EFFECT OF ONE STOP BORDER POST INITIATIVES ON TRADE FACILITATION IN KENYA- A SURVEY OF MALABA, BUSIA AND NAMANGA BORDER POSTS.

BY

YEDO SHIBIA OCHE

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DECLARATION

Declaration by Candidate

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

Signature: …… Date: ……

YEDO SHIBIA OCHE.

MU / KESRA / 105 / 0137 / 2019.

Declaration by the Supervisors

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

Signature: …… Date: ……

DR. DORIS GITONGA, (PhD)

KESRA / MOI UNIVERSITY.

Signature: …… Date: ……

DR. PATRICK LIMO

SCHOOL OF BUSINESS AND ECONOMICS.

MOI UNIVERSITY.

DEDICATION

This research project is dedicated to my late Dad Mr. Ahmed Shibia Oche and to my lovely Mom Mrs. Fatuma Mohamed for their steady and endless support during the time I have been busy working on the project, may almighty God bless them.

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I thank Almighty God for His kindness and favor for taking me this far. To my dear mother, thank you so much mum, for your wonderful prayers and encouragement, and to my older brothers, I thank you all for walking with me throughout the course of my studies. To my Research Project Supervisors Dr. Doris Gitonga and Dr. Patrick Limo, thank you so much for enabling me to write this research project through your wonderful guidance, may the Almighty bless you abundantly. To my nephews and nieces, Ahmed and Zara, may you live long, I thank God for your wonderful concern throughout my studies; your wonderful curiosity in whatever I was doing motivated me in working harder. May God's favor be upon you, always!

ABSTRACT

Trade facilitation is the streamlining and harmonization of international trade procedures that block the flow of goods, people and vehicles across international borders, resulting in increased costs of conducting business, delays in goods clearance, and a decrease in commodity flow. One of the main tools for ensuring that trade facilitation is completely achieved across national borders is the One Stop Border Post. The purpose of this study was to evaluate the effect of One Stop Border Post Initiatives on trade facilitation in Kenya, with the specific objectives of determining the effect of border procedures on trade facilitation in Kenya, examining the effect of information and communication technology on trade facilitation in Kenya, and establishing the effect of the legal framework on trade facilitation in Kenya. Coordination theory, Technology Acceptance Theory and Territorialism theory are the theories that guided this study. The research utilized explanatory research design to determine the detailed causal effect between independent and dependent variables. The target population for this study was 526 employees from three agencies that are key players in everyday border customs operations: Customs, Bureau of Standards and Immigrations, as well as traders at Malaba, Busia and Namanga border stations who typically participate in the border process. A stratified random sampling technique was employed to draw the sample of 227 respondents. The primary data was collected using a self-administered closed-ended questionnaire presented on a five-point Likert scale. A Cronbach's alpha reliability coefficient of 0.7 was used as a threshold to accept the reliability of the elements in the questionnaire. Data analysis was done using Statistical Package for Social Scientists (SPSS) version .22. Descriptive statistics such as mean and standard deviation and further inferential statistics including correlation and regression analysis were employed to describe the results of the study. The model summary results revealed that there was a 50.3 % variation in trade facilitation due to changes in border procedure, information technology and legal framework. The remaining 49.7% of factors that may affect trade facilitation are infrastructure, information availability, and border agency collaboration. The study established that Border Procedure ($\beta1=0.477$, $p=0.000$), Information Technology ($\beta2=0.214$, $p=0.003$) and Legal Framework ($\beta3=0.164$, $p=0.006$) all had a positive and significant relationship on trade facilitation in Kenya. This study recommended that the border authorities should establish policies to strengthen and harmonize border procedures, deploy modern ICT infrastructure in all of their operations, and provide a proper and harmonized legal framework to facilitate trade. Future research should investigate into other factors that may influence trade facilitation in Kenya, based on the findings of this study.

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ABBREVIATIONS AND ACRONYMS

AfDB	Africa Development Bank.
EAC	East African Community.
ECLA	Economic Commission for Latin America and the Caribbean.
IBMS	Integrated Border Management System.
ICA	International Charity for Africa.
iCMS	Integrated Custom Management System
IOM	International Organization for Migration.
KAM	Kenya Association of Manufacturers.
KRA	Kenya Revenue Authority.
MOA	Memorandum of Agreement.
OSBP	One Stop Border Post.
REC	Regional Economic Commission.
RECTS	Regional Electronic Cargo Tracking System
SWS	Single Window System
TAM	Technology Acceptance Model.
TMEA	Trade Mark East Africa.
TS	Trade Facilitation.
TTC	Trade Transaction Cost
UNE/CE	United Nation Economic Commission for Africa.
WCO	World Custom Organization.
WTO	World Trade Organization.

OPERATIONAL DEFINITION OF TERMS

Border procedures refer to customs practices and documentary requirements that are imposed on goods and services crossing national borders, the procedures also encompass the entire range of controls and facilitation procedures for imported and exported products, passenger movement, and commodities in transit (Kagira & Bernard, 2011).

Coordination refers to the additional information processing that occurs when several, connected actors pursue goals that a single actor pursuing the same goals would not achieve (Malone,1988).

Information and communications technology (**ICT**) refers to unified communications and the integration of telecommunications and computers that allow users to access, store, transmit, comprehend, and manipulate data (Murray, James,2011-12-18).

Integrated System This can be defined as the unification of telecommunications, communications and technologies, such as institutional software and storage systems, so that users can access, transmit and store data (Morris & Mukandi,2007).

Legal framework are laws that are more precise than constitutional provisions, they establish general commitments and principles, but leave it to the governments the task of enacting the further legislation and other specific actions as needed (Knuth, Lidija,2011).

One Stop Border Post refers to the legal and institutional framework, facilities, and associated procedures that enable goods, people, and vehicles to stop in a single facility in which they undergo necessary controls following applicable regional and national laws to exit one state and enter the adjoining state (Nepad,2017).

Reliability	refers to the degree to which a certain instrument can consistently produce the same result across a series of repeated testing (Orodho,2005).
Single Window	is the facility that allows trade-related information and documents to be submitted only once at a single entry point to meet all regulatory requirements for import, export, and transit (World Bank Group,2018).
Territorialism	is described as a claim and attempt to impose authority over a certain geographical area in order to affect, influence, or control activities, interactions, or access (Hay,1997).
Trade facilitation	is the streamlining and unification of international trade procedures, which are the actions, practices, and formalities involved in the collection, presentation, communication, and data processing necessary for the flow of goods in international trade (World Trade Organization,2005).
Transaction Cost	These are costs direct or indirect that result in delayed clearance of goods through custom systems and administrations through the international supply chain (Verwaal & Donkers,2003).
Validity	refers to the extent to which an instrument measures what it was designed to measure or what it was supposed to measure (Weirsma,1990).

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the research background, problem presentation, general objectives, specific objectives, research hypotheses, importance and scope of research on the impact of one-stop-shop border initiatives on trade facilitation in Kenya.

1.1 Background of the Study

According to the World Customs Organization (2002), trade facilitation is about avoiding unnecessary trade restrictions through the use of modern procedures and technologies, while improving quality controls in a coordinated and globally aligned manner. Trade facilitation entails the simplification and harmonization of activities, procedures, and formalities required for international trade, payments, and border logistics while preserving relevant legal and policy objectives. As a result, global commerce and the World Bank Group have prioritized trade facilitation, which involves lowering transaction and operational costs associated with cross-border movement of goods and services. Reforms to trade facilitation are particularly beneficial to poor countries; the World Trade Organization estimates that they can cut trade expenses by 15% for low- and middle-income countries (World Trade Organization, 2005). The one stop border posts are unlikely to reach its full potential in facilitating trade until **border procedures** are improved, **information technologies** are implemented, and a **legal framework** is created to support it.

Border Procedures

Importers and exporters are typically in charge of worldwide trade, and they want international border procedures to be easier and more consistent, as this is critical for

international trade to be as efficient as possible. These operational concerns primarily concern the simplification and harmonization of customs rules and procedures, the setup of controls, and standard operating procedures for joint activities, as well as coordination between the various agencies at the border. Customs procedure simplification is critical for improving customs clearance and control efficiency, increasing revenue collection capacity, and reducing trade-related expenses and delays. Electronic declarations and payments, standardization of required documentation, and reducing the number of copies required for goods declarations are examples of these procedures (Polner, 2011).

Information Communication Technologies

Furthermore, the use of information technology strives to lower commercial expenses by introducing automated procedures and contemporary equipment such as scanners. This affects the ease with which border guards may collaborate as well as the transparency of trade norms and processes (Eugenia, 2018). OSBP uses information and communication technology (ICT) to communicate data, primarily for risk management and to speed up processing by lowering procedure time. ICTs also make efficient use of limited resources by facilitating the establishment of risk management systems and assessing trade movement and trends within internal/authority networks.

Legal Framework

Border procedures should be backed up by legislation and regulations. The goal of the regulation is to develop a clear, straightforward, and transparent legal framework. Border controls entail a variety of responsibilities carried out by officials from various government entities within the power granted by a state's national laws. The functions

of various officials and the powers exercised by them must be legitimate, as they may limit or violate the rights of individuals or legal entities.

As a result, each of these components must be developed in order to establish the close cooperation between countries needed to run an efficient OSBP (Kieck, 2010). One-stop border posts have been set up at various border crossings in Kenya to improve trade facilitation, with the study focusing on the Malaba, Busia and Namanga borders, the country's main border crossings.

1.1.1 Global perspective

Trade facilitation is becoming a more critical issue globally as the demand for free movement of products and services grows as a result of increased trade, lower tariffs following the Uruguay Round of trade liberalization, and the rising availability of modern technologies. In particular, international trade at borders is associated with complex and multiple border procedures, excessive and numerous documentation requirements, lack of transparency of rules and regulations, limited use of modern customs techniques, excessive time for permits and permits, lack of coordination and cooperation. between customs authorities. and other inspection bodies. Dealing with international borders becomes more complex with many state actors involved (Wheelen & Hunger, 2008). When these variables are combined, they result in a loss of business and expensive trade transaction fees (TTC). TTCs typically account for 2–15% of the value of traded goods (OECD, 2003).

The origins and importance of trade facilitation as a topic for WTO negotiations can be traced back to the 1996 Singapore Ministerial Conference and the Doha Development Agenda, which ministers endorsed as the framework for the agreement (Hoek et al, 2012). Despite proposals from the Doha Development Agenda to begin negotiations

following the Cancun conference, there was little movement in this area at the succeeding WTO Ministerial Conferences in Seattle, Doha, and Cancun. Following the Cancun Conference, the WTO General Council passed a resolution on August 1, 2004 (known as the July Package) to begin trade facilitation-led negotiations.

1.1.2 The Regional perspective

Africa has the world's longest average customs waits, at 12 days on average. Customs clearance takes one day in Estonia and Lithuania, but 30 days on average in Ethiopia (Buyonge and Kireeva, 2008). According to the World Bank (2016), poor trade and transport facilitation accounts for the vast majority of border delays in Africa. This delay and bureaucracy makes transportation costs in Africa more expensive than in other parts of the world, such as South America and Asian countries. The effect of this phenomenon has a negative impact on the competitiveness of products from the African continent in the international market (International Charity for Africa, 2010). Recognizing the benefits of less stringent borders for cross-border trade, many governments have committed to promoting trade facilitation policies with the primary aim of removing non-tariff and other bureaucratic barriers in regulating products and people across borders (World Trade Organization, 2005). The regional economic community (EAC, COMESA, and SADC) actively implemented trade facilitation projects to integrate policies and procedures to ensure the smooth movement of passengers and commodities in the region. To assist regional trade and transportation, a number of common instruments and standards have been established, including harmonized transit fares, regional carrier permits, and a regional customs transit system (Kenya Producers Association, 2012).

1.1.3 Kenyan Context

Since Kenya is a co-founder of the WTO, adherence to the principles of the World Trade Organization is an integral part of its economic policy. All of its trading partners enjoy the Most Favored Nation (NOB) regime. Kenya is a member of COMESA, EAC, OAU, IGAD and ACP/EU and aims for preferential trade agreements to improve trade flows. The country has amended a number of laws, including anti-dumping, balancing and copyright laws, to be in line with World Trade Organization agreements. It also implements all WTO trade facilitation agreements, including valuation agreements, pre-shipment control agreements, rules of origin, import licensing schemes, technical barriers to trade, and sanitary and phytosanitary measures (Kenya Manufacturers Association, 2012). An effort to overhaul and modernize the country's Customs Service has also been initiated (CRM). The project's goal is to modernize customs administration in accordance with the WTO agreement and the amended Kyoto agreement on customs procedural simplification and harmonization.

The East African Community has committed to establishing uniform border crossings within the community to halve the time spent at the border. USAID ECA Mall and Kenya's Ministry of Transport collaborated on research and business strategy in 2004 to establish a single border station for road and rail trade in Malaba. Later, several border crossings were established in Busia, Namanga and many others. The items are currently being reviewed at the Uganda site by the Kenyan and Ugandan Tax Service in Malaba and Busia. This has reduced the time required to process documents (Kieck, 2010). Under the updated Kyoto Convention, the concept of a one-stop border post office was developed as one of several major border trade promotion measures adopted under the umbrella of the World Trade Agreements and the World Customs Organization (Moise & Sorescu, 2013).

1.1.4 The One Stop Border Post Initiatives

The One Stop Integrated Border Post (OSBP) idea attempts to make cross-border movement of goods and persons easier. It is a border management system in which customs and other government agencies from neighboring countries collaborate to perform all major entry and exit processes (Icafrica 2011), implying that border users are allowed to enter and exit through a single point, reducing travel time for passengers and trucks and potentially saving money. For increased trade, economic progress, and regional security, the OSBP concept is vital. According to Crown Agents (2013), the main benefits are faster border clearance and less duplication by border authorities, which boosts trade competitiveness by reducing costs and time.

1.1.5 The Malaba, Busia & Namanga OSBP

The Malaba border post is a crucial border crossing point for Kenyan and Ugandan road and rail traffic. It is roughly 438 kilometers from Nairobi, Kenya's capital and largest city, and 215 kilometers from Kampala, Uganda's capital and largest city, in the west of Kenya and the east of Uganda. Borders, which are characterized by large movements of goods and people, oil tankers, small cross-border trade, and trucks transporting containers, imports, exports, and goods en route to other landlocked countries like Rwanda, Burundi, South Sudan, and the Democratic Republic of Congo, account for the majority of trade and passenger traffic between the two East African countries. Customs, immigration, standards offices, health and safety agencies, and health services have all established government entities to ensure that trade and commerce flow smoothly across the border. Financial institutions supplied by Stan Bank and Barclays Bank, as well as telecommunications infrastructure, are available. The county government, clearing and freight forwarders, small trader's groups, and transporters are among the other major users of borders (USAID, 2010).

Then we come upon Busia County, which extends into Uganda and has a population of 743,946 people, on the Kenya/Uganda border. It is a frontier town on Kenya's western border, having a similar name on the Ugandan side of the divide. Busia OSBP is about 431 kilometers west of Nairobi, Kenya's capital and largest city, by road. This area is roughly 202 kilometers from Kampala, Uganda's capital and largest city, and is directly east of Busia, Uganda. With an average of 894 vehicles crossing each day, the Busia border is one of the busiest in East Africa (TMEA, 2011). Busia serves as a transit point for products bound for at least five landlocked nations, including Rwanda, Burundi, the Democratic Republic of Congo (DRC), Uganda, and South Sudan. For the most part, these countries rely on Kenya and Tanzania's Dar es-Salaam port to ease the transportation of products.

Namanga comes to a close with the chosen border post. It's roughly 160 km southeast of Nairobi and 100 km west of Arusha. The Kenyan side of the border lies in the Rift Valley's Kajiado County, which has a population of 687,313, and the Tanzanian side is in Longido District, 130 kilometers from Arusha. The Amboseli National Park in Kenya and the Kilimanjaro Mountains in Tanzania are well-known in Namanga. The famous Masai Mara surrounds Loitoktok township, while Taita Taveta township, with a population of 284,657, is wedged into Kenyan territory but bordered by Tanzania, and relies on trading between the two nations, fueled by the Mombasa Taveta Kampala railway line. Namanga is one of the most important border crossings between the two countries due to its proximity to major cities (MOPDD, 2009).

1.1.6 Trade Facilitation Context

Trade facilitation refers to a set of policies that expedite and simplify the technical and legal processes for goods entering or departing a country for international trade. As a result, trade facilitation encompasses the entire range of border operations, from the

electronic interchange of cargo data to the simplicity and standardization of trade documentation to the ability to appeal border agency administrative decisions (WTO,2013).

Trade facilitation has become a critical component of international trade efficiency and country economic success. This is owing to its increasing relevance in attracting direct foreign investments and its impact on competitiveness and market integration. It has acquired prominence in the international political agenda over the last decade, culminating in the WTO's conclusion of the Trade Facilitation Agreement as well as the establishment of extensive international technical assistance programs for developing and transition countries (World Bank,2012). The main purpose of trade facilitation is to make cross-border trade (imports and exports) faster, cheaper, and more predictable while maintaining safety and security. In terms of focus, it's about streamlining and harmonizing formalities, procedures, and the associated exchange of information and documents amongst supply chain partners (Grainger,2011).

In a globalized world where items frequently cross borders as intermediate and final products, trade facilitation helps reduce overall trade costs and time to do business while also increasing trade volume. Trade facilitation also improves predictability in international trade and allows developing or transitioning nations to participate more fully in international trade, resulting in increased economic welfare, particularly for developing and emerging economies. Reducing unnecessary delays and expenses encourages investments and fosters growth and job creation for countries as a whole. Trade facilitation measures can assist underdeveloped countries in particular, since exporting commodities takes three times as long as it does in affluent countries. Exports from underdeveloped countries require approximately twice as many paperwork and six times as much time as exports from developed countries (World Bank,2012).

1.2 Statement of the Problem

Almost all elements in the trade cycle must transit through global supply chains around the world, implying that trade should flow freely across borders (Doyle, 2011). While the transition to the main road was relatively quick, time wasted at borders and checkpoints in corridors quickly became very expensive (World Bank, 2016). As a result, the free movement of commodities, people, and vehicles across international borders has been hampered.

Traders crossing our borders encounter a range of obstacles. The main challenges at Kenya's border have been delays in transit products and a high cost of doing business, resulting in congestion at border facilities and a drop in the volume of import and export activities (World Bank, 2013). Malaba has been marred by a number of challenges which have hindered trade facilitation, the border has been criticized for the delays in transit goods and high cost of doing business. While a trucker's travel from Malaba to Mombasa takes only two days, waiting in a 20-kilometer-long line at the Malaba border may take up to five days (The E.A trade hub,2013). Similar to Malaba, the Busia border has received unfavorable notoriety and media attention for its characteristics, including as cargo clearance delays and long lines that obstruct the free flow of transit products. Unending traffic jams, some reaching for more than 6 kilometers, threatened to stifle trade at the Busia OSBP. This has been blamed on the OSBP's sluggish clearance process, which contradicts the OSBP's primary goal (to reduce delays and congestion) (Crown agent,2014). The Namanga border has been chastised for long passage times and a high cost of doing business. Kenyan traders who imported items from Tanzania have been reported to have had to wait four days for their consignment to be cleared. Custom officers stationed at Namanga were criticized by track drivers for introducing needless paperwork in order to exploit loopholes and extort money (TMEA,2011).

Transporters and agents who work on behalf of the traders have already gone on strike and slowed down as a result of the delays.

A range of causes contribute to the delays and increase in cost of trade, the most prominent of which are poor trade facilitation issues. Border trade facilitation concerns include complex and duplicative customs procedures, lack of transparent rules and regulations, excessive multiple documentation requirements, weak ICT infrastructure and multiplicity of state agencies at the border. The good effect of trade facilitation is hindered from being completely realized as a result of such impediments (World Bank, 2013).

In Kenya, the Single Border Checkpoint is a concept that has been developed to address these long-standing traditional barriers that have hampered international trade. According to USAID (2010), a one-stop border station coordinates transit clearance procedures by having border officials from two neighboring nations work together on transit documentation thus reducing time and also cutting the cost of conducting business in the region. Previous studies have been conducted to see if One Stop Border Post has an impact on trade facilitation, but these studies have not comprehensively established the role One Stop Border Post played in influencing trade facilitation in Kenya, particularly at the Malaba, Busia, and Namanga Border Stations. As a result, the current research aimed to bridge the gap by examining the influence of border procedure, information communication technology, and the legal framework on trade facilitation in Kenya.

1.3 Objectives of the Study

1.3.1 General Objectives of the Study

To assess the effect of one stop border post initiatives on trade facilitation in Kenya.

1.3.2 Specific Objectives of the Study

The specific objectives were as follow;

i. To determine the effect of border procedures on trade facilitation in Kenya.
ii. To examine the effect of information technology on trade facilitation in Kenya.
iii. To establish the effect of legal framework on trade facilitation in Kenya.

1.4 Research Hypothesis

The research hypothesis was as follow;

i. **H_{01}**: Border procedures has no significant effect on trade facilitation in Kenya.
ii. **H_{02}**: Information technology has no significant effect on trade facilitation in Kenya.
iii. **H_{03}**: Legal framework has no significant effect on trade facilitation in Kenya.

1.5 Significance of the Study

The research's findings are useful not only to all border agencies and stakeholders in border management, but also to other public sector policymakers, as they assist them in developing effective border control solutions that allow for seamless information flow between stakeholders and the facilitation of in-bound and out-bound travelers and goods. They are able to streamline their operations as a result, allowing for cross-border movement of goods. Immigration officials, in particular, benefit greatly from the research because it aids them in developing rules and procedures at the OSBPs.

The study's finding aids border authorities in coordinating their functions, effectively allocating resources, and carrying out collaborative operations like goods and cargo verification and inspections. It also assisted them in developing effective border control measures that allowed for the free passage of goods, people, and vehicles, thereby simplifying border operations and facilitating trade.

The research would be useful to policy makers to develop strategies to combat outdated systems, complex and duplicated procedures and practices, long turnaround times in clearing goods, and non-integrated systems, all of which will improve service delivery and make the country more internationally competitive. The study has also offered useful information to policymakers in Kenya's government, EAC partner states, and the EAC, encouraging them to explore adding OSBPs at all of their border control points to promote trade facilitation.

This study aims to serve as a foundation for future research by other scholars, particularly in East Africa, on topics of OSBP and trade facilitation. It serves as a primary source of primary material for comparative research on the benefits of OSBPs over the traditional two-stop border model on cross-border trade, providing scholars with rich material for further research.

1.6 Scope of the Study

The study's goal was to determine how one-stop border post initiatives in Kenya affected trade facilitation. The study covered Malaba, Busia, and Namanga one stop border posts, which are the top three busiest border crossings in the region. Border procedures, information and communication technology (ICT), and the legislative framework were the key variables covered. The target population was 526 employees from three agencies that are key players in everyday border customs operations: Customs, Bureau of Standards and Immigrations, as well as traders at Malaba, Busia and Namanga border stations who typically participate in the border process. From the population, a sample size of 227 respondents was drawn using a stratified random sampling technique. However, with reference to time scope, the research was conducted during a one-year period between 2021 to 2022.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this chapter, the study evaluated the literature on One-Stop Border Post Initiatives and Trade Facilitation. It presented concepts, the study's theoretical framework, and empirical investigations from previous researchers in order to provide insight into the research. The conceptual framework was offered after that.

2.1 Review of the Concepts

2.1.1 Trade Facilitation

Trade facilitation is gaining popularity and is at the heart of a lot of customs projects. Trade facilitation programs are largely regarded to increase cross-border movement of goods and services (Silva, 2015). Trade facilitation refers to policy initiatives that go beyond standard market access instruments like tariffs to reduce costs across borders. It looks at how the process of transferring commodities across borders can be improved in order to keep trade prices as low as possible while maintaining border security (Grainger 2011). There is no clear definition of trade facilitation, but any effort to ensure that legitimate trade flows take place with the least delay while maintaining appropriate regulations is considered essential. Streamlining and unifying the activities, processes, and formalities required for international trade, related payments, and border logistics, according to the IEG Approach Document (2017). Such a definition implies that not just the physical movement of items, but also the matching flow of information, is critical in the supply chain. It also includes all government agencies involved in the transportation of products, as well as various companies that do business and transfer goods. Overall trade facilitation indicators include trade cost, time/delays and trade volume (World Customs Organization, 2018).

2.1.2 One Stop Border Post Initiatives

The OSBP concept refers to the legal and institutional structures, facilities and processes that allow products, people and vehicles to stop at facilities and exercise the controls required under applicable regional and national laws for leaving and entering one country (Nepad, 2016). The International Organization for Migration (2015) defines it as a single and shared physical infrastructure in which adjacent nations' customs and border agencies function in tandem (side by side). The Global Partnership for the Facilitation of Transport and Trade also identifies it as a border crossing point where border guards from two neighboring countries share some security procedures and cross-border permits. More broadly, in OSBP, border control for leaving one country and entering another is carried out in a shared environment, subject to the principles of law enforcement and extraterritorial housing arrangements (OSBP Sourcebook, 2016). It involves, local, regional, and international coordination between authorities, data exchange via information and communication technology, simplification and harmonization of procedures, adaptation or construction of new facilities to facilitate trade, improve commercial tax collection, and maintain security by reducing terrorism and human trafficking risks and preventing transmission.

The OSBP idea encourages a coordinated and integrated strategy to enabling trade, increasing security, and facilitating people movement. It removes the need for people and products to stop twice for border crossing procedures (Crown agent, 2014). One Stop Border Posts play a critical role in ensuring that trade facilitation goals such as cost reduction and reduced transit times/delays in transportation corridors are met. It proposes the use of joint controls to reduce routine tasks and duplication of requirements, hence improving trade competitiveness by reducing costs and time.

Many countries, including Europe, the United States, Canada, Asia, and South America, have focused on improving border infrastructure and governance systems, with results (Perpetual Tours and Travel (ttpafrica, 2011). A one-stop-shop agreement has been implemented in South Africa at the Chirundu border crossing between Zambia and Zimbabwe, while an OSBP has been implemented in Mozambique at the Lebombo and Resano Garcia border crossings. On the Sesheke border, Namibia is working on the OSBP with Zambia; on the Oshikango and Santa Clara crossings with Angola; and on the Trans Kalahari and Mamuno borders with Botswana (AfDB, 2012). The East African Community (EAC), has embraced the concept at Lungalunga-Horohoro border (Kenya-Tanzania), Holili-Taveta border (between Kenya and Tanzania), Malaba-Busia borders (Uganda-Kenya), Namanga border (Kenya-Tanzania), Moyale (Kenya-Ethiopia) and the Kanyaru-Akanyaru border (Burundi-Rwanda) (ttpafrica, 2011). OSBP expansion will not only make cross-border operations easier and remove impediments to intra-regional trade; it will also expand markets and economies of scale, deepen economic links, and support the continent's overall development.

2.1.3 Border Procedure

Although the role of each institution is generally the same, the procedure for border crossings in OSBP is different from what happens in two-door border crossings in general. OSBP activities are based on simplification and harmonization of work processes and control of cooperation. OSBP becomes ineffective or ineffective if it is implemented without prior simplification and harmonization of cross-border procedures (Polner, 2011). While consumers only need to stop once at the border to complete entry and exit requirements, subjecting them to routine and unnecessary formalities will not reduce time spent at the border.

The introduction of a single window is one particular way to reduce border operations. A window is a physical or virtual facility where merchants can provide all documented criteria for products release and receive signals for delivery decisions (WTO 2015). This system has the added benefit of requiring a minimal level of coordination between internal border authorities to avoid duplication (and/or elimination of inconsistencies) of rules.

The evaluation and coordination process must continue to guarantee that OSBP implements cross-border approaches that are not only effective but also convenient and appropriate for the current scenario (Meyer-Gerbaulet, Batho & Grozdanova, 2014). In an OSBP environment, general operations and the need to comply with jurisdictions require special consideration when developing OSBP procedures.

Following the development of OSBP procedures, it is critical that border personnel receive adequate training in order to absorb the new procedures. Prior to the start of OSBP activities, training should be done. It is recommended that border authorities of neighboring countries should be trained together with employees of all border authorities whenever possible (Falifin & Silver, 2015). This method supports inter-agency development and international cooperation. OSBP projects should include training and awareness-raising initiatives for local communities and private sector service providers. Whatever method is used, the procedures should be in accordance with the policy, legal, and operational laws that govern the OSBP.

2.1.4 Information Communication Technology

ICT is a vital component of a shared one-stop system that streamlines documentation, manages borders, and modernizes customs, immigration, and related services (World Bank, 2016). One-stop border posts rely heavily on information and communication

technology (ICT). The increased volume of trade, arriving at the border and having to be handled by an approximately equal number of people, strikes a balance between trade control and facilitation (OSBP Sourcebook, 2016). ICT allows agencies at the national level to be more interconnected and coordinate their controls. It enables border agencies to divide its workforce into two OSBPs while still submitting data to the same network. It also enables for effective information sharing with neighboring states that operate border controls, as well as effective exit and entry processing coordination (Doyle, 2011). Various border agencies are bringing in a lot of duplicate and overlapping data. The OSBP should have a border management information system that allows all agencies to share basic data. It aims to make the flow of electronic data and traditional documents as well as the necessary interventions in the clearing process easier and more manageable (World Bank, 2013). Cross-border regulatory authorities must communicate crucial information on shipments crossing the border provided by the trading community. This aids in group decision-making and risk management, which can aid in the management of both high-risk and low-risk shipments (Fukuyama,2004).

To examine the impact of information technology on trade facilitation, the researcher will focus on the Single Window system, Integrated Custom Management System (iCMS), and Regional Electronic Cargo Tracking System (RECTS). By creating a single window, trade-related information and documents can only be sent once at a single point of entry to meet all regulatory requirements for import, export and transit. Border authorities and agencies should use the Single Window to coordinate their respective controls and explore providing payment options for relevant duties, taxes, and fees (World Bank Group,2018). Single Windows are essentially trade facilitation

instruments whose major objective is to simplify and harmonize cross-border commodity flow processes.

The Integrated Custom Management System (iCMS) replaces the legacy Simba system, which runs on multiple subsystems and requires multiple user authentication points, and was introduced in 2005. Unlike Simba, iCMS allows KRA to receive goods declarations before ships dock at the port, lowering the time it takes to clear commodities by anticipating risk assessments before consignments arrive at the port or at the border point (KRA,2019). By eliminating bureaucratic processes at ports and land borders, automating manual and semi-manual processes, and reducing system malfunctions, the iCMS system is intended to reduce import and export clearance times by at least 60%. Less paperwork will also assist customs operations, resulting in significant cost savings for corporations (Asiimwe,2014).

The Regional Electronic Cargo Tracking System (RECTS) uses information technology to improve transparency and control in the movement of national and international cargo. A road manifest is attached to a specific truck, and the truck is then assigned to a specific route without the need for human intervention because the information comes from integration with existing customs systems such as ASYCUDA, SIMBA, and other customs systems (Chimilila &Benjamin,2014). The RECTS keeps track of events for agencies and other interested parties throughout the voyage (the whole journey), from the moment of departure to the end destination. The truck position and cargo status are available in real-time, as well as other relevant events such as check point inspection, trip termination, and seal tamper. RECTS offers the capability to replay trips if stakeholders require it.

2.1.5 Legal Framework

In general, border controls entail the fulfillment of numerous responsibilities by officials from various government agencies within the power granted by a Country's national legislation. It is critical that the functions of these numerous officials, as well as the powers they wield, are legal, as they may result in a violation of anyone's rights (OSBP Sourcebook, 2011). OSBP adoption necessitates a thorough examination of the legal, regulatory, and institutional framework that regulates border agency operations (Bhero & Huffman, 2014). In addition, the requirements for implementing national border controls in foreign territories and implementing joint controls require conscious institutional arrangements to support OSBP operations. The application of the one-stop-shop concept requires a government agency to be able to enforce its laws in the jurisdictions of other countries. In other words, extraterritorial jurisdiction must be taken into account. The application of national law is usually accepted in international law to be limited to a country's sovereign territory (Milanovic, 2013). As a result, OSBP is founded on the extraterritorial law enforcement principle, which allows nations to apply some national laws outside their own borders (Haight, 2012).

2.2 Theoretical Review

The theoretical review aids in the identification of existing theories and their relationships. The key theoretical framework for researching the many variables that play a part in the One Stop Border Post Initiative and Trade Facilitation at Kenya Border Stations included coordination theory, technological acceptance theory and territorialism theory.

2.2.1 Coordination Theory

This theory was promoted by Crowston (1997). Coordination theory, he claims, is still a developing corpus of theories regarding how coordination might emerge in a variety

of systems. It is a collection of principles that govern how individual actors' activities should be coordinated or how they should collaborate in harmony (Malone, 1988). Participants in organizations confront coordination issues, according to this notion. These difficulties arise as a result of organizational dependencies that impede task execution efficiency. These dependencies could be critical to the organization's structure (Malone & Crowston, 1990). Departments of a government ministry, for example, are interconnected, restricting the changes that may be made to a single department without disrupting the efficient operation of the others (Richards, 2001).

Coordination theory implies that the actors must execute other duties, such as coordination mechanisms, in order to overcome these coordination issues. According to the idea, interdependence and coordination mechanisms are extensive in scope, arising in some form or another in almost every organization. Actors must also be aware that there are a variety of techniques for managing reliance, each of which might lead to different outcomes (Malone,1990). To summarize, an organization contemplating change should first identify critical dependencies and coordination challenges that are likely to arise, and then select from a variety of options the coordination mechanism that best achieves the desired goals in the given circumstances (Crowston, 1997). The fact that coordination mechanisms are variable aspects of the organization system and that the mechanism chosen has an impact on efficiency and goal achievement is a vital factor to remember (Hill, 1968).

Coordination theory is informed by and contributes to research in a variety of domains. One stop border post, for example, has a number of players, each of whom has a specific job to perform in ensuring that established goals are met (Kieck, 2010). Different authorities on both sides of the border are responsible for coordinating different operations to ensure cooperation. This theory's application in this study suggests that

multiple border operations are coordinated in such a way that border control for exiting one side and entering the other is conducted in a common space, resources and equipment are shared, and joint inspection and verification done all with the ultimate goal of increasing trade facilitation.

2.2.2 Technology Acceptance Theory

Technological Acceptance Theory is a subset of Theory of Action that focuses on technological adoption. It combines attitude and decided intention to describe the relationship between users' beliefs and their behavioral intentions. Davis et al. developed this theory in 1989, and it was used to model user adoption of technology. It says that people are more likely to adopt technology if they believe it will help them perform better at work and is simple to use. Technologies acceptance theory, according to Opoku (2006), refers to how individuals embrace and adopt new technology. The entire willingness of a user group to utilize or deploy IT for the tasks it is designed to assist has also been defined as user acceptance of technology (Dillon, 2001). As a result, user acceptability can be thought of as a function of user participation in technology use. Acceptance has been viewed as an outcome variable in a psychological process that consumers go through while making technology-related decisions.

The philosophy of Technological Acceptance has changed over time. It all started with Festinger's (1957) Cognitive Dissonance Theory, which explains how inconsistencies between one's cognition and reality affect one's subsequent cognition and behavior. It describes a behavior pattern in which a user has a preexisting belief about technology, has experienced its use over time, and has a post-use view. Then, in 1995, the Innovation Diffusion Theory was developed to explain how innovation travels from discovery to widespread adoption at both the individual and organizational levels (Ibrahim et al,2017).

Its relevance to this study is that, even though technology is projected to improve process efficiency, it may not be fully welcomed and may encounter opposition from users. As a result, it's critical to comprehend the impact of citizen adoption of technology on possible cost savings and system investment choices. Furthermore, the principle of technological acceptance promotes border control and trade facilitation among all regional players. New ways for monitoring border security and aiding in the improvement of border control operations are now possible thanks to technological advancements. This will make it easier to convey goods, people, and vehicles. Technology also helps to increase efficiency by enabling for faster and more efficient data or information transmission between border agencies, as well as shared risk management and efficient use of limited border management resources. Border agencies are encouraged to deploy cutting-edge, user-friendly technology to improve and establish more autonomy in certain border activities, such as cargo inspection and verification using scanning technology. Many border management stakeholders believe that using technology to execute basic border procedures online, such as document processing, declaration, and payment, reduces delays and costs while requiring little effort.

2.2.3 Territorialism Theory

According to Hay (1996), territorialism theory is rooted in the phenomenon of sovereignty. A sovereign state's sole jurisdiction over natural persons and other legal entities inside its borders is recognized under the territorial notion. This includes the right to prosecute persons for crimes committed within its boundaries, as well as the ability to arrest and detain anyone who enters the country (James, 1948). It practically prohibits nations from exerting sovereign rights over the territory of other states unless the practice is based on other sovereign principles such as nationality, passive

personality, protection, or possibly universal jurisdiction. Furthermore, this territorialism idea is based on the desire for a sovereign state in which countries can preserve their own local interests (Randall & Kenneth, 2004). The territorialism theory limits the extraterritorial influence of administration to trade, but it caters to the people and assets located within the sovereign state's territory whose jurisdiction has been declared. This approach not only gives every sovereign state the power to administer the assets of an insolvent debtor inside its borders according to its own regulations, without taking into account trade procedures initiated by debtors in other sovereign nations (Hay,1996).

The theory is useful in the context of this study since the One Stop Border Post needs jurisdiction over those components of a multinational corporation's commerce that are within a country's boundaries. This rationale is based on the notion that trade and travel rules are frequently customized to match the individual countries' interests, societal norms, objectives, values, policies, and standards. These laws have not been formed and cannot be automatically imposed in other nations based on these concepts. To implement the one-stop border post, a state agency must be able to apply national laws within their jurisdiction while also agreeing to and enforcing those laws in the authority of another state. Concerns over sovereignty and jurisdiction can be resolved swiftly and effectively through bilateral dialogue and national legislation, according to international experience. As a result, states should be able to apply their domestic laws within their borders while also agreeing to extend the law outside their borders or to neighboring countries.

2.3 Empirical Review

Border procedure, information technology, the legal framework, and their effect on trade facilitation have all been studied extensively. All of the research strive to increase

trade facilitation, particularly in developing nations, by making trade easier and ensuring that border controls are maintained. Independent variables in this research lead the subsequent empirical literature review.

2.3.1 Border Procedure and Trade Facilitation

Simplified and coordinated border procedures, according to several studies, result in decreased trade costs and increased export and import flows/volumes. At the same time, it encourages smaller businesses to participate in international trade.

Moise and Sorescu (2013) examined the impact of certain trade facilitation policies on trade in developing countries. The study reveals that document simplicity and harmonization, procedure streamlining, and trade-related information availability are the policy areas with the biggest impact on trade volumes and costs, not only for imports but also for export productivity. The combined effect of these improvements is more than the sum of individual initiatives, resulting in total trade cost reductions of 14.5 percent for low-income nations, 15.5 percent for lower-middle-income countries, and 13.2 percent for higher-income countries.

Studies by Lesser and Moisé-Leeman (2009) on cross-border trade and trade facilitation reform in sub-Saharan Africa have found that successful implementation of trade facilitation programs such as simplified border procedures, reduced costs, increased productivity and increased transparency. in cross-border trade. Direct and indirect trading costs can be separated into the smaller fees. Direct costs include things like documentation, border taxes, transit, and storage. Indirect costs, on the other hand, refer to depreciation costs incurred as a result of delays at border crossings and uncertainty in procedures such as customs clearance. According to Iwanow and Kirkpatrick (2007),

a 1% increase in border procedure boosts trade flows by 0.20 percent. For African countries, the elasticity is significantly higher.

Djankov (2010) found out that the amount of time required to export and import increases as the number of requirements and the complexity of work procedures increases. Djankov believes that every additional day of shipment delay affects the value of exports by more than 1%, which is similar to traversing a country an additional 70 kilometers with your business or trading partner, based on data from surveys of shipping businesses in 148 countries. According to Shepherd (2013), a 1% increase in cross-border clearance time lowers the value of enterprises' direct exports by 0.07 percent while increasing their reliance on foreign exporters by 0.10 percent.

2.3.2 Information Technology and Trade Facilitation

Asiimwe (2014) investigated an Integrated System with a single-point border crossing (OSBP). The study mentioned an Integrated Custom Management System (iCMS) that would be accessible to a variety of institutions at border crossings, including immigration authorities, revenue authorities, police, and the National Bureau of Standards. According to the study, border crossing time will be decreased by around 60% because both border crossing systems will use the same data in the same area, making interpretation easy on both sides.

Tosevska-Trpcevsca (2014) investigated the impact of the Single Window and simplified customs procedure in the Republic of Macedonia, concluding that the single window has aided enterprises in obtaining licenses and tariff quota allocation. One of the most significant benefits gained by the single window user was a 66.16 percent decrease in time and human resources. When compared to standard custom procedures,

all factors such as average documents, signatures, time in hours, and financial costs have been considerably reduced.

Automated border systems are one of the most successful techniques of expediting the international commerce process, according to research by the Economic Commission for Latin America and the Caribbean (ECLAC, 2006). Automation has been a catalyst for modernization and a stimulus for expanded use of information and communication technologies (ICTs) by other government agencies and the commercial sector involved in automation initiatives, in addition to customs and border reforms. This reduces trade costs and has an impact on the ease of coordination of border officials and the transparency of trade laws and procedures.

Angola's Crown agents (2010) advocated the introduction of computerized customs clearance, which resulted in a faster flow of real merchants and reduced the time to clear customs from 21 days to 48 hours. In addition, businesses will benefit from increased transparency and predictability as a result of implementing new consolidated customs codes and regulations that align with internationally agreed standards such as the WTO Rules on Customs Assessment and the Code of Ethics and Customer Service for Customs Standards.

According to a study by Kafeero (2009), successful border clearing operations, consistent application of customs laws, effective risk management, and effective data analysis depend on the maximum use of information and communication technologies (ICTs). These ICT systems have significantly shortened clearance and release times. In addition, Kenya's implementation of electronic filing of Customs records has increased transparency.

2.3.3 Legal Framework and Trade Facilitation

A study by Nkwenu & Lungu (2011) shows that a legal framework must first be created to do justice to the convenience store concept. The legal framework allows for the extension of each country's national border control laws to other countries, enabling each country's border control officers to carry out legal duties outside their national territory; and allows the granting of permits to border control officers who are authorized to carry out border control functions according to the laws of their country in the territory of other countries. The finding indicated that establishment of proper legal framework along the international border greatly improved trade facilitation.

Coordinated Border Management: Unlocking Trade Opportunities Through One-Stop Border Crossing was a study conducted by Kieck (2010). From an international coordinated border management perspective, he claims that one-stop border posts are a major mechanism to improve the movement of goods across shared borders, and that this arrangement had both economic and enforcement benefits because it reduced the cost and time of doing business. However, this has been achieved thanks to sound policies supported by a favorable legal framework and implementation strategies supported by all stakeholders.

Fitzmaurice (2017) examined the regulatory framework, infrastructure, and OSBP process flow in Port Elizabeth, South Africa. His research also looks into OSBP's goals, border operating procedures, and how OSBP fits into the larger picture of reducing transit time and promoting trade. He gave an example, infrastructure must include human resources, especially the OSBP Joint Coordinating Committee. Committees should be established in accordance with bilateral trade agreements.

2.3.4 One Stop Border Post Initiatives and Trade Facilitation

The term "trade facilitation" refers to the elimination of unnecessary trade barriers. This is accomplished by employing harmonized procedures, standards, and technology while also improving the quality of controls in a globally standardized manner (Kenya Association of Manufacturers, 2017). Trade facilitation is one of the most important variables or factors in a country's economic development, social well-being, and poverty alleviation. As a result, this is one of the key areas of concentration for countries looking to reap the benefits of eliminating outdated clearance policies and procedures in terms of lower costs of doing business and increased cargo volume and cargo value.

Several studies have confirmed that a stronger and better trade facilitation environment increases import and export volumes. Wilson et al. (2003) used a gravity model to quantify the influence of trade facilitation on trade flows. Their findings show that trade facilitation reform could result in significant gains in trade and growth rates in nations with above-average trade transaction costs.

According to Djankov (2010), the amount of time required to export and import increases as the number of requirements and the complexity of work procedures increases. Djankov believes that every additional day of shipment delay affects the value of exports by more than 1%, which is similar to traversing a country an additional 70 kilometers with your business or trading partner, based on data from surveys of shipping businesses in 148 countries. Shepherd (2013) discovered that a 1% increase in cross-border clearance time reduces enterprises' direct export values by 0.07 percent while increasing their reliance on outside exporters by 0.10 percent.

In the field of port efficiency, Customs environment, and technology utilization, Otsuki et al, (2003) investigates the relationship between Trade Facilitation, Trade Flows, and

GDP in the Asia Pacific Region for the goods sector. Their findings are quite similar to the study's expectations in East Africa. According to the findings, trade tends to expand in tandem with port efficiency. The writer used the gravity model. According to the research, the Asia Pacific region grew by 21% ($ 254 billion).

According to Hillberry and Zhang (2015), automation can save the time it takes to import by 30%. For poor and middle-income nations, formalities related to automation are proven to be one of the most important drivers of trade costs and flows (Moise and Sorescu 2013). In terms of geographies or region, Asia and Sub-Saharan Africa are expected to have the most significant consequences.

Iwanow and Kirkpatrick (2007) argue that trade liberalization and tariff reductions, as well as the rise in global supply chain management strategies, all lead to higher costs of border trade transactions, which account for 2-15 percent of all goods trade. Non-tariff barriers are a type of negative externality that raises business costs.

Nordas et al., (2000) looked at the relationship between time for exports and imports, logistics services, and international commerce and discovered that time delays result in reduced trade volumes and lower the likelihood that enterprises will enter export markets for time-sensitive products.

2.4 Research Gaps

Mbiwa (2013) examined the effectiveness of OSBP concept implemented by COMESA and how it has increased trade facilitation. The study focuses on OSBP's function in reducing clearing time and its impact on the local population's well-being. The findings of this study indicated that OSBP in Chirundu enhanced trade flow by allowing items to be cleared more quickly; however, OSBP in the region lacks sufficient resources to be more effective, as it continues to rely primarily on donor financing for its operations.

The notion of a one-stop border post office, as applied to the Chirundu border crossing between Zambia and Zimbabwe, was studied by Nkwenu and Lungu (2011). In 2011, the Zambian government undertook research that looked at the period before and after the OSBP was implemented. Cross-border truck traffic grew by 80 percent from 70 in 2000 to 260 in 2010 to 470 in 2011. Additionally, customs filings grew from 3,800 in 2004 to 7,500 in 2010 and 10,000 in 2011. This demonstrates how the OSPB influences trade facilitation.

Mureverwi (2015) investigated the impact of a one-stop border crossing method on trade facilitation in South Africa. The results show that shipping goods to Zimbabwe is very difficult and dealing with Zimbabwe is not for the faint of heart. These issues arise as a result of exorbitant administrative fees, stringent paperwork requirements, and time constraints. The study advises customs officials and government policymakers on which aspects of the trade facilitation process should be addressed and which will have the greatest impact in terms of eliminating border inadequacies, lowering trade costs, and enhancing the logistics chain. As part of the overall process of trade facilitation, these recommendations include implementing a single window system, integrated border management, and one-stop border posts.

Mfune (2015) reviews a study on facilitation of customs trade at the Kasumbulesa border post in Zambia. The study's goal was to examine the existing trade facilitation technique in use at the Kasumbalesa. Data was acquired through a questionnaire and oral interviews, while secondary data was gathered from publications of world custom organizations, the World Bank, and the World Health Organization. Kasumbalesa is used as a sample entry/exit point in Zambia in this case study. As a result, identifying the issues that products and persons confront as they cross Kasumbalesa can help to expedite operations at other Zambian borders.

Nkundabaramye (2021) studied the influence of Rwanda's One Stop Trade Facilitation Initiative (OSBP) on the transit of commodities through customs offices. The OSBP initiative has a large and favorable impact on the movement of products through Rwanda's customs office, according to the primary findings. The analysis, however, focuses on Rwanda's and other EAC partner states' common borders (Tanzania, Uganda and Burundi). The study used a mixed-methods descriptive research design (qualitative and quantitative). Study conducted by USAID (2013) found that the OSBP facility has clearly enhanced formal commerce by streamlining processes and lowering costs.

Swaleh (2020) conducted a study at the Lunga-Lunga border on the impact of the central point of border crossing on trade facilitation, examining system integration, infrastructure and collaboration between institutions as variables. The research employed cross-sectional design of descriptive research. According to the results, OSBP's systematic integration, common infrastructure and inter-agency cooperation have a positive impact on trade facilitation.

Cheruiyot & Rotich (2015) conducted a study to evaluate the application of the concept of a one-stop border post and its impact on the Kenyan border, the case of the Malaba border. Infrastructure, stakeholder cooperation, and people capacity were among the study's independent variables. The data was examined using descriptive statistics after the study provided both qualitative and quantitative data. The study discovered that the capacity of employees and Infrastructure affects the implementation of the OSBP plan. According to research, OSBP has a significant impact on improving the efficiency of customs and other government agencies by minimizing unnecessary duplication in permit operations and encouraging collaboration.

Ndunda (2013) conducted a study to investigate the aspects that affect the implementation of the one-stop-shop at the border with Busia. The purpose of the survey was to determine how the single border control post would operate and the challenges it would face. Study data were obtained from primary and secondary sources and examined using content analysis. Primary data was collected through face-to-face interviews using the open interview guide. According to the study results, Busia OSBP faced a number of problems that prevented its publication. According to the research, stakeholder participation in the development process should be increased.

Most of this previous research have confirmed that the creation of OSBPs has improved trade facilitation. These investigations were nonetheless, mainly conducted in countries with border environment distinct from Kenya. Numerous studies have also been conducted at local level and in the EAC, but they focused on the implementation strategy and opportunities that could arise as a result of OSBPs. However, no comprehensive research has been conducted on the impact of OSBP efforts on trade facilitation in Kenya, particularly at the border stations of Malaba, Busia, and Namanga. This study, therefore, sought to address the gap by analyzing the effects of One Stop Border Post Initiatives on trade facilitating trade in Kenya, with border procedure, information technology and legal framework as the main study variables.

The study also adds to the existing literature by employing a different methodology approach. In many of these past investigations (qualitative and quantitative) a descriptive mixed-method search strategy was used. Observations, focus group studies, interviews, and other measurement tools were employed to integrate primary and secondary data. The information was analyzed with descriptive statistics. The baseline data for this study were acquired using an explanatory research design using a structured closed-ended questionnaire. Inferential statistics analyses such as correlation

and regressions were performed were performed more thoroughly. As a result, new data on the researched variables were created, allowing for an in-depth examination of the effects of OSBP activities on trade facilitation in Kenya. Of note is the fact that the study was conducted in Kenya, in particular at the border stations in Malaba, Busia and Namanga. The impact of OSBP activities on trade facilitation in Europe, South Africa and even Rwanda does not match the findings of this study. Thus, the study of this new area adds to the existing body of knowledge.

2.5 Conceptual Framework

According to Mugenda & Mugenda (2003), a conceptual framework is a brief description of the phenomenon under investigation that is supported by a graphical or visual representation of the study's main factors. This diagrammatic representation of a schematic description aids in visualizing theoretical linkages (Sekeran & Bougie, 2011). According to the literature in relation to the research topic, the influence of one-stop border post initiatives on trade facilitation in Kenya, the researcher divided the variables into dependent and independent variables. Border procedure, information technology, and the legislative framework were all independent variables. Trade facilitation is the dependent variable. Figure 2.1 illustrates the conceptual framework of the study.

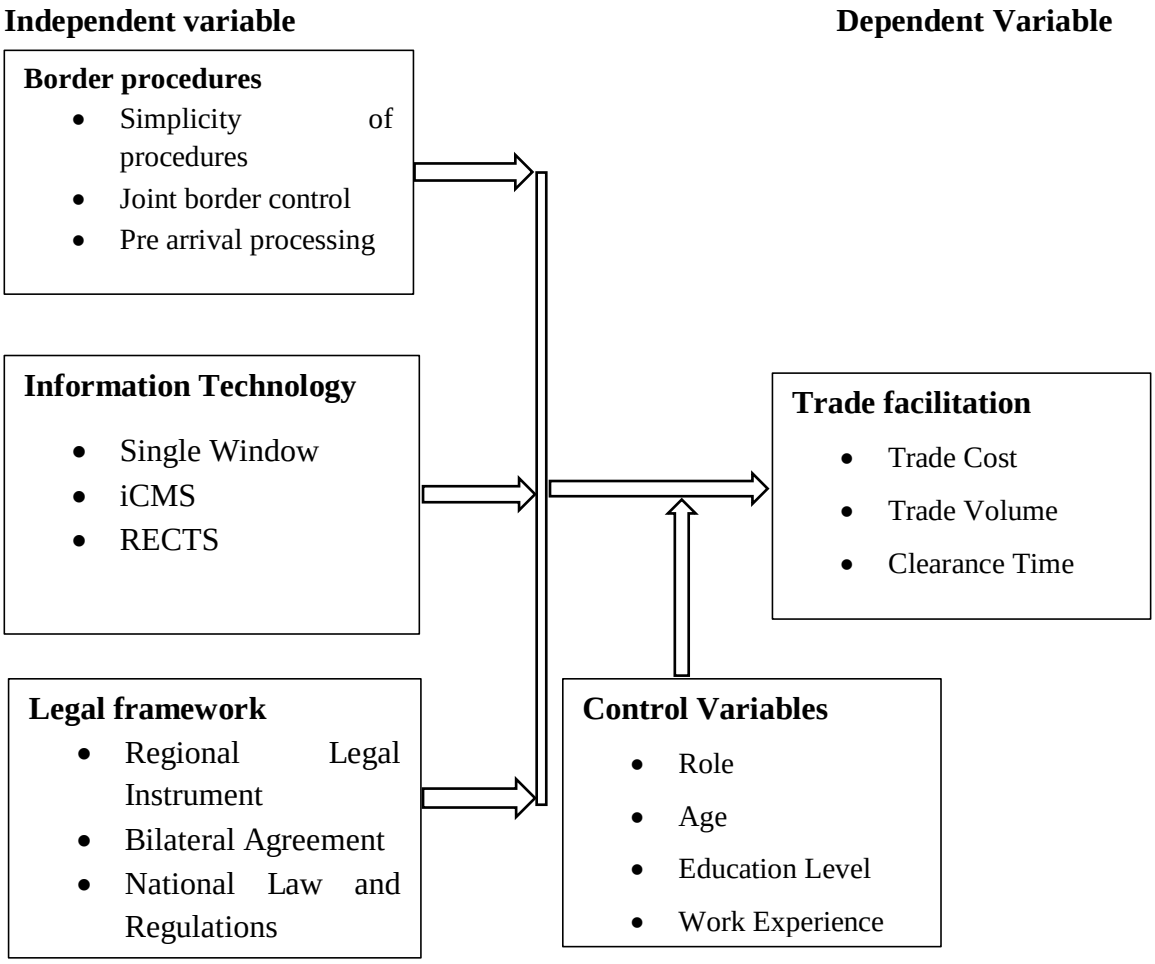

Figure 2.1: The Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes in detail the survey methods and processes used to assess the impact of the One Stop Shop Border Initiative on trade facilitation in Kenya, specifically survey design, population, sample size, sampling methods, sampling, data collection tools, pilot studies, reliability, validity, variable measurement, data analysis, model assumptions and hypothesis testing.

3.1 Research Design

Research design, according to Kothari (2008), is the conceptual structure within which research is conducted. It serves as a plan for data gathering, measurement, and analysis. The study approach or methodology must be well-aligned with the research design (Saunders,2011). This study employed an explanatory research design. Explanatory study examines why and how two or more features of a condition or occurrence are connected. Explanatory research, according to Youssef (2018), entails using the causal relationship between variables to investigate the effect of one variable on another. The study took a quantitative approach. According to (Kothari,2004) quantitative approach is the designs, procedures, and measures that yield discrete numerical data. The goal of this study's explanatory research approach was to evaluate how independent variables (border procedures, information technology, and legal framework) affect the dependent variable (trade facilitation).

3.2 Area of Study

The research was conducted at the Malaba, Busia and Namanga border station. The reason for choosing these three border posts was because they are considered to be the principal border posts in Kenya, with a significant amount of traffic flowing through

them on a regular basis. More than 80% of the country's overall imports and exports pass through these three major border crossings, less than 20% of the country's imports and exports are handled by the remaining border stations (Ken Trade database,2014).

The volume of goods passing through this other four border post Lunga-Lunga, Taveta, Isebania and Moyale borders were less compared to Malaba, Busia and Namanga Border station. Moyale border facility was in particular underutilized, there is less trade volume across this border. We expect more trading volume to flow through OSBP at Moyale - an indication of steady business activity between Kenya and Ethiopia. Unfortunately, we do not observe this; most traders avoid paying taxes by using pan (porous) pathways.

Process of clearing goods across our international border involves different people who work closely together and work towards the same goals. The three government agencies, Custom, Bureau of standards and Immigration were chosen as the target population because they are the major agencies that are key players in everyday border customs operations. They therefore monitor the smooth flow of goods, people and vehicle across our international borders. For instance, At the border station, customs officials follow defined customs procedures for the release of goods entering the country from foreign countries. KEBS ensures that goods entering Kenya meet the standards set and do not harm consumers. They facilitate examination of goods and save the traders from time wastage at the border point. Immigration they facilitate the movement of people the international travel, regulate entry and exit, residency and citizenship and delivery of consular services. AEO dealers (traders) are frequent users of One Stop Border Posts and thus the group most affected by OSBP's influence on their operations.

3.3 Target Population

The population is the total number of components or elements from which we wish to draw inferences (Cooper & Sschindler, 2008). It is the segment of the population that the researcher studies in order to derive findings that can be applied to the entire population. Mugenda (2003) defines a cluster as a group of people, items, events, or things that share observable characteristics. The target population for this study was 526 employees from three agencies that are key players in everyday border customs operations: Customs, Bureau of Standards and Immigration as well as the traders under AEO program who usually participate in border process.

The target population is shown on table 3.1.

Table 3.1: Target Population

STATIONS	**CATEGORY**				**TOTAL**
	Custom Staff	**KEBS**	**Immigration**	**Traders**	
Malaba	46	34	41	93	221
Busia	33	24	35	84	174
Namanga	31	21	31	53	131
Total	**110**	**79**	**107**	**230**	**526**

Source: Border Management Committee Report (2020)

3.4 Sampling Method & Sampling Procedure

3.4.1 Sampling Technique

According to Mugenda & Mugenda (2003), sampling is the process of selecting individuals or cases to be included in research that represents the target population. It was also identified by (Kothari, 2004) as the technique the researcher would use when selecting items for the sample. This study used a stratified random sampling technique to obtain a representative sample of the population. According to Mugenda & Mugenda (2012), a stratified sample is excellent for a heterogeneous investigation, and because

this study investigated diverse and dissimilar classes of personnel along the Malaba, Busia, and Namanga border, stratified sampling was the most appropriate technique. The employees were stratified into four strata of Customs, Bureau of standards, immigration and traders. A simple random sampling is used at each stratum to select respondents, ensuring that each respondent has an equal chance of being selected. For the traders, convenience sampling was employed to choose the respondent, since they are external and do not necessarily operate from the same place as the three organizations hence not present at the border at the same time. The sample subjects in stratified samples are chosen in such a way that the population's subgroups are proportionally represented in the sample (Mugenda & Mugenda, 2008).

3.4.2 Sample Size

A sample size is a small portion or a subset of a target population (Cooper and Schindler, 2006). A total of 227 respondents was chosen for this study. The Yamane Formula was used to arrive at this result (Yamane,1967). The Yamane (1967) method is appropriate since it provides a simplified formula for calculating sample sizes, and it works for simple random sampling as well as if the population to be sampled contains identifiable subgroups or strata, which is the case in this study.

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

Where n = Samples size

N = Total Population (526).

E = Margin of error (0.05), meaning a confidence level of 95%.

Thus:

$$n = \frac{526}{(1 + 526(0.05)^2)} = 227$$

The summary of the stratified random sampling is presented in Table 3.2.

Table 3.2: Sample Size

Category	Target population	Proportion	Sample size
Custom	110	0.2091254753	48
KEBS	79	0.1501901141	34
Immigration	107	0.2034220532	46
Traders	230	0.4372623574	99
Total	**526**	**1.0**	**227**

Source: Researcher (2022)

The sample size of 227 respondents was deemed appropriate to represent the target population.

3.4.3 Sampling Procedure

Stratified Random sampling was done using the register/list of staff of the key agencies and traders in each category totaling to 227 respondents. To get the sample for each stratum, the researcher used proportional strata allocation, for example, customs total population 110, desired sample 48, so Strata N1 = 227 (110/526) = 48. The 48 respondents were then chosen at random from a list of 110, ensuring that everyone had a fair and equal chance of being chosen. This was accomplished by assigning a number to each respondent in a list and then picking these numbers at random. The questionnaires were subsequently given to the individuals chosen. The same was done to other group/strata respectively. Because the traders are external and do not necessarily operate from the same place as the three organizations, convenient sampling was employed to choose respondents. The researcher wanted a sample size of ninety-nine AEO traders, thus continued to invite individuals who are available and willing to participate in the study until the sample size was met. Convenience sampling allowed

the researcher to collect data that would otherwise be hard to derive using the probability sampling technique. And since the number of respondents was large, the data was collected over two days. convenient sampling involved a conveniently available pool of respondent's; members are readily approachable to be a part of the sample (Lund Research,2012).

3.5 Data Collection

3.5.1 Data Collection Tools

A closed structured questionnaire was used to collect primary data, which was administered on a five-point Likert scale from 1 to 5. Primary data according to Louis et al. (2007) are the unique and original elements of the object under study. The questionnaires were constructed with closed-ended queries, which allowed respondents respond more quickly and efficiently. A five-level Likert scale ranging from strongly disagree, disagree, neutral, agree, and strongly agree was used to acquire or collect the data, with 1 representing the least level of satisfaction and 5 representing the most level of satisfaction. A Likert scale is a method for evaluating attitudes and actions that use response options that range from one extreme to the other (Zikmund,2010). According to Kiess & Bloom Quist (2008), the Likert - type format is a powerful statistical format in hypothesis testing since it gives equal interval of data.

3.5.2 Data Collection Procedure

Before starting the data collection process, the researcher received a cover letter from the Kenya Revenue School (KESRA). Researchers then applied for a research permit with the National Council for Science, Technology and Innovation (NACOSTI), which was approved within days. Various government agencies and cooperating groups were notified two weeks before to data collection. The researcher asked the dealer for

permission to participate in this study. To gather data, the researcher personally administered the questionnaire to the chosen sample, as well as recruit two research assistants. The questionnaire was administered with the help of the professional assistants. The Professional Research Assistant is an expertise in researching, evaluating, and studying a variety of subjects. The researcher evaluated their appropriateness based on their educational backgrounds, ensuring that they had at least an Associate's or Bachelor's degree. The assistants' analytical, detail-oriented, and communication skills were also checked by the researcher. The aim of the questionnaire as well as the instructions was conveyed to the respondents, and they were given time to complete the surveys before the researcher collects the data for analysis and interpretation.

3.6 Pilot Testing

The pilot test is a dress rehearsal for your research study, allowing you to test your research instrument with a small group of test subjects before launching your major study. The goal of the pilot study was to determine the research tools' accuracy, clarity, and applicability, as well as their validity and reliability. The pilot study for this study was carried out at Lunga-Lunga border station on 10% of the intended sample size of 227 respondents. This location Lunga-Lunga OSBP was picked because it presents majority of similarities with the study locations. The pilot was attended by twenty-three (23) participants. According to Connelly (2008),10-20 percent of the primary sample size is appropriate for pilot testing. The pilot research's randomly selected respondents were not included in the final study sample. It is from this study that the validity and reliability test were executed.

3.6.1 Validity of the Questionnaire

Validity is the extent to which an instrument measures what it was designed to measure or what it was supposed to measure, according to Weirsma (1990). Cooper and Schindler (2010) describe it as the extent to which an indicator measures a concept to do so. Determining the validity of the questionnaire is one of the objectives of the pilot project. The validity test was carried out based on the results of the pilot study. There are several sorts of validity, the most fundamental of which is Face Validity, which is connected with the highest level of subjectivity because it is not based on any scientific technique. In other words, a test may be designated as valid by a researcher simply because it appears to be legitimate, without a thorough scientific basis. Construct Validity refers to the evaluation of a measurement tool's adequacy for measuring the phenomenon under investigation. With the help of a panel of 'experts' who are intimately aware with the measure and the phenomenon, construct validity can be applied more effectively. The comparison of test results with the outcome is referred to as criterion-related validity. This form of validity correlates assessment findings with another assessment criterion. Formative validity is the evaluation of a measure's ability to provide information that can be used to improve specific characteristics of a phenomena. Content validity assures that the measure's coverage area within the study domain is extensive. Important components and elements are chosen utilizing a specific sample approach based on the study's goals and objectives. This study accepts content validity, that is, the extent to which questions about the tools and outcomes of these questions represent all possible questions about content (Gillham, 2008).

Factor analysis was used to simplify data in order to make it more understandable without sacrificing any crucial information, making hypotheses test easier (Theo,2002). Factor loading values larger than 0.5, according to Kaiser (1974), should be included,

while values less than 0.5 should lead to the rectification of more data to assist the researcher in determining the values to include. A 0.7 or higher factor loading represents that the factor extracts sufficient variance from that variable. Any construct that had a loading of less than 0.5 were eliminated.

A statistical test, Kaiser-Mayer-Olkin (KMO) test, was used to verify the validity of the structure detection data. This test determines the adequacy of the sample for each variable in the model. Shows the amount of variance in your variable that may be due to the key factor, with a high value closer to 1.0 usually indicating that quantitative study could be useful to your data (Pallant, 2010). KMO returns values between 0 and 1. Kaiser (1974) proposed that a KMO greater than 0.5 is acceptable.

3.6.2 Reliability of the Questionnaire

The degree to which results are similar or can be compared across multiple versions of the same instrument is referred to as reliability (McMillan & Schumacher, 2001). The questionnaire's reliability was tested by administering it to the pilot group. The reliability test was carried out based on the results of the pilot research. Cronbach's Alpha reliability tests on the study instrument were conducted using the Statistical Package for Social Science (SPSS). Cronbach's alpha is a measure of internal consistency, or how closely a group of objects are related. It's a scale dependability or reliability metric commonly used with Likert multiple-choice questions. In this investigation, the standardized Cronbach alpha formula was used:

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

N represents the number of items, c is the mean inter-item variation, and v represents the mean variance. The Cronbach's alpha increases as the number of elements increases,

as you can see from this formula. The alpha is also low if the mean correlation between items is low. Cronbach's alpha (with the number of items) rises as the mean correlation between items rises.

Table 3. 3: Cronbach's alpha internal consistency

Cronbach's alpha	Internal consistency
$0.9 \leq \alpha$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Nunally (1967) noted that a Cronbach's alpha score of 0.7 or higher indicates the reliability of the study instrument. A Cronbach's alpha confidence coefficient of 0.7 or above was judged sufficient for the purposes of this investigation.

3.7 Measurement of variables

The process of assigning numbers to reflect the amount of a variable is known as measurement. The researcher utilized an ordinal measurement scale in this research. A 5-point Likert scale was used to administer the survey. This is because it exhausted all possible responses without leaving any that would be useful during the research. Traders and the three primary agencies involved in the border process, customs, Kenya Bureau of Standards (KEBS), immigration and traders were the units of analysis.

Table 3. 4: Measurement of variables

Variable	Variable type	Indicators	Instrument
Trade facilitation	dependent	Trade cost Time/Delay Volume of trade Simplicity of procedure	Questionnaire
Border Procedure	Independent	Joint border control Pre arrival processing Electronic exchange of data	Questionnaire
Information communication Technology	Independent	Electronic payment/declaration Single window	Questionnaire
Legal framework	Independent	Regional legal instrument Bilateral agreement National law & regulations	Questionnaire

Source: Researcher (2022).

3.8 Data Analysis and Presentation

Data analysis, according to Cooper and Schindler (2010), is an educational process in which a large amount of data is reduced to a manageable size by creating summaries, looking for patterns, and using statistical approaches. Questionnaires were organized and prepared for data analysis once the field survey was done. The data acquired from the respondents' questionnaires thoroughly examined and confirmed for completeness and consistency before being analyzed.

3.8.1 Organization of Data

Three major themes were drawn from the specific objectives of the study that captured the effect of one stop border post initiatives on trade facilitation in Kenya.

3.8.2 Coding and Data Analysis

Border procedures, information and communication technologies, and legislative framework were among the sections that was classified and separated from the detailed data. Each section was given a number and a short sentence describing how the associated data sections contribute to the research goals. The classified data was entered

into version 22 of the Statistical Package for the Social Sciences (SPSS). Descriptive statistics such as mean and standard deviation was generated using SPSS which described the opinions of respondents on the influence of single-stop border initiatives on trade facilitation in Kenya. The results were described using frequency tables and figures. Multiple linear regression analysis was used to evaluate the relationship between the independent variables and the dependent variable. The researchers employed multiple linear regression analysis to determine how much trade facilitation is dependent on improved border procedures, information technology, and Kenya's legal framework. The regression model showed the model estimators, the standard errors of the estimators, the test of significance (t-values) for the estimators, the probability values (p-values), the correlation coefficients and the goodness of fit or coefficient of determination. A model summary table, an analysis of variance (ANOVA) table, and a coefficients table was used to summarize the results of the multiple regression study.

3.8.3 Regression Model

A Multiple regression analysis was conducted to show how the explanatory variables explains a statistically significant amount of variance in the outcome variable after accounting for all variables. The computed multiple regression model was:

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

Where:

$\mathbf{X_1, X_2, X_3 =}$ Independent variables

$\mathbf{X_1}$ = Border Procedure;

$\mathbf{X_2}$ = Information Technology;

$\mathbf{X_3}$ = Legal Framework;

Y = (dependent variable) Trade Facilitation;

While $\beta_1, \beta_2, \beta_3$ are the slope coefficients.

β_0 = is the intercept (often labeled the constant).

ϵ = (Random error) is the error term or disturbance term of the regression.

3.9 Assumptions of Multiple Regression Model

In order to produce trustworthy coefficient estimates, this part attempted to guarantee that the model framework satisfied the relevant econometric assumptions. This is a pre-analysis test that was done on the data set to confirm that it fulfills the expected minimum, according to Kothari (2012). When linear regression assumptions are broken, the results can be skewed, erroneous, or inconsistent. As a result, the researcher conducted a diagnostic test that includes linearity, normality, multicollinearity, autocorrelation, and heteroscedasticity to verify appropriate specification of the aforementioned equation as well as validation of the study findings.

3.9.1 Test of Linearity

One of the major assumptions of linear regression, according to Belsley (1991), is linearity. The linearity test aims to determine the degree of relationship between the independent variable and the dependent variable. The unknown regression coefficient can be obtained by fitting numerous regression models to the data given the values of the independent and dependent variables (Orme & Combs-Orme,2009). Analysis of Variance analysis (ANOVA) was used to test linearity. The F-ratio tests whether the overall regression fits the data. The probability value less than 0.05 indicates linearity and vice versa.

3.9.2 Test of Normality

The normality test is used to examine whether a data set is properly defined by a normal distribution and to calculate the probability that the random variables underlying the data set are normally distributed, according to Anderson and Darling (1954). In multiple linear regression analysis, the error must be distributed evenly between the observed and predicted values (Gonzales,2016). The Kolmogorov-Smirnov tests were used to determine normality. The Kolmogorov-Smirnov tests were used to demonstrate the normality of the data using the p-values. The null hypothesis is rejected if the p-value is less than 0.05, showing that the data is not evenly distributed (Razali & Wah,2011). If the probability value is greater than 0.05, the null hypothesis is accepted, indicating that the data is normally distributed. The Kolmogorov–Smirnov test is used when the sample size is equal to or greater than fifty (50), (Elliott & Woodward,2007). Because our sample size is bigger than fifty, Kolmogorov–Smirnov is a better fit for our study.

3.9.3 Test of Multicollinearity

Multicollinearity is a situation in which one predictor variable in a multiple regression model can be accurately predicted linearly from the others (Vatcheva, Lee, McCormic & Rahbar,2016). When the independent variables are substantially correlated (r=0.8 or above), multiple collinearity arises. Because the independent variable must be independent of all other elements in the equation, correlation usually signals a problem. In this study, both variance inflation rate (VIF) and tolerance were selected for the multicollinearity test. According to Pallant (2011), there is no multicollinearity when the VIF is between 1 and 10, whereas when the VIF is less than 1 or greater than 10 (<1 or >10), there is multicollinearity.

3.9.4 Test of Heteroscedasticity

Homoscedasticity occurs when the variance of errors is the same at all levels of the independent variable (Kothari,2006). Pallant (2011) describes heteroscedasticity as a term used to characterize a scenario in which the variance of the residuals from a model is not constant. The homoscedasticity assumption, according to Zikmund (2010), simply demands that all random errors have the same constant variance, which is predicted to be true if the error term observations are selected from identical distributions. Heteroscedasticity can be tested using the following methods Scatter diagrams, Simple correlation or spearman's rank correlation, Glejser test, The park test, The Goldfeld-Quandt test, White's General Test and Breusch-Pagan test. This study tested Heteroscedasticity using the Breusch-Pagan test. In relation to the Breusch-Pagan Test, the squared residuals are regressed against the independent variables of the study. If the probability value is greater than 0.05, there is no heteroscedasticity and the null hypothesis is accepted. The null hypothesis is accepted and the alternative hypothesis is rejected if the p-value is larger than 0.05 (Tabachnick & Fidell, 2007).

3.10 Hypothesis Testing

The purpose of multiple regression analysis is to see if there is a link between a specific independent variable and the dependent variable. Rather than testing the research hypothesis, the null hypothesis was examined to see if it should be rejected or accepted. The alternative hypothesis is considered if the null hypothesis is rejected. If the p-value in the test is less than 0.05, null hypothesis will be rejected in favor of an alternative hypothesis, and the X (independent variable) is considered to have a statistically significant influence on the Y (dependent variable). Accepting the null hypothesis means (independent variable X) has no statistically significant effect on the (dependent variable Y) when the P-value in the test is greater than 0.05. To examine the statistical significance of the regression

coefficients, the multiple regression analysis model $Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$ was utilized.

Table 3. 5: Hypothesis testing

Hypothesis	Independent Variable	Dependent Variable	Interpretation
H_{01}: There is no significant relationship between border procedure and trade facilitation in Kenya	Border procedure	Trade facilitation	If p-value < 0.05, there is a significant relationship
H_{02}: There is no significant relationship between ICT and trade facilitation in Kenya.	Information Communication Technology	Trade facilitation	If p-value < 0.05, there is a significant relationship
H_{03}: There is no significant relationship between Legal framework and trade facilitation in Kenya.	Legal Framework	Trade facilitation	If p-value < 0.05, there is a significant relationship

Source: Researcher (2022).

3.11 Ethical Considerations

Moral ideas and how people should behave in social contexts are central to ethics (Graham and Bennett, 2005). It is a guideline that assist the researcher in maintaining clear study boundaries. During data collection, the appropriate authorities was shown an introductory letter from Moi University and the Kenya School of Revenue Administration (KESRA). Respondents were also shown a license from the NACOSTI. This provided responders peace of mind regarding how their information was used. For data provided by persons or identifiable participants, the researcher combined integrity and honesty, as well as maintained a higher level of secrecy and anonymity.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

This chapter provides analysis, presentation and interpretation of the results of evaluating the impact of the one-stop border initiative on trade facilitation in Kenya. It provides respondents with demographic information, descriptive statistics, correlations, and multiple regression analysis related to the variables.

4.1 Response Rate

With the help of study assistants, the researcher administered 227 questionnaires, 171 of which were properly filled and returned. As a result, a response rate of 75.3 percent was achieved, which was deemed sufficient for analysis and drawing conclusions in order to determine the impact of one-stop border post initiatives on trade facilitation in Kenya. A response rate of 50% is regarded satisfactory, 60% is good, and 70% and above is considered exceptional for analysis and reporting purposes, according to Mugenda & Mugenda (2003). Table 4.1 presents the summary of the response rate.

Table 4. 1: Response Rate

Category	Response	Response Rate (%)
Returned	171	75.3
Unreturned	56	24.7
Total	**227**	**100**

Source: Research Data (2022)

4.2 Demographic characteristics of the Respondents

Demographic data was used to determine whether the participants in a study were a true representative sample of the target community and to test the respondent's ability to

answer questions accurately for generalization purposes. The study sought to ascertain the background information about the respondents associated with the investigation. The foundation data focuses at the respondents' reasonableness in noting the inquiries on how One Stop Border Post initiatives affects trade facilitation in Kenya. The role, age, education, and years of work experience were all included in the demographic data.

4.2.1 Role of the Respondents at Malaba, Busia and Namanga Border Posts

The responders were questioned about their roles at each OSBP. Table 4.2 presents the role of the respondents at OSBP's.

Table 4. 2: Role of the Respondents at Malaba, Busia and Namanga Border Posts

Role	Frequency	Percentage (%)
Custom staff	48	28.1
KEBS staff	32	18.7
Immigration staff	36	21.1
Traders	55	32.2
Total	**171**	**100.0**

Source: Research Data (2022)

Table 4.2 shows that traders who constitute the vast majority of the respondents constituted 32.2% of the respondents. This was followed by Custom Staff who constituted 28.1% of the respondents; 18.7% were KEBS staff and 21.1% were Immigration staff. This implies that all the categories of the respondents were proportionally represented in the sample.

4.2.2 Age of the Respondents

The study sought to establish the age of the respondents. Table 4.3 presents the age of the respondents.

Table 4. 3: Age of the Respondents

Age	Frequency	Percentage (%)
Below 20yrs	6	3.5
20-30yrs	24	14.0
31-40yrs	20	11.7
41-50yrs	69	40.4
50yrs and above	52	30.4
Total	**171**	**100.0**

Source: Research Data (2022)

Table 4.3 indicates that 69 (40.4%) of the respondents who constituted the majority were aged 41-50 years. This were followed by those aged 50yrs and above who were 52 (30.4%); 20-30 years were 24 (14%); 31-40 years were 20 (11.7%); and lastly the ones in the category of 20 years and below accounted for 6 (3.5%) in total. This suggested that the majority of respondents in the survey were older individuals who offered accurate information on the effect of one-stop border post activities on Kenyan trade facilitation.

4.2.3 Respondent's Level of Education

The respondents' degree of education was used as a crucial measure of their comprehension of Kenyan customs. Their educational level is measured by primary, secondary, postgraduate, undergraduate and postgraduate education. Table 4.4 presents the respondents level of education.

Table 4. 4: Respondent's Level of Education

Education	Frequency	Percentage (%)
Primary	8	4.7
Secondary	23	13.5
Diploma	46	26.9
Undergraduate	67	39.2
Postgraduate	27	15.8
Total	**171**	**100.0**

Source: Research Data (2022)

From the findings on table 4.4, 67 (39.2%) of the respondents who the majority were undergraduate degree holders. This were followed by diploma holders who were 46 (26.9%); postgraduate degree holders were 27(15.8%); secondary certificate holders were 23(13.5%) while primary certificate holders were 8(4.7%). The education level of the respondents can be interpreted that the majority of respondents have the right qualifications to provide reliable information.

4.2.4 Respondents Years of Work Experience

The respondents were asked about their years of work experience. Table 4.5 presents the respondents years of work experience.

Table 4. 5: Respondent's Years of Work Experience

Education	Frequency	Percentage (%)
Under 2 years	4	2.3
2-4 years	26	15.2
4-6 years	17	9.9
Over 6 years	124	72.5
Total	**171**	**100.0**

Source: Research Data (2022)

Table 4.5 indicates that 124 (72.5%) of the participants who constituted the majority had Over 6 years of work experience. This were followed by those with between 2-4 years of work experience who were 26 (15.2%); 4-6 years of work experience were 17 (9.9%) and finally those with below 2 years of work experience accounted for 4 (2.3%) in total. A higher majority of the respondents had appropriate work experience, based on their age distribution. Therefore, they were relied upon to give objective information.

4.3 Descriptive Statistical Analysis of the Study Variables

The study employed descriptive statistics in the form of aggregate means and percentages to assess the effect of one stop border post initiatives on trade facilitation

in Kenya. A Likert scale of 1-5 was used where; 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree 5 = strongly agree.

4.3.1 Border Procedure and Trade facilitation in Kenya

The first goal of this research was to see how border procedures affected trade facilitation in Kenya. Respondents were asked to indicate the extent of their agreement on statements on the border procedures on trade facilitation in Kenya. Table 4.6 shows the outcome.

Table 4. 6: Border Procedure and Trade facilitation in Kenya

Statements		SD	D	N	A	SA	Total	Mean	S.t.d Dev
Procedures for conducting checks and clearance are simplified and saves time.	*f*	2	15	30	73	51	171	3.91	.963
	%	1.2	8.8	17.5	42.7	29.8	100.0		
Harmonized and simplified trade documentation reduces delays at the border.	*f*	7	19	15	89	41	171	3.81	1.053
	%	4.1	11.1	8.8	52.0	24.0	100.0		
Streamlined customs clearance reduces the time to comply with border requirements for imports and exports.	*f*	13	23	27	44	64	171	3.60	1.220
	%	7.6	13.5	15.8	25.7	37.4	100.0		
Joint inspections and verification of cargo by multiple agencies is efficient and time saving.	*f*	10	29	33	59	40	171	3.53	1.190
	%	5.8	17.0	19.3	34.5	23.4	100.0		
Joint examination of border procedures saves on duplication hence reducing time delays and cost of doing business	*f*	13	24	37	44	53	171	3.53	1.229
	%	7.6	14.0	21.6	25.7	31.0	100.0		
Pre-arrival processing have expedited the release of goods upon arrival.	*f*	18	9	41	65	38	171	3.56	1.198
	%	10.5	5.3	24.0	38.0	22.2	100.0		
Aggregate Mean								**3.66**	**1.142**

Source: Research Data (2022)

Table 4.6 indicates that the majority of the participants agreed that procedures for conducting checks and clearance are simplified and saves time as shown by 73 (42.7%) and mean of 3.91; majority of the respondents agreed that harmonized and simplified trade documentation reduces delays at the border as shown by 89 (52%) and mean of 3.81; majority of the respondents strongly agreed that streamlined customs clearance reduces the time to comply with border requirements for imports and exports as shown by 64 (37.4%) and mean of 3.60; majority of the respondents agreed that joint inspections and verification of cargo by multiple agencies is efficient and time saving as shown by 40 (23.4%) and mean of 3.53; majority of the respondents strongly agreed that joint examination of border procedures saves on duplication hence reducing time delays and cost of doing business as shown by 53 (31.0%) and mean of 3.53; majority of the respondents agreed that pre-arrival processing have expedited the release of goods upon arrival as shown by 65 (38.0%) and mean of 3.56. The aggregate mean of all statements was 3.66 which suggested that most of the participants agreed that the simplified border procedure leads to trade facilitation in Kenya.

4.3.2 Information Technology and Trade Facilitation in Kenya

The second objective of the research was to determine the effect of information technology on trade facilitation in Kenya. Respondents were asked to indicate the extent of their agreement on statements on the information technology on trade facilitation in Kenya. Table 4.7 shows the outcome.

Table 4. 7: Information Technology and Trade Facilitation in Kenya

Statements		SD	D	N	A	SA	Total	Mean	S.t.d Dev
The integrated system has improved interconnectivity between border agencies of the two countries.	***f***	16	24	31	66	34	171	3.44	1.247
	%	9.4	14.0	18.1	38.6	19.9	100.0		
Traders can electronically communicate information regulatory agencies, which decreases delays in the trading process.	***f***	14	21	23	54	59	171	3.69	1.262
	%	8.2	12.3	13.5	31.6	34.5	100.0		
The global placement of the RECTS has improved the monitoring of outbound cargo	***f***	15	18	22	50	66	171	3.59	1.243
	%	8.8	10.5	12.9	29.2	38.6	100.0		
SWS has improved agency coordination, which has resulted in delay in time	***f***	17	14	20	44	76	171	3.58	1.225
	%	9.9	8.2	11.7	25.7	44.4	100.0		
Single window has enabled quicker processing of trade documentation and release of good.	***f***	15	22	20	54	60	171	3.68	1.282
	%	8.8	12.9	11.7	31.6	35.1	100.0		
Single window has enhanced less duplication of work, saving time.	***f***	14	21	36	60	40	171	3.53	1.209
	%	8.2	12.3	21.1	35.1	23.4	100.0		
Aggregate Mean								**3.585**	**1.244**

Source: Research Data (2022)

Table 4.7 indicates that most of the participants agreed that integrated system has improved interconnectivity for information exchange between border agencies of the two countries as shown by 66 (38.6%) and mean of 3.44; majority of the respondents strongly agreed that technology allows traders to exchange information with customs and other control agency electronically and this reduces delays in trading process as shown by 59 (34.5%) and mean of 3.69; majority of the respondents strongly agreed that the global placement of the RECTS has improved the monitoring of outbound cargo as shown by 66 (38.6%) and mean of 3.59; majority of the respondents strongly agreed

that the SWS has improved agency coordination, which has resulted in a reduction in delays and lead times as shown by 76 (44.4%) and mean of 3.58; majority of the respondents strongly agreed that Single window has enabled quicker processing of trade documentation and release of good as shown by 60 (35.1%) and mean of 3.68; the majority of respondents agreed that using a single window has reduced job duplication, saving time as shown by 60 (35.1%) and mean of 3.53. The aggregate mean of all statements was 3.585 which suggested that most of the participants agreed that the adoption of information technology led to trade facilitation in Kenya.

4.3.3 Legal framework and trade facilitation in Kenya

The third objective of the research was to determine the influence of legal framework on trade facilitation in Kenya. Respondents were asked to indicate the extent of their agreement on statements on the legal framework on trade facilitation in Kenya. Table 4.8 indicates the outcome.

Table 4. 8: Legal framework and Trade facilitation in Kenya

Statements		SD	D	N	A	SA	Total	Mean	S.t.d Dev
Operationalization of OSBP is in accordance with regional instrument promoting faster single stops border procedure.	*f*	5	22	31	36	77	171	3.68	1.037
	%	2.9	12.9	18.1	21.1	45.0	100.0		
Regional legislation on OSBP is harmonized taking into account the interest of the third country easing border operations between them.	*f*	9	29	14	60	59	171	3.77	1.238
	%	5.3	17.0	8.2	35.1	34.5	100.0		
Bilateral agreement on the parameters of establishing OSBP has been entrenched in the domestic law of each country for effective control.	*f*	18	3	22	55	73	171	3.95	1.257
	%	10.5	1.8	12.9	32.2	42.7	100.0		
National laws on joint border control has reduced delay experienced at the border by traders	*f*	10	14	42	64	41	171	3.65	1.108
	%	5.8	8.2	24.6	37.4	24.0	100.0		
National laws and policies guiding border operations are harmonized enhancing smooth clearing of goods at the border.	*f*	19	22	21	66	43	171	3.54	1.298
	%	11.1	12.9	12.3	38.6	25.1	100.0		
The concept of extraterritorial jurisdiction has helped both countries to control cross border trade effectively.	*f*	21	14	48	32	56	171	3.37	1.232
	%	12.3	8.2	28.1	18.7	32.7	100.0		
Aggregate Mean								**3.66**	**1.195**

Source: Research Data (2022)

Table 4.8 indicate that the majority of the participants strong agreed that operationalization of OSBP is in accordance with regional instrument promoting faster single stops border procedure as shown by 77 (45%) and mean of 3.68; majority of the respondents agreed that Regional legislation on OSBP is harmonized taking into account the interest of the third country easing border operations between them as

shown by 60 (35.1%) and mean of 3.77; majority of the respondents strongly agreed that for effective control, bilateral agreements on the parameters of establishing OSBP have been enshrined in each country's domestic law as shown by 73 (42.7%) and mean of 3.95; majority of the respondents agreed that National laws on joint border control has reduced delay experienced at the border by traders as shown by 64 (37.4%) and mean of 3.65; majority of the respondents agreed that National laws and policies guiding border operations are harmonized enhancing smooth clearing of goods at the border as shown by 66 (38.6%) and mean of 3.54; most of the participants strongly agreed that the concept of extraterritorial jurisdiction has helped both countries to control cross border trade effectively as shown by 56 (32.7%) and mean of 3.37. The aggregate mean of all statements was 3.66 which suggested that majority of the respondents agreed that the existence of legal framework leads to trade facilitation in Kenya.

4.3.4 Trade facilitation in Kenya

Trade facilitation in Kenya was the study's dependent variable. Respondents were asked to rate how much they agreed with statements on Kenyan trade facilitation. Table 4.9 presents findings.

Table 4. 9: Trade facilitation in Kenya

Statements		SD	D	N	A	SA	Total	Mean	Std Dev
The direct and indirect cost of imports and export transaction have significantly reduced.	*f*	20	13	25	68	45	171	3.61	1.275
	%	11.7	7.6	14.6	39.8	26.3	100.0		
The volume of imports and export have increased considerably.	*f*	10	13	29	50	69	171	3.85	1.153
	%	5.8	7.6	17.0	29.2	40.4	100.0		
The volume of cargo clearance has increased significantly.	*f*	2	15	30	57	67	171	3.91	.963
	%	1.2	8.8	17.5	33.3	39.2	100		
The time taken in carrying out checks and clearance has greatly reduced	*f*	9	16	33	50	63	171	3.75	1.132
	%	5.3	9.4	19.3	29.2	36.8	100.0		
Technology has increased speed of processing and exchanging of information between border agencies.	*f*	2	16	32	71	50	171	3.88	.975
	%	1.2	9.4	18.7	41.5	29.2	100.0		
Aggregate Mean								**3.8**	**1.0996**

Source: Research Data (2022)

Table 4.9 indicate that the majority of the participants strongly agreed that the direct and indirect cost of imports and export transaction have significantly reduced as shown by 68 (39.8%) and mean of 3.61; most of the participants strongly agreed that the volume of imports and export have increased considerably as shown by 69 (40.4%) and mean of 3.85; majority of the respondents strongly agreed that the volume of cargo clearance has increased significantly as shown by 67 (39.2%) and mean of 3.91; majority of the respondents agreed that the time taken in carrying out checks and clearance has greatly reduced as shown by 63 (36.8%) and mean of 3.75; majority of the respondents agreed that National laws and policies guiding border operations are harmonized enhancing smooth clearing of goods at the border as shown by 66 (38.6%) and mean of 3.54; majority of the respondents agreed that technology has increased speed of

processing and exchanging of information between border agencies as shown by 71 (41.5%) and mean of 3.66. The aggregate mean of all statements was 3.8 which suggested that most of the participants agreed that there is trade facilitation in Kenya.

4.4 Diagnostic Tests

To confirm that the multiple regression analysis' assumptions were not broken, the study first carried out the diagnostics tests namely, linearity, normality, multicollinearity, and heteroscedasticity tests.

4.4.1 Test of Linearity

One of the major assumptions of linear regression, according to Belsley (1991), is linearity. The linearity test aims to determine the degree of relationship between the independent variable and the dependent variable. The unknown regression coefficient can be obtained by fitting numerous regression models to the data given the values of the independent and dependent variables (Orme & Combs-Orme,2009). Analysis of Variance analysis (ANOVA) was used to test linearity. The F-ratio tests whether the overall regression fits the data. The probability value less than 0.05 indicates linearity and vice versa. The findings are presented in table 4.10.

Table 4. 10: Linearity Test-Analysis of Variance (ANOVA).

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.638	3	9.879	58.336	.000[b]
	Residual	28.281	167	.169		
	Total	57.919	170			

a. Dependent Variable: Trade Facilitation in Kenya

b. Predictors: (Constant), Legal Framework, Information Technology, Border Procedure

Source: Research Data (2022)

The finding indicates that, the F calculated value (58.336) was greater than the F critical value. Also, the P value is less than the Alpha value p= (0.000 <0.05). The null

hypothesis was rejected indicating that there is linearity. This was considered to suggest that the total regression model was a good fit (significant) and that the research outcome and predictor variables had a linear relationship.

4.4.2 Test of Normality

The normality test is used to examine whether a data set is properly defined by a normal distribution and to calculate the probability that the random variables underlying the data set are normally distributed, according to Anderson and Darling (1954). In multiple linear regression analysis, the error must be distributed evenly between the observed and predicted values (Gonzales,2016). The Kolmogorov-Smirnov tests were used to determine normality. The Kolmogorov-Smirnov tests were used to demonstrate the normality of the data using the p-values. The null hypothesis is rejected if the p-value is less than 0.05, showing that the data is not evenly distributed (Razali & Wah,2011). If the probability value is greater than 0.05, the null hypothesis is accepted, indicating that the data is normally distributed. The Kolmogorov–Smirnov test is used when the sample size is equal to or greater than fifty (50), (Elliott & Woodward,2007). Because our sample size is bigger than fifty, Kolmogorov–Smirnov is a better fit for our study. The findings are presented in table 4.11.

Table 4. 11:Normality Test- Kolmogorov-Smirnov Tests

	Kolmogorov-Smirnov[a]			**Shapiro-Wilk**		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Unstandardized Residual	.044	171	.200*	.990	171	.279
Standardized Residual	.044	171	.200*	.990	171	.279

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Source: Research Data (2022)

The p-values for both standardized and unstandardized residuals for the Kolmogorov-Smirnov test were p=0.200>0.05, according to table 4.11. As a result, the Kolmogorov-Smirnov tests have p-values greater than 0.05. The null hypothesis was preserved (accepted) since the test had probability values larger than 0.05, indicating that the data was normally distributed and so did not violate the multiple regression analyses' normality assumption.

4.4.3 Test of Multicollinearity

Multicollinearity is a situation in which one predictor variable in a multiple regression model can be accurately predicted linearly from the others (Vatcheva, Lee, McCormic & Rahbar,2016). When the independent variables are substantially correlated (r=0.8 or above), multiple collinearity arises. Because the independent variable must be independent of all other elements in the equation, correlation usually signals a problem. In this study, both variance inflation rate (VIF) and tolerance were selected for the multicollinearity test. According to Pallant (2011), there is no multicollinearity when the VIF is between 1 and 10, whereas when the VIF is less than 1 or greater than 10 (<1 or >10), there is multicollinearity.

i. Variance Inflation Factor (VIF) Test

According to Pallant (2011), there is no multicollinearity if the VIF value is between 1 and 10, but there is multicollinearity if the VIF is less than 1 or larger than 10 (<1 or > 10). Based on the collinearity statistics given in table 4.10, VIF values of 1.823, 1.695 and 1.180 were obtained for the border procedure, information technology and legal framework. This implied that there was no multicollinearity between the independent variables. Therefore, the VIF test results confirmed the assumption of multicollinearity was not violated.

ii. Value of Tolerance Test

Multicollinearity is indicated by a tolerance value less than 0.1 (Ary, Jacobs & Sorensen, 2015), while no multicollinearity is indicated by a tolerance value more than 0.1 (> 0.1) (Pallant.2011). Collinearity statistics obtained from the coefficient output revealed the following tolerance values; border procedure = 0.549, information technology= 0.590, legal framework = 0. 847.Likewise, this result indicated that there was no multicollinearity between the independent variables. Therefore, the tolerance test result confirmed the assumption of multicollinearity was not violated. Table 4.12 presents the findings of Multicollinearity test.

Table 4. 12: Multicollinearity Test-VIF and Tolerance

	Collinearity Statistics	
Model	**Tolerance**	**VIF**
Border Procedure	.549	1.823
Information Technology	.590	1.695
Legal Framework	.847	1.180

Source: Research Data (2022)

The data show that the variables have VIF values of <10 and tolerance values of > 0.1, meaning there was no multicollinearity among the study's independent variables.

4.4.4 Test of Heteroscedasticity

Homoscedasticity occurs when the variance of errors is the same at all levels of the independent variable (Kothari,2006). Pallant (2011) describes heteroscedasticity as a term used to characterize a scenario in which the variance of the residuals from a model is not constant. The homoscedasticity assumption, according to Zikmund (2010), simply demands that all random errors have the same constant variance, which is predicted to be true if the error term observations are selected from identical

distributions. Heteroscedasticity can be tested using the following methods Scatter diagrams, Simple correlation or spearman's rank correlation, Glejser test, The park test, The Goldfeld-Quandt test, White's General Test and Breusch-Pagan test. This study tested Heteroscedasticity using the Breusch-Pagan test. In relation to the Breusch-Pagan Test, the squared residuals are regressed against the independent variables of the study. If the probability value is greater than 0.05, there is no heteroscedasticity and the null hypothesis is accepted. The null hypothesis is accepted and the alternative hypothesis is rejected if the p-value is larger than 0.05 (Tabachnick & Fidell, 2007). The findings of the Breusch-Pagan are shown on table 4.13.

Table 4. 13:Breusch-Pagan Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.873	3	.291	4.810	.130
	Residual	10.099	167	.060		
	Total	10.972	170			

a. Dependent Variable: Squared Residual

b. Predictors: (Constant), Legal Framework, Information Technology, Border Procedure

Source: Research Data (2022)

In conducting the Breusch-Pagan Test the Squared residuals were regressed against the independent variables. From the finding of the Breusch-Pagan Test, the null hypothesis was accepted as the (p-value =0.13>0.05) indicating no heteroscedasticity.

4.5 Reliability Testing

A pilot study was done to determine the questionnaire's reliability and internal consistency. The reliability test was conducted based on the findings of the pilot study. Cronbach's Alpha reliability testing was performed on the study instrument using the Statistical Package for Social Science (SPSS). The internal consistency of the questionnaire items was determined using Cronbach alpha (1951). Cooper and

Schindler (2008) consider 0.7 to be an acceptable reliability coefficient. Tables 4.14 summarize the findings.

Table 4. 14: Reliability Test

Variables	Cronbach's Alpha
Trade Facilitation	0.702
Border Procedures	0.701
Information Technology	0.735
Legal Framework	0.832

Source: Research Data (2022)

Cronbach's Alpha coefficients for Trade Facilitation, Border Procedures, Information Technology, and Legal Framework were 0.702, 0.701, 0.735, and 0.832, respectively, according to the analysis in table 4.14. According to Cronbach's reliable tests, a coefficient of 0.7 or higher suggests that the items in the questionnaire are highly trustworthy. The closer Cronbach's alpha value is to 1, the stronger the internal consistency of the scale's elements, according to Taber, (2018). As a result, the findings of the reliability tests can be translated to imply that all of the items in the questionnaire were relied upon to give reliable information in order to analyze the impact of one-stop border post initiatives on trade facilitation in Kenya. Please refer to the Appendix 1 for Item total statistics.

4.6 Validity Testing

According to Weirsma (1990), validity is the extent to which an instrument measures what it was meant to measure or what it was supposed to measure. It is defined by Cooper and Schindler (2010) as the extent to which indicators designed to measure a concept really do so. Ascertaining questionnaire validity was one of the objectives of carrying out the pilot test. This study adopted content validity. The validity test was

carried out based on the outcome of the pilot study. The validity test of this study was done using Kaiser-Meyer-Olkin (KMO). This test measures sampling adequacy for each variable in the model. KMO returns values between 0 and 1. Kaiser (1974) proposed that a KMO greater than 0.5 is acceptable. Tables 4.15 shows the results.

Table 4. 15: Validity Test

Variable	KMO	Bartlett's Test of Sphericity			Validity
		Approx. Chi-Square	df	Sig.	
Border Procedure	0.574	130.005	27	.000	Valid
Information Technology	0.689	169.678	44	.000	Valid
Legal Framework	0.675	82.986	28	.000	Valid
Trade Facilitation	0.685	186.686	46	.000	Valid

Source: Research Data (2022)

The results revealed that all of the variables had a KMO greater than 0.5 (KMO>0.5), indicating that they were all legitimate.

4.7 Factor Analysis

Factor analysis was used to simplify data in order to make it more understandable without sacrificing any crucial information, making hypotheses test easier (Theo,2002). Factor loading values larger than 0.5, according to Kaiser (1974), should be included, while values less than 0.5 should lead to the rectification of more data to assist the researcher in determining the values to include. A 0.7 or higher factor loading represents that the factor extracts sufficient variance from that variable. Any construct that had a loading of less than 0.5 were eliminated.

4.7.1 Border procedure

Kaiser-Meyer-Olkin (KMO) sample adequacy measures were employed to assess the data's eligibility for structure detection. High results near to 1.0 indicate that a factor analysis may be effective with your data. Kaiser-Meyer-Olkin measures of sampling adequacy reflect the proportion of variance in your variables that could be caused by underlying factors (Pallant,2010). According to Table 4.14, the KMO value is 0.574, which is near to 1. This mean factor analysis was acceptable. The variable Border Procedure was subjected to factor analysis based on the foregoing findings, with the results provided in table 4.16.

Table 4. 16: Factor loading for border procedure Variable

Sub-Variables	Factor Loading
Procedures for conducting checks and clearance are simplified and saves time.	0.532
Harmonized and simplified trade documentation reduces delays at the border.	0.542
Streamlined customs clearance reduces the time to comply with border requirements for imports and exports.	0.614
Joint inspections and verification of cargo by multiple agencies is efficient and time saving.	0.611
Joint examination of border procedures saves on duplication hence reducing time delays and cost of doing business.	0.531
Pre-arrival processing have expedited the release of goods upon arrival.	0.742

Source: Research Data (2022)

The list of sub-variables with factor loadings under the variable border procedure is shown in Table 4.16. Because all of the sub-variables had values greater than 0.5, they were accepted.

4.7.2 Information communication Technology

According to Table 4.14, the KMO value was 0.689, which is near to 1. This indicates that factor analysis was acceptable. The variable ICT was subjected to factor analysis based on the foregoing findings, with the results provided in table 4.17.

Table 4. 17: Factor loading for ICT Variable

Sub-variables	Factor Loading
Single window has enabled quicker processing of trade documentation and release of good.	0.812
Single window has enhanced less duplication of work, saving time	0.833
SWS has improved agency coordination, which has resulted in a reduction in delays and lead times.	0.824
The integrated system has improved interconnectivity for information exchange between border agencies of the two countries.	0.743
Traders can electronically communicate information with customs and other regulatory agencies, which decreases delays in the trading process.	0.664
The global placement of the RECTS has improved the monitoring of outbound cargo.	0.736

Source: Research Data (2022)

Table 4.17 shows the sub-variables with factor loadings under the variable ICT. Because all of the variables had values greater than 0.5, they were acceptable.

4.7.3 Legal Framework

According to Table 4.14, the KMO value is 0.675, which is near to 1. This indicates that factor analysis is acceptable. The variable ict was subjected to factor analysis based on the preceding findings, with the results provided in table 4.18.

Table 4. 18: Factor loading for Legal Framework Variable

Sub-variables	Factor Loading
Operationalization of OSBP is in accordance with regional instrument promoting faster single stops border procedure.	0.752
Regional legislation on OSBP is harmonized taking into account the interest of the third country easing border operations between them.	0.786
Bilateral agreement on the parameters of establishing OSBP has been entrenched in the domestic law of each country for effective control.	0.633
National laws on joint border control has reduced delay experienced at the border by traders.	0.615
National laws and policies guiding border operations are harmonized enhancing smooth clearing of goods at the border.	0.583
The concept of extraterritorial jurisdiction has helped both countries to control cross border trade effectively.	0.596

Source: Research Data (2022)

Table 4.18 displays the set of sub-variables with factor loading under the variable legal framework. Because all of the sub-variables had values greater than 0.5, they were allowed.

4.7.4 Trade Facilitation

According to Table 4.14, the KMO value is 0.685, which is near to 1. This indicates that factor analysis is appropriate.

Table 4. 19:Factor loading for Trade Facilitation Variable

Sub-variables	Factor Loading
The direct and indirect cost of imports and export transaction have significantly reduced.	0.562
The volume of imports and export have increased considerably.	0.646
The volume of cargo clearance has increased significantly.	0.732
The time taken in carrying out checks and clearance has greatly reduced.	0.799
Technology has increased speed of processing and exchanging of information between border agencies.	0.865

Source: Research Data (2022)

All displays the set of sub-variables under the variables trade facilitation had factor loading over 0.5 and were thus acceptable, according to table 4.19.

4.8 Inferential Analysis of Study Variables

Inferential statistical analysis was used in addition to descriptive statistical analysis to determine the relationship between the study's outcome and predictor factors.

4.8.1 Correlation Analysis

The strength of the linear link between the research variables was measured using Pearson correlation analysis. The Pearson correlation coefficient denoted (r) should lie between -1 and +1; ($-1 \leq r \leq +1$) with the value of 0 indicating there is no relationship between variables. The goal of this study was to determine the strength of the link between Kenya's border procedures, information technology, legal framework, and trade facilitation. Table 4.20 presents the finding of Pearson correlation analysis.

Table 4. 20: Pearson Correlation Analysis

		Trade Facilitation in Kenya	Border Procedure	Information Technology	Legal Framework
Trade Facilitation in Kenya	Pearson Correlation	1			
	Sig.				
Border Procedure	Pearson Correlation	.677**	1		
	Sig.	.000			
Information Technology	Pearson Correlation	.566**	.638**	1	
	Sig.	.000	.000		
Legal Framework	Pearson Correlation	.410**	.386**	.291**	1
	Sig.	.000	.000	.000	

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

Source: Research Data (2022)

The correlation summary in table 4.20 indicates that the association between the outcome and predictor variables was at 1% significance level. The correlation analysis between border procedures (r=0.677, p=0.00<0.01), information technology (r=0.566, p=0.00<0.01), legal framework (r=0.410, p=0.00<0.01) and trade facilitation in Kenya found a positive and significant relationship at 1% significance level. This finding was interpreted to imply that border procedures, information technology and legal framework had a fairly positive and significant correlation to trade facilitation.

4.8.2 Regression Analysis

Regression analysis was conducted to establish the effect border procedures, information technology and legal framework on trade facilitation in Kenya.

Model Summary

The model summary table shows how well the regression lines can account for all of the variation in the dependent variable. The regression model summary is shown in Table 4.21.

Table 4. 21: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.715[a]	.512	.503	.41152

a. Predictors: (Constant), Legal Framework, Information Technology, Border Procedure

b. Dependent Variable: Trade Facilitation in Kenya

Source: Research Data (2022)

The correlation coefficient (R) of 0.715 in Table 4.21 indicates that there was a high degree of correlation between the study's independent and dependent variables. The coefficient of determination (R-Square) of 0.512 adjusted to 0.503 meant that the three predictor variables, border procedures, information technology, and legislative framework, accounted for 50.3 percent of the variation in trade facilitation in Kenya. This suggests that other factors not addressed in the study were responsible for 49.7% of the changes in trade facilitation in Kenya. These factors include information availability (trade-related information), border agency cooperation, and hard infrastructures, such as poor road and railway infrastructure as well as border-related infrastructure such as border authorities' offices, operational equipment, warehouses, and parking.

Analysis of Variance (ANOVA)

The entire regression model's significance was determined using Analysis of Variance, as shown in Table 4.22.

Table 4. 22: Analysis of Variance (ANOVA).

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.638	3	9.879	58.336	.000[b]
	Residual	28.281	167	.169		
	Total	57.919	170			

a. Dependent Variable: Trade Facilitation in Kenya

b. Predictors: (Constant), Legal Framework, Information Technology, Border Procedure

Source: Research Data (2022)

This finding from the table 4.22 indicates that the overall regression model predicts the dependent variable significantly well. ANOVA results revealed that F-Calculated value (F statistic) (3, 167) = (58.336) was greater than F-Critical value (2.00) obtained from the standard F table (the distribution table), implying that the overall model was statistically significant.

Furthermore, because the p value is less than the alpha value (0.000<0.05), the model statistically strongly predicts the outcome variable (it is a good fit for the data). This showed that Kenya's border processes, information technology, and regulatory framework all had a major impact on trade facilitation.

Multiple Linear Regression Model coefficient analysis

Table 4.23 shows the model weights, t-statistics, and p-values for the link between the effects of one-stop border post efforts on trade facilitation in Kenya.

Table 4. 23: Multiple Linear Regression Model coefficient analysis

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	1.216	.214		5.692	.000
	Border Procedure	.388	.059	.477	6.537	.000
	Information Technology	.184	.060	.214	3.043	.003
	Legal Framework	.137	.049	.164	2.786	.006

a. Dependent Variable: Trade Facilitation in Kenya

Research Data (2022)

Model:

β_1=0.477, t =6.537, p < 0.000.

β_2=0.214, t =3.043, p < 0.003.

β_3=0.164, t =2.786, p < 0.006.

The coefficients table results of the model was interpreted as follows:

Based on the slope coefficients and p values of the border procedure (β1=0.477, p=0.000), information technology (β2=0.214, p=0.003) and legal framework (β3=0.164, p=0.006), the results indicates that border procedure, information technology and legal framework were statistically significant and positively influenced trade facilitation in Kenya. This finding is supported by the probability value of the border procedure (p = 0.000), information technology (p = 0.003) and legal framework (p = 0.006) being less than 0.05. Likewise, the finding is also supported by the test of significance calculated t-value of border procedure (t = 6.537), information technology (t = 3.043) and legal framework (t = 2.786) being greater than critical-t value of 2.00.

The interpretation of the coefficients results is as follows: An increase in border procedure, information technology and legal framework by one unit would result to an

increase in trade facilitation by 0.477,0.214 and 0.164 unit respectively at ceteris paribus.

4.8.3: Model specifications

Based on information in table 4.17, the optimal regression model was as follows:

$Y= \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + €$.

Thus

$Y= 1.216 + 0.477X1 + 0.214X2 + 0.164X3 + €$.

Where Y =Trade Facilitation in Kenya;

β_0= 1.216 =intercept term (constant) of the regression line.

β_1=0.477 = slope coefficients of border procedure.

β_2=0.214 = slope coefficients of information technology.

β_3=0.164 = slope coefficients of legal framework.

€ =Error term that captures other factors other than the border procedure, information technology and legal framework that explains variation in trade facilitation.

X_1 = Border procedure;

X_2 = Information technology;

X_3 = Legal framework;

After substituting the variables, the optimal regression model was as follows:

Y (Trade Facilitation in Kenya) = 1.216 + 0.477 (Border Procedure) +0.214 (Information Technology) + 0.164 (Legal Framework) + e (error term)

Based on the beta coefficients on Table 4.17, the regression constant (β_0) was 1.216. This was interpreted to mean that when all factors including the three independent variables are at zero, there would be a 1.216 trade facilitation in Kenya.

X_1 is border procedure which has a Beta coefficient value of 0.477 that was statistically significant at (p=0.000<0.05). This was interpreted to mean that a unit increase in Border Procedure would lead to a rise in trade facilitation in Kenya by 0.477 while holding other factors constant.

X_2 is information technology which has a Beta coefficient value of 0.214 that was statistically significant at (p=0.003<0.05). This was interpreted to mean that a unit increase in information technology would lead to a rise in trade facilitation in Kenya by 0.214 while holding other factors constant.

X_3 is **legal framework** which has a Beta coefficient value of 0.164 that was statistically significant at (p=0.006<0.05). This was interpreted to mean that a unit increase in legal framework would lead to a rise in trade facilitation in Kenya by 0.164 while holding other factors constant.

4.9 Hypothesis Testing

The first hypothesis of the study was as follows:

H_{01}: *Border procedures has no significant effect on trade facilitation in Kenya.*

In testing this hypothesis, trade facilitation in Kenya being the outcome variable was regressed on border procedures the predictor variable. The results indicated that there was a significant influence of border procedures on trade facilitation in Kenya based on the p-values (p=0.000<0.05) p-value of 0.000 being less than alpha value of 0.05 and test of significance value Calculated-T (t-value=6.537) of border procedure being greater than Critical-T (2.00). Hence, the study rejected the null hypothesis (H01) and

accepted the alternative ***(H_1): Border procedures has significant effect on trade facilitation in Kenya***

The second hypothesis of the study was as follows:

H_{02}: Information technology has no significant effect on trade facilitation in Kenya.

In testing this hypothesis, trade facilitation in Kenya being the outcome variable was regressed on information technology the predictor variable. The results indicated that there was a significant influence of information technology on trade facilitation in Kenya based on the p-values ($p=0.003<0.05$) p-value of 0.003 being less than alpha value of 0.05 and test of significance value Calculated-T (t-value=3.043) of information technology being greater than Critical-T (2.00). Hence, the study rejected the null hypothesis (H_{02}) and accepted the alternative ***(H_2): Information Technology has significant effect on trade facilitation in Kenya.***

The third hypothesis of the study was as follows:

H_{03}: Legal framework has no significant effect on trade facilitation in Kenya.

In testing this hypothesis, trade facilitation in Kenya being the outcome variable was regressed on legal framework the predictor variable based on p-value ($p=0.006<0.05$), p values of 0.006 being less than alpha value of 0.05 and test of significance value Calculated-T (t-value=2.786) of information technology being greater than Critical-T (2.00). Hence, the study rejected the null hypothesis (H_{03}) and accepted the alternative ***H_3: Legal framework has significant effect on trade facilitation in Kenya.***

Table 4. 24: Summary of Hypotheses Tests.

Hypothesis	P-value	T-value	Verdict
H_{01}: Border procedure had no effect on trade facilitation in Kenya.	0.000	6.537	Rejected
H_{02}: Information technology had no effect on trade facilitation in Kenya.	0.003	3.043	Rejected
H_{03}: Legal framework had no effect on trade facilitation in Kenya.	0.006	2.786	Rejected

Source: Research Data (2022)

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the study findings; the conclusion drawn, recommendations and suggestions for futures studies.

5.1 Summary of the Findings

The study's major purpose was to determine the efficiency of one-stop border post initiatives on trade facilitation in Kenya. The study was conducted during a one-year period, from 2021 to 2022. The study used original data from Kenya's Malaba, Busia, and Namanga OSBPs.

The descriptive statistics results revealed that the majority of respondents, as shown by the mean score of border procedure (x =3.66), information technology (x =3.585), and legal framework (x =3.66), agreed that border procedure, information technology, and legal framework all had an influence on trade facilitation. The findings of correlations analysis revealed a positive and significant relationship was established between border procedure (r =.677, p=0.000), information technology (r=.566, p=0.000), and legislative framework (r=.410, p=0.000). This finding on the correlation analysis revealed that a unit worth of increase in any one of the three independent variables will have an effect on trade facilitation based on the strength of the correlation coefficient.

According to the findings of the multiple regression analysis, the computed model, analysis of variance (ANOVA), and independent variables were all statistically significant since their probability values (p-values) were less than 0.05. The model summary results revealed that there was a 50.3 % variation in trade facilitation due to

changes in border procedure, information technology and legal framework. Calculated-F (58.336) was greater than Critical-F in the ANOVA, indicating that the calculated regression model was statistically significant. This was also an indication that border procedure, information technology and legal framework influenced trade facilitation in Kenya.

The slope coefficients of border procedure (β1=0.477, p=0.000), information technology (β2=0.214, p=0.003) and legal framework (β3=0.164, p=0.006) also backed this finding. Based on the slope coefficients of the predictor variables, the study found that increasing border procedures, information technology, and legal framework by one unit will result in increases in trade facilitation of 0.477,0.214, and 0.164 units, respectively, when all other variables are held constant.

This finding was also validated by the results of hypothesis testing that rejected all the three null hypotheses (H01, H02 and H03) and accepted their alternatives (H1, H2 and H3) based on the computed p-values of border procedure (p = 0.000), information technology (p = 0.003) and legal framework (p = 0.006) being less than 0.05. In addition to the p-values, the study also rejected the three null hypotheses based on the calculated t-values of border procedure (t = 6.537), information technology (t =3.043) and legal framework (t = 2.786) being greater than their critical t value of 2.00. Based on the research goals, the following conclusions were drawn from the descriptive and inferential analytical results:

5.1.1 Findings on Border Procedures and Trade Facilitation

Based on the first research objective, the study found that the border procedure had a positive and significant effect on trade facilitation in Kenya. This finding was backed by the results of hypothesis testing which rejected the null hypothesis (H01) and

accepted the alternative (H1) based on the p-value of the border procedure (p = 0.000) and the t-value of the border procedure (t = 6.537). Slope coefficient of value of 0.477 for border procedure that was statistically significant at (p=0.000<0.05) also supported this finding. This was further supported by the descriptive statistics mean score of border procedure ($\bar{x}$ =3.66) as well as correlation coefficient value of border procedure (r=0.677, p=0.00<0.01) in relation to trade facilitation. Therefore, based on the slope coefficient of border procedure (0.477), it means that a unit increase in Border Procedure would lead to a rise in trade facilitation in Kenya by 0.477 while holding the factors constant.

The results of this study are in line with research by Moise and Sorescu (2013), who found that simplification and harmonization of documents, streamlining border procedures and the availability of trade-related information were the policy areas that had the most impact on the volume of trade and costs of trade, both for imports and exports. The cumulative effect of these improvements resulted in an overall reduction in trade costs of around 14.5% for low-income countries, 15.5% for lower-middle-income countries, and 13.2% for upper-middle-income countries. The finding was also consistent with those of Lesser and Moisé-Leeman (2009) who found out that successful implementation of trade facilitation programs such as simplified border procedures reduced costs, boosted productivity, and increased transparency in cross-border trade thus improving trade facilitation.

5.1.2 Findings on Information Technology and Trade Facilitation

Based on the second research objective, the study found that the information technology had a positive and significant effect on trade facilitation in Kenya. This finding was backed by the results of hypothesis testing which rejected the null hypothesis (H01) and accepted the alternative (H1) based on the p-value of the information technology (p =

0.000) and the t-value of information technology (t = 3.043). Slope coefficient of value of 0.214 for information technology that was statistically significant at (p=0.003<0.05) also supported this finding. The descriptive statistics mean score of information technology (x =3.585) and correlation coefficient value of information technology (r=0.566, p=0.000.01) in relation to trade facilitation further corroborated this. Based on the slope coefficient of information technology (0.214), a unit increase in information technology would result in a 0.214 increase in trade facilitation in Kenya while all other parameters remained constant.

The findings of this study on information technology and trade facilitation in Kenya concur with study done by Asiimwe (2014) who investigated an Integrated System with a single-point border crossing (OSBP). The study mentioned an Integrated Custom Management System (iCMS) that would be accessible to a variety of institutions at border crossings, including immigration authorities, revenue authorities, police, and the National Bureau of Standards. According to the study, border crossing time will be decreased by around 60% because both border crossing systems will use the same data in the same area, making interpretation easy on both sides. This is also supported by Tosevska-(2014) Trpcevsca's study, which looked into the impact of the Single Window and simplified customs procedures in the Republic of Macedonia. The study concluded that one of the most significant benefits gained by the single window user was a 66.16 percent decrease in time and human resources. When compared to standard custom procedures, all factors such as average documents, signatures, time in hours, and financial costs have been considerably reduced.

5.1.3 Findings on Legal Framework and Trade Facilitation

Based on the third research objective, the study found that the legal framework had a positive and significant effect on trade facilitation in Kenya. This finding was backed

by the results of hypothesis testing which rejected the null hypothesis (H01) and accepted the alternative (H1) based on the p-value of the legal framework (p = 0.006) and the t-value of legal framework (t = 2.786). Slope coefficient of value of 0.164 for legal framework that was statistically significant at (p=0.006<0.05) also supported this finding. The descriptive statistics mean score of legal framework (x =3.66) and correlation coefficient value of legal framework (r=0.410, p=0.000.01) in relation to trade facilitation backed up this conclusion. Based on the slope coefficient of legal framework (0.164), a unit increase in legal framework would result in a 0.164 increase in trade facilitation in Kenya while all other parameters remained constant.

The research findings on the legal framework and trade facilitation in Kenya are in line with the research of Nkwenu & Lungu (2011) which found that a legal framework was first needed to accommodate the concept of a one-stop shop to be established. The legal framework allows for the extension of each country's national border control laws to other countries, enabling each country's border control officers to carry out legal duties outside their national territory; and allow the granting of permits to border control officers with the authority to carry out border control functions according to the laws of their country in other areas. The finding indicated that establishment of proper legal framework along the international border greatly improved trade facilitation. This is also consistent with Kieck's (2010) research “Coordinated Border Management: Unlocking Trade Opportunities through One-Stop Border Crossing Points”, which found that one-stop border crossings are a key mechanism for increasing the movement of goods across shared borders in terms of coordinated border management. internationally, and this agreement has brought economic and criminal benefits by reducing the cost and time of doing business. However, this has been achieved thanks

to sound policies supported by a favorable legal framework and implementation strategies supported by all stakeholders.

5.2 Conclusions of the Study

The study's primary goal was to evaluate how border procedures affected trade facilitation in Kenya. According to the findings, the study concluded that border procedures had a significant and positive effect on trade facilitation in Kenya. This conclusion was backed by the study's rejection of the border procedure's first null hypothesis and acceptance of the alternative based on computed probability and test of significant values. The border procedure's slope coefficient backed up this conclusion, demonstrating a statistically significant portion of variance linked to trade facilitation in Kenya. This conclusion goes hand in hand with the Studies by Lesser and Moisé-Leeman (2009) on cross-border trade and trade facilitation reform in sub-Saharan Africa who found that successful implementation of trade facilitation programs such as simplified border procedures, reduced costs, increased productivity and increased transparency. in cross-border trade. According to Iwanow and Kirkpatrick (2007), a 1% increase in border procedure boosts trade flows by 0.20 percent. For African countries, the elasticity is significantly higher. According to Shepherd (2013), a 1% increase in cross-border clearance time lowers the value of enterprises' direct exports by 0.07 percent while increasing their reliance on foreign exporters by 0.10 percent.

The study's second goal was to see how information technology affected trade facilitation in Kenya. The study concluded that information technology has a significant and positive effect on trade facilitation in Kenya, according to the findings. This conclusion was backed by the study's rejection of information technology's second null hypothesis and acceptance of the alternative based on probability and test of significance values. This finding was further supported by the slope coefficient of

information technology, which indicated a statistically significant portion of variance due to trade facilitation in Kenya. This conclusion is backed by study on Automated border systems as one of the most successful techniques of expediting the international commerce process, according to research by the Economic Commission for Latin America and the Caribbean (ECLAC, 2006). Automation has been a catalyst for modernization and a stimulus for expanded use of information and communication technologies (ICTs) by other government agencies and the commercial sector involved in automation initiatives. This reduces trade costs and has an impact on the ease of coordination of border officials and the transparency of trade laws and procedures. Angola's Crown agents (2010) advocated the introduction of computerized customs clearance, which resulted in a faster flow of real merchants and reduced the time to clear customs from 21 days to 48 hours. In addition, businesses will benefit from increased transparency and predictability as a result of implementing new consolidated customs codes and regulations that align with internationally agreed standards such as the WTO Rules on Customs Assessment and the Code of Ethics and Customer Service for Customs Standards.

The study's third goal was to examine the effect of Kenya's legal framework on trade facilitation. The study revealed that Kenya's legal framework had a significant and positive effect on trade facilitation, according to the findings. This conclusion was backed by the study's rejection of the legal framework's third null hypothesis and acceptance of the alternative based on computed probability and test of significant values. The legal framework's slope coefficient backed with this conclusion, suggesting a statistically substantial fraction of variance linked to trade facilitation in Kenya. This conclusion is also supported by Fitzmaurice (2017) who examined the regulatory framework, infrastructure, and OSBP process flow in Port Elizabeth, South Africa. His

research also looks into OSBP's goals, border operating procedures, and how OSBP fits into the larger picture of reducing transit time and promoting trade. He gave an example, infrastructure must include human resources, especially the OSBP Joint Coordinating Committee. Committees should be established in accordance with bilateral trade agreements.

The model summary results demonstrated that the border procedure, information technology, and legislative framework accounted for 50.3 percent of all changes or variations in trade facilitation in Kenya, in addition to the analysis of variance and beta coefficients of the predictor variables. As a result of the findings, the study concluded that border procedures, information technology, and the legal framework were all fundamental elements that positively influenced trade facilitation in Kenya.

5.3 Recommendations of the Study

The study recommended that the Border Authorities should strengthen the border procedures by ensuring that all OSBP's operations are built on the simplified and harmonized operating procedures as well as collaborative controls like joint goods and cargo verification and inspections in order to facilitate trade.

The study recommends that the agencies involved needs to develop policies in border procedure to increase simplification, harmonization and coordination at the border point, that supports trade facilitation. This Policies should be implemented to guarantee that operations are simplified and streamlined and uniform at the border point.

A solid ICT infrastructure should be put in place to promote trade facilitation. The study recommended that the agencies to implement a policy that supports the iCMS, SWS, and RECTS global positioning systems, to accelerates the flow of information between

agencies and reduces border delays. This will benefit customs procedures as well, resulting in faster border transit and clearance.

The study also recommended that that the government of the respective EAC partner states should put in place a proper and harmonize legal framework to aid border authorities in coordinating their functions effectively also the government should engage stakeholders in the implementation, which should be based on realistic goals and completed within specified timelines. This will assist in reducing the obvious challenges since most of the major difficulties will have been handled.

To diversify the outcomes of this study and develop common trends, the study recommends more research addressing similar variables to be done in other EAC partner states adopting the same initiatives.

5.4 Limitations of the Study

The researcher discovered a sluggish reaction, with some people hesitating to comply out of fear of being victimized. The respondent was informed that the study was for academic purposes only and that their opinions would be kept private.

The study concentrated on three elements that have a significant effect on trade facilitation. However, trade facilitation in Kenya is influenced by variables other than these three. Respondents showed some reluctance to fully cooperate, believing that other elements such as infrastructure, trade-related information availability, and border agency collaboration were more important. In comparison to the rest, the researcher said that the three factors were the most important.

The study has certain limitations worth addressing; The study focused on three aspects related to the effectiveness of OSBP activities on Kenyan trade facilitation. The research was confined to customs, immigration, Kebs, and a few AEO traders. As a

result, there was a limitation in covering all possible stakeholders, such as clearing agencies and logistics firms, and how this affects trade facilitation in Kenya.

5.5 Suggestions for Future Research

This study assessed the impact of the one-stop border initiative on trade facilitation in Kenya. Based on the results of this study, 50.3% of the difference in trade facilitation in Kenya can be attributed to three predictor variables, namely border procedures, information technology, and the legal framework. This means that other factors not considered by the study were responsible for 49.7% of the changes in trade facilitation in Kenya. These factors include information availability (trade-related information), border agency cooperation, strengthening border agencies and hard infrastructures, such as poor road and railways as well as border-related infrastructure such as border authorities' offices, operational equipment, warehouses, and parking. As a result, the study recommends that future research look at additional factors that may influence trade facilitation in Kenya. The researcher should also cover all possible stakeholders and the key players in international trade such as clearing agencies and logistics firms, and how this affects trade facilitation in Kenya.

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APPENDICES

Appendix A: Research Questionnaire

Dear Respondent,

I am a master's student at Moi University pursuing a Master of tax and custom administration. Currently, I'm carrying out a research on the **"Effect of one stop border post initiatives on trade facilitation in Kenya"**. I kindly request you to fill in this questionnaire. The information collected will be used strictly for the purpose of this study and will be treated confidentially. Thank you for agreeing to participate in the study.

Yours Faithfully,

Yedo Shibia Oche.

PART A: BACKGROUND INFORMATION

Kindly Tick as appropriate;

1.Please indicate your role at the OSBP.

Custom Staff [ ] KEBS [ ] Immigration [ ] Traders [ ]

2.What is your current age?

Under 20 [ ] 20-30 [ ] 31-40 [ ] 41-50 [ ] 50 years & above [ ]

3. What is your highest level of education.

Primary [ ] Secondary [ ] Diploma [ ] Undergraduate [ ] Postgraduate [ ]

4.For how long have you been working at the OSBP?

Under 2 years [ ] 2-4 years [ ] 4-6 years [ ] Over 6 years [ ]

PART B: BORDER PROCEDURE

Please tick the numeric value corresponding to your view for each statement on border procedure and trade facilitation, using the Likert scale of 1-5, where; 1=Strongly disagree, 2=Disagree, 3= Neutral, 4=Agree 5= Strongly agree.

STATEMENT	**1**	**2**	**3**	**4**	**5**
Procedures for conducting checks and clearance are simplified and saves time.					
Harmonized and simplified trade documentation reduces delays at the border.					
Streamlined customs clearance reduces the time to comply with border requirements for imports and exports.					
Joint inspections and verification of cargo by multiple agencies is efficient and time saving.					
Joint examination of border procedures saves on duplication hence reducing time delays and cost of doing business.					
Pre-arrival processing have expedited the release of goods upon arrival.					

PART C: INFORMATION TECHNOLOGY (ICT)

Please tick the numeric value corresponding to your opinion for each statement on information technology and trade facilitation, using the Likert scale of 1-5, where; 1=Strongly disagree, 2=Disagree, 3= Neutral, 4=Agree 5= Strongly agree.

STATEMENT	**1**	**2**	**3**	**4**	**5**
Single window has enabled quicker processing of trade documentation and release of good.					
Single window has enhanced less duplication of work, saving time					

SWS has improved agency coordination, which has resulted in a reduction in delays and lead times.					
The integrated system has improved interconnectivity for information exchange between border agencies of the two countries.					
Traders can electronically communicate information with customs and other regulatory agencies, which decreases delays in the trading process.					
The global placement of the RECTS has improved the monitoring of outbound cargo.					

PART D: LEGAL FRAMEWORK

Please tick the numeric value corresponding to your view for each statement on legal framework and trade facilitation, using the Likert scale of 1-5, where; 1=Strongly disagree, 2=Disagree, 3= Neutral, 4=Agree 5= Strongly agree.

STATEMENT	**1**	**2**	**3**	**4**	**5**
Operationalization of OSBP is in accordance with regional instrument promoting faster single stops border procedure.					
Regional legislation on OSBP is harmonized taking into account the interest of the third country easing border operations between them.					
Bilateral agreement on the parameters of establishing OSBP has been entrenched in the domestic law of each country for effective control.					
National laws on joint border control has reduced delay experienced at the border by traders.					

National laws and policies guiding border operations are harmonized enhancing smooth clearing of goods at the border.					
The concept of extraterritorial jurisdiction has helped both countries to control cross border trade effectively.					

PART E: TRADE FACILITATION

Please tick the numeric value corresponding to your view for each statement on trade facilitation, using the Likert scale of 1-5, where; 1=Strongly disagree, 2=Disagree, 3= Neutral, 4=Agree 5= Strongly agree,

STATEMENT	**1**	**2**	**3**	**4**	**5**
The direct and indirect cost of imports and export transaction have significantly reduced.					
The volume of imports and export have increased considerably.					
The volume of cargo clearance has increased significantly.					
The time taken in carrying out checks and clearance has greatly reduced.					
Technology has increased speed of processing and exchanging of information between border agencies.					

Thank you for your time and cooperation.

Appendix B: Research Permit.

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 706571

Date of Issue: 27/November/2021

RESEARCH LICENSE

This is to Certify that Miss.. Yedo Shibia Oche of Kenya School of Revenue Administration, has been licensed to conduct research in Busia, Kajiado on the topic: EFFECT OF ONE STOP BORDER POST INNITIATIVES ON TRADE FACILITATION IN KENYA- CASE OF MALABA, BUSIA AND NAMANGA BORDER POSTS. for the period ending : 27/November/2022.

License No: NACOSTI/P/21/14645

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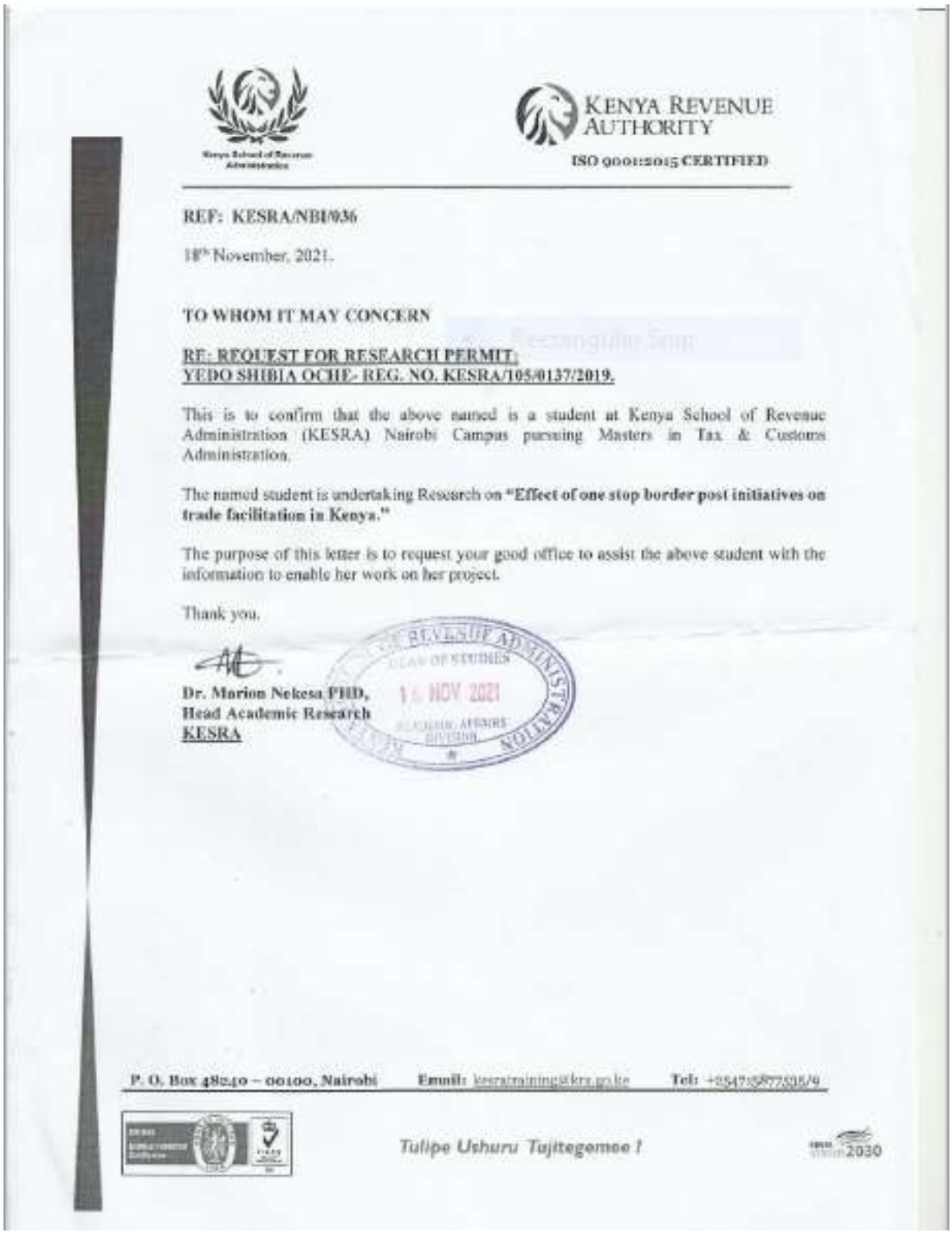
Appendix C: Introductory Letter



Kenya School of Revenue Administration

KENYA REVENUE AUTHORITY

ISO 9001:2015 CERTIFIED

REF: KESRA/NBI/036

18th November, 2021.

TO WHOM IT MAY CONCERN

RE: REQUEST FOR RESEARCH PERMIT:
YEDO SHIBIA OCHE- REG. NO. KESRA/105/0137/2019.

This is to confirm that the above named is a student at Kenya School of Revenue Administration (KESRA) Nairobi Campus pursuing Masters in Tax & Customs Administration.

The named student is undertaking Research on **"Effect of one stop border post initiatives on trade facilitation in Kenya."**

The purpose of this letter is to request your good office to assist the above student with the information to enable her work on her project.

Thank you.

Dr. Marion Nekesa PHD,
Head Academic Research
KESRA

KENYA REVENUE ADMINISTRATION
DEAN OF STUDIES
16 NOV 2021
ACADEMIC AFFAIRS DIVISION

P. O. Box 48240 – 00100, Nairobi Email: kesratraining@krs.go.ke Tel: +2547:5877535/9

Tulipe Ushuru Tujitegemee !

2030

Appendix D: Reliability Test: Item-Total Statistics

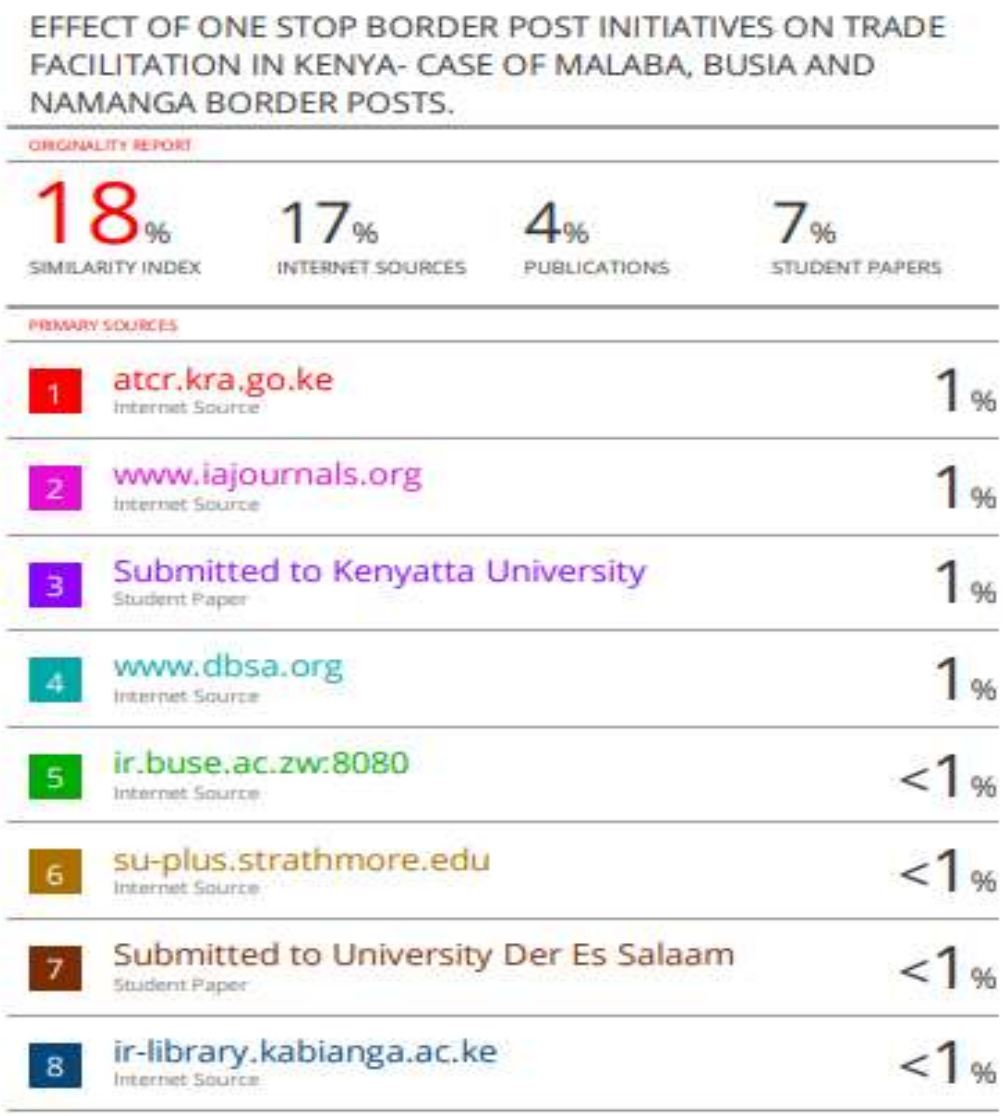
Reliability Test: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Role at OSBP	95.44	149.295	-.039	.796
Age	94.21	147.873	.016	.792
Level of Education	94.53	150.945	-.095	.797
Years of Work Experience	94.49	149.063	-.008	.790
Procedures for conducting checks and clearance are simplified and saves time.	94.10	138.396	.453	.773
Harmonized and simplified trade documentation reduces delays at the border.	94.20	138.928	.385	.775
Streamlined customs clearance reduces the time to comply with border requirements for imports and exports.	94.41	132.667	.549	.766
Joint inspections and verification of cargo by multiple agencies is efficient and time saving.	94.49	138.945	.329	.778
Joint examination of border procedures saves on duplication hence reducing time delays and cost of doing business.	94.48	134.275	.485	.769
Pre-arrival processing have expedited the release of goods upon arrival.	94.45	132.661	.561	.765

Technology has improved interconnectivity for information exchange between border agencies of the two countries.	94.57	147.141	.030	.793
Technology allows traders to exchange information with customs and other control agency electronically, this reduces delays in trading process.	94.32	137.137	.368	.776
Electronic submission of custom declarations saves time and cost at the border.	94.32	134.572	.467	.770
Payment of duties and charges electronically online has sped up border operations.	94.33	134.412	.481	.770
Single window has enabled quicker processing of trade documentation and release of good.	94.33	135.859	.404	.773
Single window has enhanced less duplication of work, saving time.	94.48	139.628	.297	.779
Operationalization of OSBP is in accordance with regional instrument promoting faster single stops border procedure.	94.33	141.480	.285	.780
Regional legislation on OSBP is harmonized taking into account the interest of the third country easing border operations between them.	94.25	138.257	.336	.777

Bilateral agreement on the parameters of establishing OSBP has been entrenched in the domestic law of each country for effective control.	94.06	141.413	.221	.783
National laws on joint border control has reduced delay experienced at the border by traders.	94.36	137.960	.400	.774
National laws and policies guiding border operations are harmonized enhancing smooth clearing of goods at the border.	94.47	138.615	.304	.779
The concept of extraterritorial jurisdiction has helped both countries to control cross border trade effectively.	94.64	140.127	.272	.781
The direct and indirect cost of imports and export transaction have significantly reduced.	94.40	134.994	.438	.772
The volume of imports and export have increased considerably.	94.16	135.455	.477	.770
The volume of cargo clearance has increased significantly.	94.10	138.396	.453	.773
The time taken in carrying out checks and clearance has greatly reduced.	94.26	139.075	.346	.777
Technology has increased speed of processing and exchanging of information between border agencies.	94.13	148.595	.002	.791

Appendix E: Plagiarism Certificate



EFFECT OF ONE STOP BORDER POST INITIATIVES ON TRADE FACILITATION IN KENYA- CASE OF MALABA, BUSIA AND NAMANGA BORDER POSTS.

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