concludes that human trafficking can be reduced to the barest minimum in the region, if West African human and material resources are combined together to expand regional capacity for border security. Implying that the borders are free for contrabands and all kind of criminal activities without fear thus there is need to improve

management and insecurity at the West African borders in order to achieve the control to the vice.

4.7.4 Overall Model Hypothesis Testing

The study overall model sought to investigate whether the three selected determinants (consumer tolerance, trade networks and porous borders) have a significant effect on the level of illicit trade of selected border stations in Kenya. The null hypothesis stated that the three do not have a significant effect. Results in Table 4.16 confirm the significance of the model indicating that consumer tolerance, trade networks and porous borders are significant predictors of the level of level of illicit trade (F statistic = 152.944, Sig. =0.000<0.05). This means that the overall hypothesis is rejected and a conclusion made that the three selected determinants have a significant effect on the level of illicit trade of selected border stations in Kenya.

The findings are in line with Foltea (2020) who investigated the issue of Illicit Tobacco Trade in the UK. The study revealed that ultimately, illicit tobacco trade is the outcome of demand and supply. Consumers wish to save money, demanding cheaper or not available tobacco products, while illicit suppliers wish to make money and are thus interested in meeting demand to ensure larger sales, increased market shares, and greater profit. The findings also concur with Champeyrache (2019) who investigated how new illicit economy is threatening our future. The study established that networks guide the transfer of illicit products.

4.8 Discussion of Findings

This section presented a discussion of the outcomes of various tests carried out on the study. The results of each of the objectives in this study were discussed.

4.8.1 Consumer Tolerance and Level of Illicit Trade

The study's first objective was to assess the influence of consumer tolerance on level of illicit trade of selected border stations in Kenya. The correlation results demonstrate a strong, positive and significant association between consumer tolerance and level of illicit trade as reflected by a Pearson correlation coefficient of 0.743 and a P-value of 0.000. This is an indicator that more consumer tolerance translates to increased level of illicit trade. Consumer tolerance was positively and significantly related with level of illicit trade of selected border stations in Kenya (β=0.285, p=0.000). The study results show that consumer tolerance is a significant factor affecting level of illicit trade. The findings of this study concur with those of Karkare *et al.* (2021) who investigated the informal cross-border trade in West Africa. The study established that knowing and unknowing consumers are drivers of illicit trade because the products are perceived to be readily available and affordable to many consumers.

4.8.2 Trade Networks and Level of Illicit Trade

The study's second objective was to evaluate the influence of trade networks on the selected border stations' level of illicit trade. The correlation results demonstrate a strong, positive and substantial association between trade networks and level of illicit trade as reflected by a Pearson correlation coefficient of 0.715 and a P-value of 0.000. This is an indicator that enhancements in trade networks translate to increased level of illicit trade. Trade networks was positively and significantly related with level of illicit trade of selected border stations in Kenya (β=0.172, p=0.016). The study results show that trade networks is a significant factor affecting level of illicit trade. The findings concur with Champeyrache (2019) who investigated how new illicit economy is threatening our future. The study established that networks guide the transfer of illicit products.

4.8.3 Porous Borders and Level of Illicit Trade

The study's third objective was to determine influence of porous borders on level of illicit trade of selected border stations. Correlation results demonstrate a strong, positive and substantial association between porous borders and level of illicit trade as reflected by a Pearson correlation coefficient of 0.766 and a P-value of 0.000. This is an indicator that porous borders increase the level of illicit trade. Porous borders was positively and significantly related with level of illicit trade of selected border stations in Kenya (β=0.379, p=0.000). The study results show that porous borders are a significant factor affecting level of illicit trade. The study findings agree with Makokha (2020) who focused on enforcement challenges in addressing migrant smuggling into Kenya, the case of Moyale Border. The study revealed the presence of the vastness and porosity of the border, language barrier and the lack of translators, insecurity resulting from inter-communal conflicts, and local communities that are economically dependent on migrant smuggling and therefore engaged in facilitating the illicit trade.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a summary, conclusion, and recommendations. The summary, conclusion, recommendations for improvements for the study are presented in line with the study research objectives. Recommendations for further research are also presented in this chapter.

5.1 Summary of Findings

This study broadly sought to explore the factors influencing the level of illicit trade across selected boarder stations in Kenya focusing on Mombasa port, Namanga and Taveta borders in, Kenya. The study specific objectives were to investigate how consumer tolerance, trade networks and porous borders influence the level of illicit trade across selected boarder stations in Kenya. The study was anchored on theory of consumer ethics, institutional theory and theory of reasoned action. The study adopted an explanatory research survey design. The population of the study was the 516 officers of state agencies working at the port of Mombasa, Namanga border and Taveta border. Yamane formula was used to arrive at the sample size of 225 who were arrived at using stratified random sampling. The study was carried in the month of May and June 2022. The location of the study was Mombasa port, Namanga and Taveta borders. The study relied on primary data which was collected by use of a questionnaire. The statistics generated were descriptive statistics which included frequencies and percentages and inferential statistics which included both correlation and regression. The findings of this study are summarized in this section in line with the research objectives.

5.1.1 Consumer Tolerance and Level of Illicit Trade

The study's first objective was to assess the influence of consumer tolerance on level of illicit trade of selected border stations in Kenya. The study found out that most consumers buy fake goods knowingly, consumers provide the demand and market for sale of illicit trade, higher taxes create greater incentives for traders to enter the illicit market, consumers tend to prefer illicit goods as it helps them avoid taxes and that price increases creates a market for illicit products. Further, the study found that the main incentive for consumers intentionally buying fake products is lower prices, consumer tolerance of illicit goods is holding back the efforts by the government to curb the trade and that illicit trade is slowly becoming common in the country.

The correlation analysis conducted was aimed at testing the association between the consumer tolerance and level of illicit trade. These results revealed a significant positive association between consumer tolerance and level of illicit trade. The null hypothesis was rejected, and conclusion made that consumer tolerance significantly influenced the selected border stations' level of illicit trade. The results established that a unit change in consumer tolerance would result in 0.285 change of level of illicit trade. This was a confirmation also that there was a significant positive influence of consumer tolerance on level of illicit trade of selected border stations in Kenya.

5.1.2 Trade Networks and Level of Illicit Trade

The study's second objective was to evaluate the influence of trade networks on the selected border stations' level of illicit trade. The descriptive analysis findings revealed that trade networks are what drives illicit trade, illicit networks utilize technological advancements for illicit gain, availability of funding for illicit trade makes it difficult to curb it, the traffickers operate in networks that makes it hard to curb illicit trade and

that complicit corrupt officials make it easy for illicit traders. Further, the study revealed that shadow-network of criminal activities facilitate the transit of illegal products, networks guide the transfer of illicit products and that institutions are ineffective at curbing wildlife trafficking, partly due to the lack of information detailing activities within illicit trading networks.

Correlation analysis done to test the strength of the association between trade networks and level of illicit trade of selected border stations in Kenya, the results established a positive and moderately strong association between the two variables. The findings also implied that an increase in trade networks would result to an increase in level of illicit trade. Results also established that a unit change in trade networks would result in 0.172 units change in level of illicit trade of the selected border stations in Kenya. This confirmed the significant influence of trade networks on level of illicit trade. The null hypothesis was rejected, and a conclusion made that trade networks had a significant influence on level of illicit trade of selected border stations in Kenya.

5.1.3 Porous Borders and Level of Illicit Trade

The study's third objective was to determine influence of porous borders on level of illicit trade of selected border stations. The descriptive statistics regarding porous borders reveal that porous borders encourage illicit trade by bypassing delays at customs and border posts, the inadequate manning of border entries facilitates illicit trade for illicit gain, corruption and porous borders are among the underlying reasons for the increase in illicit trade, porous borders are mostly associated with laxity in the manner of handling activities at the borders especially by the various agencies and that lack of adequate personnel to man border entries lead to an increase in illicit trade. Further, the respondents also agreed that border security agents do not have enough

resources to curb illicit trade, and that lack of modern technological devices to man borders make it difficult to curb illicit trade.

The results of correlation analysis indicated that porous borders had a positive and significant correlation with level of illicit trade. The correlation findings implied that a positive increase in porous borders would result to a corresponding positive change in level of illicit trade. The regression results established a positive and significant relationship between porous borders and level of illicit trade. The results implied that a unit change in porous borders would result to an increase in level of illicit trade of selected border stations in Kenya by 0.379 units. The null hypothesis was rejected, and conclusion made that porous borders had a significant influence on level of illicit trade of selected border stations."

5.2 Conclusions of the Findings

This section presents the conclusions drawn from the research findings for each of the research objectives.

5.2.1 Consumer Tolerance and Level of Illicit Trade

The study concluded that consumer tolerance influenced level of illicit trade of selected border stations positively. This was reflected by the regression and correlation results support the results as there was a positive and significant relationship between consumer tolerance and level of illicit trade. The study further concluded that most consumers buy fake goods knowingly and that they provide the demand and market for sale of illicit trade. The study further concludes that consumer tolerance of illicit goods is holding back the efforts by the government to curb the trade.

5.2.2 Trade Networks and Level of Illicit Trade

The study concluded that trade networks influenced level of illicit trade of the selected border stations positively. This was reflected by the regression and correlation results support the results as there exist a positive and significant relationship between trade networks and level of illicit trade. Trade networks are what drive illicit trade. The study further concludes that traffickers operate in networks that makes it hard to curb illicit trade and that complicit corrupt officials make it easy for illicit traders.

5.2.3 Porous Borders and Level of Illicit Trade

This study concluded that porous borders are one of the factors that can explain a rise in the level of illicit trade. Porous borders encourage illicit trade by bypassing delays at customs and border posts. The study also concludes that the inadequate manning of border entries facilitates illicit trade for illicit gain and that corruption and porous borders are among the underlying reasons for the increase in illicit trade. The study further concludes that lack of adequate personnel to man border entries lead to an increase in illicit trade.

5.3 Recommendations of the Study

5.3.1 Consumer Tolerance

The study recommends that the government should conduct sensitization programs to educate consumers on the harm associated with illicit trades and the role they play in encouraging illicit trade. The policy makers should also develop clear guidelines on the consequences of buying illicit goods.

5.3.2 Trade Networks

The study recommends the need for government to invest in advanced technologies that will enable its officials curb the levels of illicit trade. The criminals operate in networks

that utilize advanced technology and therefore need the government to invest on the same. Further, the government should come up with tough measures of dealing with corrupt officials.

5.3.3 Porous Borders

The study recommends that the government should invest more resources in the border stations as border security agents do not have enough resources to curb illicit trade. The government should also employ more security agents as currently they are in adequate. Policy makers should come up with policies guiding effective running of affairs at the border stations.

5.4 Suggestions for Further Research

The findings of this study revealed that consumer tolerance, trade networks, and porous borders, accounted for 62.5% of the variation in the selected border stations' level of illicit trade. The study suggests that future studies should focus on establishing other factors that account for the remaining 37.5%. Further studies can also focus on a comparative analysis of border stations to bring out clearly the difference in terms of their level of illicit trade. Finally, this study was based on a multiple linear regression model, which has its own limitations like errors and misleading results resulting from a change in variable. Future researchers should focus on models like the Vector Error Correction Model (VECM) in exploring the various determinants of the level of illicit trade, with reference to East Africa.

REFERENCES

African Development Bank (2016). Illicit trade in natural resources in Africa — A forthcoming report from the African Natural Resources Center. Available at https://www.afdb.org/fileadmin/uploads/afdb/Documents/Events/IFF/Documents_IFF/ANRC_ILLICIT_TRADE_IN_NATURAL_RESOURCES.pdf.

Ajzen, I. (1991). The theory of planned behavior. *Organ Behav Hum*, *50*(12), 179–211.

Akinyem, D. (2019). Porous Borders and Increasing Human Trafficking in West Africa: Issues and Challenges. *International Journal of Social Science Research*, 7(2), 42-52.

Allen, E. (2012). The illicit trade in tobacco products and how to tackle it. *World Customs Journal*, *6*(2), 121-130.

Arroyave, F. J., Petersen, A. M., Jenkins, J., & Hurtado, R. (2020). Multiplex networks reveal geographic constraints on illicit wildlife trafficking. *Applied Network Science*, *5*(1), 1-20.

Basit, T. N. (2013). Ethics, reflexivity and access in educational research: issues in intergenerational investigation. *Research papers in Education*, *28*(4), 506-517.

Basu, G. (2014). Combating illicit trade and transnational smuggling: key challenges for customs and border control agencies. *World Customs Journal*, *8*(2), 15-20.

Bell, E., Bryman, A., & Harley, B. (2018). *Business research methods*. Oxford university press.

Beqiraj, E., Fedeli, S., & Giuriato, L. (2020). Policy tolerance of economic crime? An empirical analysis of the effect of counterfeiting on Italian trade. *European Journal of Political Economy*, *65*, 101933.

Bryman, A. (2011). Research methods in the study of leadership. *The SAGE handbook of leadership*, 15-28.

Champeyrache, C. (2019). How a New Illicit Economy Is Threatening Our Future. *Œconomia. History, Methodology, Philosophy*, (9-2), 403-406.

Chaudhry, P. & Zimmerman, A. (2012). The Impact of Plain Packaging on the Illicit Trade in Tobacco Products. Available at https://www.jti.com/sites/default/files/key-regulatory-submissions-documents/expert-reports/illicit-trade/1-impact-on-illicit-trade.pdf.

Chavarria, L., Walker, Q. & Bahamon, D. (2020). Illicit Trade in Times

Chuchu, T., Chinomona, R., & Pamacheche, R. (2016). Factors that influence the purchase of counterfeit products by students: A case of South Africa. In *International Conference on Ethics of Business, Economics and Social Sciences-ICEBESS* (pp. 324-337).

Conner, M. (2020). Theory of planned behavior. *Handbook of Sport Psychology*, 3.

Cooper, D. R., & Schindler, P. S. (2011). Qualitative research. *Business research methods*, *4*(1), 160-182.

Cooper, D. R., Schindler, P. S., & Sun, J. (2006). Business research methods. [12] Ference, TP, Stoner, JAF, Warren, EK 1977. Managing the career stagnation, academy of management review, 2: 602-612.

Creswell, J. W., & Creswell, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.

Dacin, M. T. (1997). Isomorphism in context: The power and prescription of institutional norms. *Academy of management journal*, *40*(1), 46-81.

Deephouse, D. L., & Suchman, M. (2008). Legitimacy in organizational institutionalism. *The Sage handbook of organizational institutionalism*, *49*, 77.

Dewey, M. (2016). *Porous borders: The study of illegal markets from a sociological perspective* (No. 16/2). MPIfG Discussion Paper. DOI:10.13140/RG.2.2.33374.84806.

Dhaouadi, R. (2019).Cross-border smuggling / What drives illicit trade in North Africa?, Enact Africa, 2019, https://enactafrica.org/enact-observer/what-drives-illicit-trade-in-north-africa.

DiMaggio, P. J., & Powell, W. W. (1983). And collective rationality in organizational fields. *American Sociological Review*, *48*(2), 147-160.

DiMaggio, P. J., & Powell, W. W. (1991). The new institutionalism in organisational analysis. The new institutionalism in organisational analysis.

Efthymiou, L., Mavragani, A., & Tsagarakis, K. P. (2016). Quantifying the effect of macroeconomic and social factors on illegal e-waste trade. *International journal of environmental research and public health*, *13*(8), 789.

Engel, F., Roger D., & David T. (1978). *Consumer Behavior* 3d ed. Hinsdale IL: Dryden.

Fishbein, M., & Ajzen, I. (1980). Predicting and understanding consumer behavior: Attitude-behavior correspondence. *Understanding attitudes and predicting social behavior*, 148-172.

Foltea, M. (2020). The Issue of Illicit Tobacco Trade in the UK. In *Brexit and the Control of Tobacco Illicit Trade* (pp. 21-31). Springer, Cham.

Gallien, M. (2018). Informal institutions and the regulation of smuggling in North Africa. Perspectives on Politics. ISSN 1537-5927 (In Press).

Goodstein, J., & Richard Scott, W. (2002). Institutional theory and institutional change. *Academy of management journal*, *45*(1), 45-56.

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-based nursing*, *18*(3), 66-67.

Howard, A., & Sheth, N. (1969). *The Theory of Buyer Behavior*. New York: Wiley

Huang, H. H. (2017). The Theory of Reasoned Action: Shanzhaiji or Counterfeit. *Chinese Language, Literature & Culture*, *2*(2), 10.

Hunt, D., & Vitell, J. (1986). A general theory of marketing ethics. *Journal of Macromarketing 6* (Spring): 5-15.

Hunt, D., & Vitell, J. (1993). The general theory of marketing ethics: A retrospective and revision. *In Ethics in Marketing*, edited by N.C. Smith and J.A. Quelch, 775-84. Homewood, IL: Richard D. Irwin.

Hunt, D., & Vitell, J. (2005). Personal moral codes and the Hunt-Vitell theory of ethics: Why do people's ethical judgments differ? *In Business ethics: New challenges for business schools and corporate leaders*, edited by Robert A. Peterson and O.C. Ferrell, 18-37. Armonk: NY: M.E. Sharpe.

Hunt, D., & Vitell, J. (2006). The general theory of marketing ethics: A revision and three questions. *Journal of Macromarketing 26* (2), 1-11.

International Chamber of Commerce (2020). Global impacts of counterfeiting and piracy to reach US$4.2 trillion by 2022. Available at https://iccwbo.org/media-wall/news-speeches/global-impacts-counterfeiting-piracy-reach-us4-2-trillion-2022/.

Jones, Thomas M. 1991. Ethical decision making by individuals in organizations: An issue contingent model. *Academy of Management Review 16* (February): 366-395.

Karkare, P., Byiers, B., Apiko, P., & Kane, M. (2021). Informal Cross-Border Trade In West Africa. Discussion Paper No. 300.

Kim, H., & Karpova, E. (2010). Consumer attitudes toward fashion counterfeits: Application of the theory of planned behavior. *Clothing and Textiles research journal*, *28*(2), 79-94.

Lammers, John & Garcia, Mattea. (2017). Institutional Theory Approaches. 10.1002/9781118955567.wbieoc113.

Letete, E., & Sarr, M. (2017). *Illicit Financial Flows and Political Institutions in Kenya*. African Development Bank.

Little, P. D., Tiki, W., & Debsu, D. N. (2015). Formal or informal, legal or illegal: the ambiguous nature of cross-border livestock trade in the Horn of Africa. *Journal of Borderlands Studies*, *30*(3), 405-421.

Makokha, R. S. (2020). *Enforcement Challenges in Addressing Migrant Smuggling Into Kenya-a Case of Moyale Border* (Doctoral dissertation, University of Nairobi).

Marcketti, S. B., & Shelley, M. C. (2009). Consumer concern, knowledge and attitude towards counterfeit apparel products. *International Journal of Consumer Studies*, *33*(3), 327-337.

Mashiri, E., & Sebele-Mpofu, F. Y. (2015). Illicit trade, economic growth and the role of Customs: a literature review. *World Customs Journal*, *9*(2), 38-50.

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American journal of sociology*, *83*(2), 340-363.

Mutahi, F. (2018). Illicit trade is a national disaster, KAM , Kenya Association of Manufacturers , 2018, https://citizentv.co.ke/business/illicit-trade-is-a-national-disaster-kam-201261/.

National Crime Research Center (2017), Borderland crimes in Kenya, , http://crimeresearch.go.ke/wp-content/uploads/2018/11/Borderland-Crimes-and-Security-Threats.pdf.

Newstrom, John W. and William A. Ruch. 1975. The ethics of management and the management of ethics. *MSU Business Topics 23* (Winter): 29-37.

Nkoroi, I. (2015). *Assessing the informal cross border trade between Kenya and Uganda* (Doctoral dissertation, University of Nairobi).

OECD. (2015), *Governance Frameworks to Counter Illicit Trade, OECD Publishing, Paris*. http://dx.doi.org/10.1787/9789264291652-end of Coronavirus, Euromonitor International, 2020, available at , https://www.cnc.cl/wp-content/uploads/2020/09/wpIllicitTrade20.pdf

Oxford Ecoomics, (2018). Combatting Illicit Trade: Consumer Motivations and Stakeholder Perspectives June 2018, available at, https://www.oxfordeconomics.com/thought-leadership/combatting-illicit-trade

Petty, R. E., & Cacioppo, J. (1986). *Communication and Persuasion: Central and Peripheral Routes to Persuasion.* New York: Springer-Verlag.

Puffer, S., M. & McCarthy, M., J. (2015). Institutional Theory, *International Management*, 6(1), 1-15.

Radisch, Jack. (2016). Illicit Trade: Converging Criminal Networks. 10.1787/9789264251847-en.

Rasmussen, J. (2017). Sweet Secrets: Sugar Smuggling and State Formation in the Kenya–Somalia Borderlands. DIIS Working Paper 2017: 11. Copenhagen: Danish Institute for International Studies.

Robles-Avila, S. E., & Vasquez-Parraga, A. Z. (2018). Consumer Propensity to Adopt Illicit Goods: Theory, Methods, and Results. *Theoretical Economics Letters*, *8*(03), 292.

Rossman, G., & Marshall, C. (2010). Designing qualitive research. In *EUA: Congress cataloging-in-Publication Data*.

Scott, W. R. (2005). Institutional theory: Contributing to a theoretical research program. *Great minds in management: The process of theory development*, *37*(2), 460-484.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.

Sforza, L. & Picard, J. (2017). Empowering Consumers to Fight Illicit Trade with Mobile Technology. Conference: 5th OECD Task Force meeting on Countering Illicit Trade At: Paris.

Suddaby, R. (2010). Challenges for institutional theory. *Journal of management inquiry*, *19*(1), 14-20.

UNCTAD. (2019). *Trade and the Sustainable Development Goals.* Geneva: UNCTAD

Upagade, V., & Shende, A. (2012). Research Methodology 2nd Edition S. *Chand & Company ltd ram Nagar New Delhi*.

Van Walbeek, C., Blecher, E., Gilmore, A., & Ross, H. (2012). Price and tax measures and illicit trade in the framework convention on tobacco control: what we know and what research is required. *Nicotine & Tobacco Research*, *15*(4), 767-776.

Veríssimo, D., & Glikman, J. A. (2020). Influencing consumer demand is vital for tackling the illegal wildlife trade. *People and Nature*, *2*(4), 872-876.

Woody, C. (2018, February 1). Mexican drug cartels are preying on a multibillion-dollar industry and taking a deadly toll on the workers who run it. *Business Insider*. Retrieved from https://www.businessinsider.com

World Customs Organization. (2018). *Illicit Trade Report 2018*. https://unctad.org/meetings/en/Contribution/DITC2020_Contribution_UNCTAD%20Illicit%20Trade%20Forum_WCO_en.pdf

World Health Organization (2020), The illicit trade report, Brussels, 2020, http://www.euro.who.int/__data/assets/pdf_file/0011/278093/Stop-illicit-trade-tobacco-en.pdf?ua=1.

APPENDICES

Appendix I: Research Questionnaire

Dear Respondent,

I am undertaking a Master of Tax and Customs Administration degree at Moi University and I have developed the questionnaire with respect to **FACTORS INFLUENCING THE LEVEL OF ILLICIT TRADE ACROSS SELECTED BORDER STATIONS IN KENYA**. Kindly, specify with a tick or filling in the provided space(s). This is only for research work and all evidence will be preserved with the confidentiality it deserves.

Section A: Demographic Information

1. Which state agency do you work for?

Kenya Revenue Authority ( )

Kenya Bureau of Standards ( )

Port Security Office ( )

Anti-Counterfeit Agency ( )

National Intelligence Service ( )

Directorate of Criminal Investigation ( )

2. In which border are you currently situated?

Mombasa ( ) Namanga ( )

Taveta ( )

3. Which is your position in the agency?

Senior Officer ( )

Middle- level Officer ( )

Junior Officer ( )

4. How long have you worked in your position in this agency?

(a) Less than 5years ( )

(b) 6 to 10years ( )

(c) 11 to 15years ( )

(d) Over 15years ( )

5. Please indicate your gender:

(a) Male ( ) (b) Female ( )

6. What is your highest level of education?

(a) Certificate ( ) (b) Diploma ( )

(c) Bachelor's degree ( ) (c) Master's degree ( )

(d) Other ( ) If other, please expound…….

7. Please indicate your age bracket:

(a) Less than 30 years ( ) (b) 31 - 40years ( )

(c) 41– 50 years ( ) (d) Above 50 years ( )

Section B: Factors Influencing the Level of Illicit Trade

Consumer Tolerance

Indicate your level of agreement with the following statements by ticking at the appropriate box. Use the rating criteria: *1. Strongly Disagree (SD), 2. Disagree (D), 3. Uncertain (U), 4. Agree (A), 5. Strongly Agree (SA)*

Statements	**1**	**2**	**3**	**4**	**5**
Most consumers buy fake goods knowingly					
Consumers provide the demand and market for sale of illicit trade					
Higher taxes create greater incentives for traders to enter the illicit market					
Consumers tend to prefer illicit goods as it helps them avoid taxes					
Price increases creates a market for illicit products					
The main incentive for consumers intentionally buying fake products is lower prices					
Consumer tolerance of illicit goods is holding back the efforts by the government to curb the trade					
Illicit trade is slowly becoming common in the country					

Trade Networks

Indicate your level of agreement with the following statements by ticking at the appropriate box. Use the rating criteria: *1. Strongly Disagree (SD), 2. Disagree (D), 3. Uncertain (U), 4. Agree (A), 5. Strongly Agree (SA)*

Statements	**1**	**2**	**3**	**4**	**5**
Trade networks are what drives illicit trade					
Illicit networks utilize technological advancements for illicit gain					
Availability of funding for illicit trade makes it difficult to curb it					
The traffickers operate in networks that makes it hard to curb illicit trade					
Complicit corrupt officials make it easy for illicit traders					
Shadow-network of criminal activities facilitate the transit of illegal products					
Networks guide the transfer of illicit products					
Institutions are ineffective at curbing wildlife trafficking, partly due to the lack of information detailing activities within illicit trading networks					

Porous Borders

Indicate your level of agreement with the following statements by ticking at the appropriate box. Use the rating criteria: *1. Strongly Disagree (SD), 2. Disagree (D), 3. Uncertain (U), 4. Agree (A), 5. Strongly Agree (SA)*

Statements	**1**	**2**	**3**	**4**	**5**
Porous borders encourage illicit trade by bypassing delays at customs and border posts					
The inadequate manning of border entries facilitates illicit trade for illicit gain					
Corruption and porous borders are among the underlying reasons for the increase in illicit trade					
Porous borders are mostly associated with laxity in the manner of handling activities at the borders especially by the various agencies					
Lack of adequate personnel to man border entries lead to an increase in illicit trade					
Border security agents do not have enough resources to curb illicit trade					
Lack of modern technological devices to man borders make it difficult to curb illicit trade					

Section C: Level of Illicit Trade

Indicate your level of agreement with the following statements by ticking at the appropriate box. Use the rating criteria: *1. Strongly Disagree (SD), 2. Disagree (D), 3. Uncertain (U), 4. Agree (A), 5. Strongly Agree (SA)*

Statements	**1**	**2**	**3**	**4**	**5**
This border experiences cases of smuggling					
Cases of counterfeiting are common in this border					
Piracy cases are reported frequently in this border					
There are cases of substandard goods in this border					
Transit fraud cases are experienced in this border					
The border experiences cases of prohibited or illegal goods once in a while					

THANK YOU VERY MUCH

Appendix II: NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **268832**

Date of Issue: **25/July/2022**

RESEARCH LICENSE

This is to Certify that Mr.. Zuberi Issa Mwangi of Kenya School of Revenue Administration, has been licensed to conduct research in Kajiado, Mombasa, Taita-Taveta on the topic: DETERMINANTS OF THE LEVEL OF ILLICIT TRADE ACROSS SELECT BORDER STATIONS IN KENYA for the period ending : 25/July/2023.

License No: **NACOSTI/P/22/19246**

268832

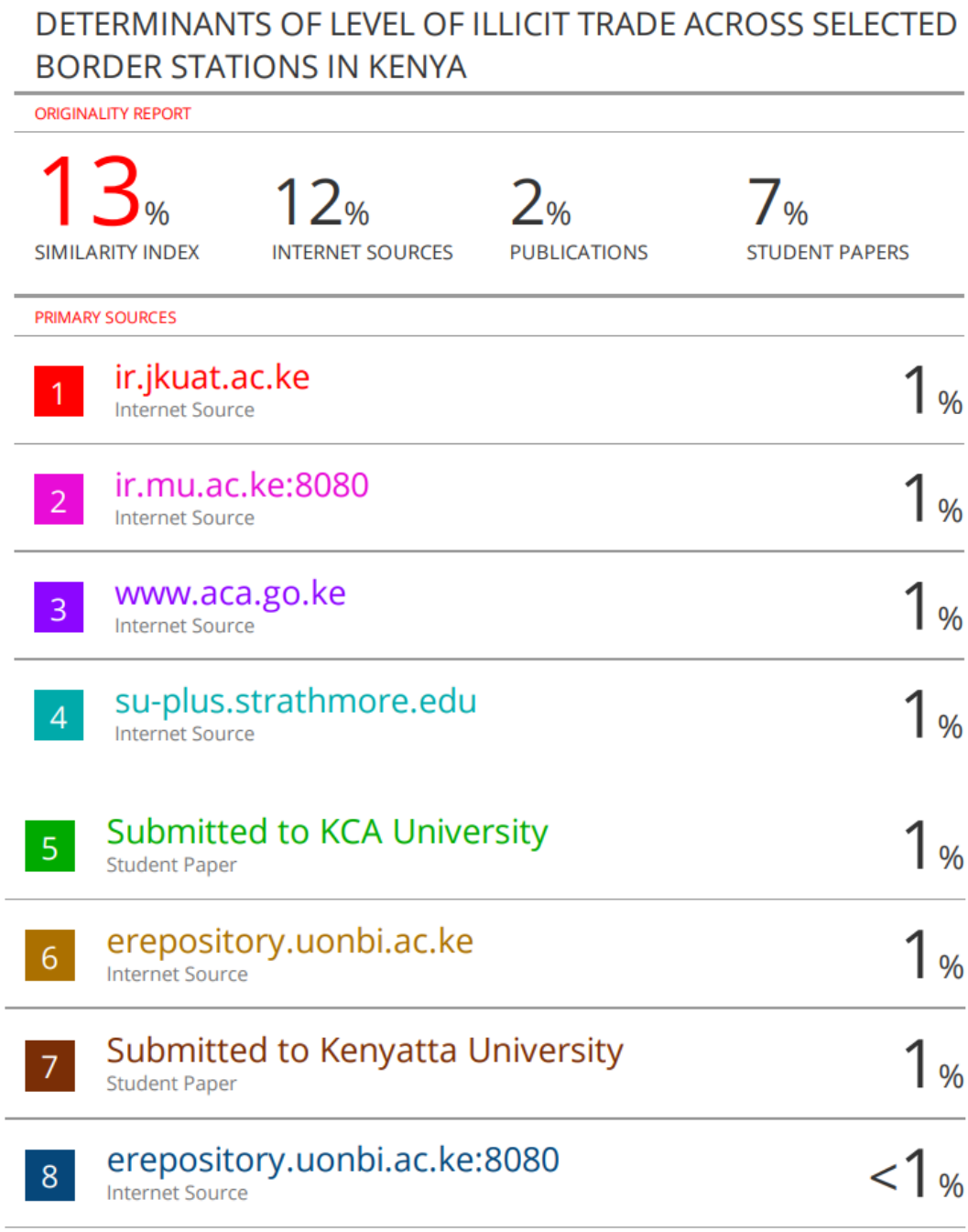
Applicant Identification Number

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.

Appendix III: Plagiarism Report



DETERMINANTS OF LEVEL OF ILLICIT TRADE ACROSS SELECTED BORDER STATIONS IN KENYA

ORIGINALITY REPORT

13%	12%	2%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	ir.jkuat.ac.ke Internet Source	1%
2	ir.mu.ac.ke:8080 Internet Source	1%
3	www.aca.go.ke Internet Source	1%
4	su-plus.strathmore.edu Internet Source	1%
5	Submitted to KCA University Student Paper	1%
6	erepository.uonbi.ac.ke Internet Source	1%
7	Submitted to Kenyatta University Student Paper	1%
8	erepository.uonbi.ac.ke:8080 Internet Source	<1%