Coordinated Border Management and Trade Facilitation at Namanga Border, Kenya

Catherine Mogere Ogutu

A Research Project Submitted in Partial Fulfillment of the Requirements for the Post Graduate Diploma in Customs Administration of the Jomo Kenyatta University of Agriculture and Technology

2021

DECLARATION

This project is my original work and has not been presented for a post graduate diploma in any other academic or non-institution

Signature: _____ Date: _____

CATHERINE MOGERE OGUTU

HDB336-C016-2477/2016

Declaration by the Supervisor

This research project has been submitted for examination with my approval as the university supervisor.

Signature: _____ Date: _____

DR. MARION NEKESA

Lecturer

KESRA

ACKNOWLEDGEMENT

I would like to take this opportunity to express my sincere gratitude to the following people whose support has made this paper a success:

To my supervisor Dr. Marion Nekesa, for her guidance throughout the research

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABBREVIATION AND ACRONYMS

ADB	African Development Bank
BAC	Border Agency Cooperation
CSOs	Civil Society Organizations
DDA	Doha Development Agenda
DFID	Department for International Development
EAC	East African Community
EALA	East African Legislative Assembly
EU	European Union
FCA	Federal Customs authority
KEBS	Kenya Bureau of Standards
KEPHIS	Kenya Plant Inspectorate Services
KRA	Kenya Revenue Authority
OSBP	One-Stop Border Post
OSCE	Organization for Security and Cooperation in Europe
PSOs	Private Sector Organizations
UAE	United Arab Emirates
WCO	World Customs Organization
WTO	World Trade Organization

DEFINITION OF KEY TERMS

Coordinated Border Management is the coordinated approach by border control agencies, both domestic and international, in the context of seeking greater efficiencies over managing trade and travel flows, while maintaining a balance with compliance requirements at the border trade areas.

One-stop Border Post (OSBP) is a shared space or border facility located at a border crossing between two adjoining countries, or in its proximity, where border agencies of the two States (e.g., Customs, Immigration, Police, health authorities, veterinary authorities, etc.) mandated to inspect goods, persons and vehicles, carry out functions related to clearing goods and travelers across the border.

Trade facilitation is the simplification, modernization and harmonization of import and export procedures with the aim of reducing trade costs associated with compliance and maximizing efficiency, transparency and predictability based on internationally accepted norms and standards relating to Namanga border trade areas.

Cooperation refers to formalized meeting and exchange of information so that agencies involved can achieve goals more effectively. It involves intra-service, inter-agency and international cooperation at the border points for smooth running of trading.

Coordination refers to border agencies moving beyond information sharing to resources sharing and working together. Undertaking tasks jointly enables the goals of independent organizations to be achieved more effectively so that trade facilitation at the border areas can be more effective.

Collaboration refers to an intensive process involving a formal partnership to achieve common goals based on shared policies and working procedures for easier trade facilitation at the border areas.

Co-existence refers to the lowest level of interaction among organizations where there is no formal communication amongst such organizations for the sake of making trade facilitation at the border areas more effective.

Communication is the most common form of interagency cooperation where there are formal channels of sharing information between different agencies so that trade facilitation at the borders can be enhanced and sustained.

ABSTRACT

The purpose of this study was to establish the effect of coordinated border management on trade facilitation in Kenya, focusing on Namanga one-stop border point. Specific objectives of the study included: to establish the effect of cooperation among border agencies, coordination between border agencies, border collaboration challenges between border agencies, coexistence among border agencies, and the effect of communication among border agencies on trade facilitation at the Namanga border point. New Trade Theory and Export Base Theory were used in the study. The study adopted causal research design and a target population of 94 staff of border control agencies at Namanga Border Point. Census was used to include all of them in the study where primary data was collected using a structured questionnaire and analyzed using descriptive (frequencies & percentages) and inferential (multiple linear regression) data analysis methods. The study's key findings indicated that there were significant challenges on coordinated border management at the Namanga border point. The study recommended the government's creation of a harmonized business environment, effective coordination mechanism, effective policy for enhanced interagency collaboration, appropriate border control agencies coexistence structures, and working communication mechanism for helping border control agencies to always work under a more professional and friendlier environment that is favourable to effective and efficient trade facilitation at the Namanga border point. The study was important for informing the government and other state agencies on how to improve trade facilitation through properly coordinated border management.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In international trade, coordinated border management and trade facilitation remains a crucial undertaking to ensure that goods and services effectively reach their intended destinations within a reasonable time and cost. The need for freedom and fast movement of goods and services across the border has further been linked to the increasingly liberalized trade worldwide. According to the World Trade Organization (WTO), the trade facilitation framework was first initiated at the Singapore Ministerial Conference of 1996 and later adopted at the Doha Development Agenda (DDA) to boost trade all over the world by easing movement of goods and services across all strategic border points (Australian Customs and Border Protection Service, 2011). From its simple definition as making trade easier (Bowman, 2006), trade facilitation calls for proper synchronization of trading systems and processes as well as rules to ensure that international movement of goods and services is streamlined to remove unnecessary bottlenecks that could inconvenience the flow. In a broader sense, trade facilitation encompasses removal or lowering of non-tariff barriers to trade through harmonization of trade procedures, including the exchange of information and handling of paperwork between different parties in the supply chain (Department for International Development [DFID], 2008).

1.1.1 Global perspective

The global objective of trade facilitation is to enhance smooth flow of trade across borders by ensuring faster, cheaper, and more foreseeable processes while at the same time observing strict compliance to set business regulations. Although the concept of trade facilitation may be broad in terms of its operational implications, according to Kieck (2010), there are four fundamental principles or pillars that define the concept. These include simplification, harmonization, standardization and transparency. World Customs Organization (WCO) (2010) further

observes that the four pillars must be observed at all times if the objective of trade facilitation has to be achieved. However, these principles cannot be realized unless there is conscious collaboration among intergovernmental agencies monitoring and controlling cross-border movement of goods and services and human traffic (DFID, 2008). Therefore, border agency cooperation (BAC) acts as the underlying foundation upon which the success of trade facilitation can be defined. Among other requirements, mutual trust amongst all the relevant agencies at the border points will further increase viability of business transactions within their jurisdictions. Border agency cooperation further ensures that synergy is created to enhance policies and structures for managing trade at border points.

In a globalized world where interconnectedness and integration are key dynamics influencing economic growth and social development, policymakers increasingly realize the need for accelerated trans-border regulatory reform to remove unnecessary barriers and burdens on trade. The World Customs Organization (WCO) in its Customs in the 21st century document has captured these critical concepts for reform within the theme of Coordinated Border Management (CBM). For Customs, CBM is about describing how improved regulatory efficiency and effectiveness can be realized through greater coordination between border agencies during policy development and operational activities, both domestically and internationally. This paper considers the meaning of the CBM concept for the customs community in particular and border agencies in general. It provides an overview of the evolution of the concept, which serves as a theoretical underpinning for further policy development.

As the CBM concept is broad and offers numerous interpretations, operational arrangements, such as joint mobile teams, hot pursuit, joint risk management, and targeting centres are not addressed, nor does the paper analyze information exchange systems, in particular the Single

Window that forms an intrinsic part of CBM. Instead, the paper focuses on institutional and some practical border arrangements developed in several countries as part of a CBM implementation strategy, and concludes by suggesting areas for further research.

Although intergovernmental cooperation at the borders may not be panacea to all trade hurdles, from the onset this move attempts to enhance efficiency and effectiveness in border management of trade where all the border control agencies create a common operational ground (WCO, 2010). Border agency cooperation further enables all the border control agencies to have a common objective where an integrated approach is used to achieve the set objective. Infrastructure, policy, manpower, technology, facilities and processes remain key thematic areas for border agency cooperation such that specific needs of different stakeholders are effectively catered for in a more coordinated manner (Zarnowiecki, 2011). Yet, despite the need for working systems to enhance trade facilitation at border points, there is evidence that often there are lapses in various domains of trade management that make it difficult for coordinated flow of information, simplified controls, and cross-functional teamwork (World Trade Organization [WTO] (2011). Although different entities have different definitions for border agency cooperation, the bottom line is that it is very essential for smooth-running of coordinated border management and trade facilitation. The World Customs Organization (WCO), the European union (EU), the Work Bank, and the Organization for Security and Cooperation in Europe (OSCE) all have slightly different definition for border agency cooperation, but common among these definitions is the aspect of interagency collaborative efforts for easing trade at international borders (WCO, 2015).

Trade facilitation is a key product of well-coordinated and studiously managed border activities where all stakeholders are actively involved. However, important to note is the fact that bureaucracies involved in coordination of multiple federal, state, and local government

agencies as well as several grassroots stakeholders tend to cause the players to work at cross-purposes (WTO, 2011). Although a number of countries have tried to put in place strategies to address these challenges by, for instance, reducing customs tariffs, encouraging foreign investments and enhancing regional integration, this approach still seems to encourage hurdles. Some of these impediments are directly tied to disruptive and high administrative costs which together tend to hamper efficiency of modern international transport and logistics transactions (Grainger, 2011). According to World Bank (2010), such disruptions and high costs are effectively being addressed through trade facilitation, especially when it comes to reducing unnecessary costs.

The concept of trade facilitation among the concerned stakeholders is founded on the need to modernize cross-border operations, heighten the spirit of national competitiveness, embrace trade facilitation principles as fronted by the World Trade Organization (WTO), and improve general security at the border points (WTO, 2011). Several developing countries and donors take trade facilitation as a central cog within 'aid-for-trade' and capacity building programs. Effective trade facilitation must be anchored on the principles of cooperation and coordination among various stakeholders. For instance, in Asia, Abu Dhabi and the United Arab Emirates (UAE) are the epitome of cross-border trading due to interstate cooperation (Zarnowiecki, 2011). However, due to what is viewed as high level of sovereignty, this trade relationship may not translate to gains for other countries in the region. The Federal Customs Authority (FCA) seems to wield more authority than other legal entities managing customs operations within their respective jurisdictions thereby creating some kind of frictions (DFID, 2008). The multiple agencies operating in strategic border zones often espouse conflicting administrative directives, and this creates border management challenges that end up hampering trade facilitation.

In Africa, the Chirundu One-Stop Border Post between Zimbabwe and Zambia can be cited as a demonstration of cross-border management and trade facilitation. Apart from the traffic from Zambia to Zimbabwe, the border post also serves as trade gateway for Zambia with other African countries, including as an entryway to the sea port in South Africa. Initially, the border post had over 20 government agencies from both Zambia and Zimbabwe operating independently in handling different responsibilities. This state of affairs led to increase of operational costs and disjointed decision-making, which together made it difficult to coordinate and facilitate trade in a more efficient way (DFID, 2008). However, the later consolidation of structures and streamlining of operations changed the situation for the better. The financial support of the border post by the Department for International Development (DFID), the Japan International Cooperation Agency (JICA), and the World Bank has since improved international trade across the Zambian borders. Yet, although there is improved level of border agency cooperation at Chirundu Border Post, there are still challenges occasioned by the two countries' difference in terms of policy and practice.

1.1.2 Regional perspective

In the East African region, cross-border trade plays a critical role in the economic development of the partner states, both within and outside of their borders. Effective management of border points encourage free movement of goods and services, hence improving the livelihood opportunities for the citizens of these partner states. However, due to unfair competition among the member countries and operational differences in other subsectors, such as customs administration, non-tariff barriers, and public health safety compliance standards among other aspects of trade. Joint border management and trade facilitation is not always an easy undertaking for the countries concerned (Kieck, 2010). The establishment of One-Stop Border Post (OSBP) at Namanga, just as an earlier one at Busia border, was anticipated to ease cross-

border trading at all levels, including informal traders who mainly comprise of women and small-scale entrepreneurs (Kivuva & Magara, 2012).

Despite all these, there are a number of challenges that still face coordinated border management and trade facilitation at Namanga border point. For instance, the customs levies the East African Community (EAC) member states at the border is thought to be too high for the small-scale traders to afford hence forcing a number of them to operate outside the law (Njiwa, 2012). Despite some business analysts' view that the partner states are committed to tap into more partnership with the private sector organizations (PSOs) and the civil society organizations (CSOs) so as to enhance coordination and accelerate sustainable trade facilitation, there are still socio-economic and political cooperation hurdles that often appear to scuttle successes of general trade operations at the Namanga border.

The communique signed between Republic of Kenya and United Republic of Tanzania on 22nd Februty 2012 allows for example communities living between Tanzania to move freely without being subjected to the rigors of the movement permits. The announcement was made recently during a 2nd joint border committee meeting for Kenya and Tanzania held at Namanga border post. The meetings were coordinated by the Kenyan and Tanzanian Revenue Authority officials. They were co-chaired by revenue station managers Mr. Dishon Njuguna (Kenya Revenue Authority and Mr. Aminiel Lewis Malisa (Tanzania Revenue Authority. A ten man committee was formed during the meeting to come up with cross border procedures and regulations for the peaceful co-existence between the pastoralists Masai community and other stakeholders to ensure that livelihood amongst the local communities was got disrupted as the move would impact negatively the success of the EAC integration.

The move comes after the Masai community raised concern about some customs imposed against their livestock while they crossed the border in search of pasture. The importance of

security and safety of the community living and operating along the two border posts was stressed. He called on the joint Border Management committees to step up sensitization of the border communities their rights and their role in the success of the integration process.

1.1.3 Trade facilitation

Trade facilitation has been defined variedly by various international organizations. However, the concept has commonly been viewed as mainly focusing on procedures and controls related to moving of goods across national borders (Grainger, 2010). Such control strategies are critical in improving cross-border trade through reduction of associated costs and maximization of efficiency while ensuring that legitimate regulatory frameworks are not violated (Grainger, 2011). In this sense, the concept of trade facilitation can be viewed from four different but interrelated perspectives: simplification and harmonization of relevant rules and procedures, modernization of trade systems or structures, administration and management of trade and customs procedures, and the institutional mechanisms for safeguarding effective application of trade facilitation.

Trade facilitation may involve simple processes, such as ensuring that there is harmonization of office hours for employees in different stakeholder organizations, or more complex ones, such as redesigning how various government offices work so as to avoid duplication of roles and wasting of resources (Grainger, 2012). The approach to trade facilitation may also vary, where it could be ‘top-up’ or ‘bottom-up’ driven. The former approach is inclined towards implementation of international trade facilitation sanctions whereas the latter is often as a result of the drive to address operational challenges (WCO, 2007). Trade facilitation involves various categories of stakeholders, such as traders, transport operators, trade service providers such as banking and insurance institutions, transport infrastructure operators, and specialist service operators, such as shipping agents, and freight forwarders (WTO/OECD, 2010). What is

critical here is the relationship existing between various players so that facilitation can be effective.

1.2 Statement of the Problem

Despite the need for working systems to enhance trade facilitation at border points, there is evidence that often there are lapses in various domains of trade management that make it difficult for coordinated flow of information, simplified controls, and cross-functional teamwork (World Trade Organization, 2011). Furthermore, despite the growing demand for coordination of all trade activities at the border by involving a multiagency approach for effective trade facilitation, competing interests by various key institutional players sometimes tend to scuttle these efforts.

The main idea behind coordinated border management is to ensure that there is effective coordination of commercial activities by relevant institutions operating at the border for efficient and effective trade operations outcomes. In theoretical terms, various countries and trade entities have embraced CBM as their foundation for driving structural border reforms for more efficiency and effectiveness when it comes to better business outcomes (Kieck, 2010). Yet, in practice, a number of institutions working at the border tend to work at cross-purposes hence failing to chart a common pathway for sustainable trade facilitation.

Enhancement of international and interagency cooperation eventually leads to eradication of unnecessary bureaucracies in trade hence establishing a more or less leveled market for all the players. CBM also ensures that there is harmonization of tariffs and removal of all unnecessary restrictions of the movement of goods and services across the border points. Despite the importance of CBM in trade facilitation at the border points, there are still challenges that need to be addressed. Lack of common principles of cooperation, coordination, border collaboration, coexistence, and communication among various key border control agencies may be a

precursor for weak customs checks that could further derail meeting of international standards by transit goods.

Further, absence of coordinated border management would imply duplication of roles by border control agencies, such as inspections and other relevant measures, which could cause delays of movement of people and their merchandises. Inefficiency and unpredictability of border and transit procedures undoubtedly increase business costs in terms of warehouse rent, logistics costs and increased reliability of shipments. Too much bureaucracy at the border points due to duplication of roles among different border control agencies sometimes tends to increase non-compliance as traders use non-designated border crossing points to ship their wares thus denying the government revenue. This study aims to assess whether coordinated approach by border control agencies at Namanga attains greater efficiencies of trade flow while maintaining compliance with government trading rules and regulations.

1.3 General Objective

The general objective of this study was to find out the effect of Coordinated Border Management on trade facilitation at Namanga Border, Kenya.

1.4 Specific Objectives

The study was guided by the following specific objectives:

i. To determine the effect of border collaboration challenges between border agencies on trade facilitation at Namanga border.
ii. To establish the effect of cooperation among border agencies on trade facilitation at Namanga border.
iii. To find out the effect of coordination between border agencies on trade facilitation at Namanga border.

iv. To examine the effect of communication among border agencies and trade facilitation at the Namanga border.

1.5 Research questions

i. What is the effect of collaboration challenges between border agencies on trade facilitation at Namanga border?
ii. What is the effect of Cooperation between border agencies on trade facilitation at Namanga border?
iii. What is the effect of Coordination between border agencies on trade facilitation at Namanga border?
iv. What is the effect of Communication among border agencies on trade facilitation at the Namanga border?

1.6 Significance of the Study1.6.1 The government

Trade facilitation at border points is imperative to a number of entities, including the government in terms of enhanced customs collection, traders in terms of reduced capital tied-up in logistics as well as increased reliability of shipments, and to various border control agencies there is better resource utilization through improved cross-border cooperation, sharing of intelligence, operational data, and resources. However, effective coordinated border management and trade facilitation may be influenced by other factors.

1.6.2 The Policy Makers

This study will therefore be significant to the various agencies working at border points, the KRA, policy makers, and to the researchers and academicians. The findings of this study are expected to help in enhancing knowledge among various government agencies about trade facilitation and how this can be improved at border points.

Furthermore, the findings will help policy makers in coming up with relevant laws and regulations to enhance harmony in border management and trade facilitation across different border stations. It is also expected that the outcome of this study will be important in improving interstate trade relations through harmonization of structures and processes for trade where there are reduced costs for trade and streamlined movement of people and merchandise for quick destinations. The study is also expected to act as reference point for future studies and stimulate further research on border management and trade facilitation

1.6.3 Future Researchers

The future researchers will be able to assess how the past research would have dealt with the problem and be able to come up with new dimensions that they can research on.

1.7 Scope of the Study

The study was an examination of the effect of coordinated border management on trade facilitation in Kenya, with a particular focus on Namanga Border. The study was carried out in Namanga border town which is the main entry point between Kenya and Tanzania. The town lies about 180 kilometers away from Nairobi and 120 kilometers away from Arusha, Tanzania. Presently, the busy border town is characterized by cumbersome and slow clearance procedures for goods moving between the two countries which often end up causing major delays and congestion as huge consignments wait for many weeks before they are cleared at the immigration offices. Delays in clearance at the border point imply that there will be inconveniences at every point in the trade chain hence eventually causing huge business losses to all the players, including governments of the two countries in terms of customs revenue losses.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses relevant literature on border management and trade facilitation. The chapter also provides a brief focused discussion on the theories that will guide this study. Further, empirical literature review and conceptual framework will be presented in this chapter.

2.2 Theoretical Review

The study was guided by the New Trade Theory, The Gravity Model, and Export Base Theory. As further discussed in the subsequent subsections, each of these theories helped in explaining the variables used in the study.

2.1.1 Export Base Theory

Naturally, economic activities of most countries can be viewed in terms of exports and imports. The export base theory was founded by North (1957) on the reasoning that a country's economic growth is fundamentally accelerated through its produce for export which guarantees foreign exchange earnings. Through exports, a country expands its market for region growth in terms of output and employment creation. The export base theory further explains that based on the assumptions of elasticity of input supply and export demand, a country's economic growth will greatly be enhanced not only through direct exports, but also through Keynesian income multiplier. This means that the increase in export market for a given country or region will cause increase for demand of the local goods, hence further creating more income opportunities for the country or region (Leichenko, 2000).

The theory further states that many countries' rate of economic growth is determined by their level of export markets for their local products. Furthermore, other subsidiary industries in a country are also influenced by that country's export market for its core produce as this ensures

creation of employment for majority of the people, and improves political stability for the possibility of expanded businesses in different trade domains.

The theory further emphasizes the need for young economies to support one another in regional blocks to encourage economic expansion for the common prosperity of a given region. Countries must capitalize on technology and research to enhance the viability of their staple commodities and increase their competitive advantages in foreign markets. Based on this study, the export base theory makes a lot of sense as it emphasizes the need for trade facilitation at all levels if a country has to realize its economic potentials. Although the theory does not expressly dwell on the happenings at border points in terms of coordination of business transactions and facilitation, the emphasis on exports as the foundation of any country's economic development and growth is indirectly touching on systems and activities at border areas since exports must be handled at such locations. Increased demand on exports will increase the demand for the same commodities at local levels thereby increasing investment not only in the export industry, but also in other economic subsectors as well. Gradual expansion on investment on other activities in the economic ecosystem will eventually cause other upcoming products to access the foreign market.

According to Tiebout (1956), the export base theory is not only limited to the concept of export base, but encompasses other variables of the economy such as income growth as related with a wide range of economic activities. Furthermore, since the exports and locally sold goods are interrelated in the economy, a country or region must optimize other local outputs.

However, by and large, the export base theory continues to apply in regional economic planning and development, especially in the analysis of international trade development and growth (Brown, Coulson & Engle 1992). The idea that exports provide an engine of growth is also frequently applied in studies of the regional and national impacts of foreign export growth

(Webster, Mathis & Zech 1990). This study examines the effect of coordinated border management and trade facilitation in Namanga border. Using the export base theory, the study was effectively guided in exploring the effect of cooperation and the impact of coordination among border agencies on trade facilitation in the study site. To this extent therefore, the theory was relevant for the study.

2.1.2 New Trade Theory

The New Trade Theory was founded to explain the engagement in intra-industry trade by various countries on the continent (Krugman, 1979). The discovery of the theory was informed by the realization that a greater part of international commerce is led by intra as opposed to inter-industry. The theory stems from the assumption that consumers usually prefer a variety of products which are sold at different prices in the market. The multiplicity of firms selling different products in the market gives customers a wider range of choices hence scaling up the level of completion and making it possible for the companies to be innovative in an effort to increase their market base. With regard to the impact of coordinated border management on trade facilitation, the theory would imply that the higher the level of streamlining of structures and processes for trade, the more profits traders are likely to make (Krugman & Venables,1993).

Business operations at the border sometimes fail to make anticipated maximized profits due to bureaucracies from numerous state agencies, with some of them having overlapping responsibilities.

According to New Trade Theory, there must be simplified systems at the border points where goods and services reach their intended destinations within a fairly short time so as to minimize costs in terms of warehousing and other related costs incurred whenever merchandises delay at entry border points. The theory further postulates that unless trade facilitation is properly

and effectively done, high trade costs can have adverse effects on profit margins, especially in small economies, such as the Kenyan case. The argument is that small developing economies are mainly dominated by the agricultural as opposed to manufacturing sectors, which is the basis for unpredictable and low returns. This would imply that unless there is clear coordinated border management for effective trade facilitation, if most of the goods at the border points are unprocessed ones for instance, then it means that if there are unnecessary delays a country could make huge losses in terms of missed opportunities (Leichenko, 2000).

On the contrary, the New Trade Theory postulates that where economies are driven by the manufacturing industry, there are higher chances of good revenue for the country at the border points even if by any chance the systems are not effective enough when it comes to clearing cross-border movement of people and goods. The New Trade Theory further explains the intricacies of growing an economy where there are no varieties of products when it comes to intra-trade since that means that in the event that there is a problem clearing certain types of goods at the border, then it will result into stagnation in revenue streams. Conversely, if a country is dealing with multiple goods at the border points, then there are chances for tradeoffs even when there are hitches with regard to clearing some of the types of goods being traded in at the cross-border regions. Furthermore, according to the New Trade Theory, there are cost advantages by manufacturing firms due to their high likely big market share and production abilities that will tend to favor them even when they are experiencing some clearing and forwarding issues at the border points (Poon, 2000).

The New Trade Theory was relevant for this study as it provided clear perspectives on how to figure out the likely scenario when there is improper coordination of border management and trade facilitation both in terms of the country's ability to earn revenues from intrastate businesses and its capacity to expand its economy due to better clearing and forwarding

systems at its border entry points. This study intends, as one of its specific objectives, to establish the impact of coordination between border agencies on trade facilitation. As a common modern principle of trade, simplified processes of business transactions are imperative in helping to cut on costs hence providing an opportunity for enhanced profits (Thirlwall, 2006). Ineffective trade procedures and systems that upset this balance would not be the desired route to pursue by most state agencies.

2.1.3 The Gravity Model

The Gravity Model is traced to Tinbergen (1962), Poyhonen (1963), and Pulliainen (163) who almost simultaneously developed the theory to explain bilateral border trade between countries. The name 'gravity model' emerged from the analogy of Newton's law of gravity to emphasize that the growth of trade between countries is dependent on the concerned countries' GDP whereas the trade can conversely be affected negatively based on the distance between the two countries (Hatab et al, 2010). The model further postulates that the standard proxies for trade costs include distance, proximity, common language, historical links, common currency, infrastructure, and migration laws among other factors. Tanzania and Kenya have coexisted for a long time where they share most of these factors. On this basis, the Gravity model would be suitable for explaining the relationship between the two countries when it comes to coordinated border management and trade facilitation. However, there may be other factors that necessitate either of the countries to focus more on their respective trade interests and champion their own paths in border management.

Over time, the econometric specification of the gravity equation has been improved, thereby leading the model to be applied in various domains of research. For instance, incorporation of the population variable in the model by Linnemann (1966) subsequently allowed per capital income which is commonly used as a proxy for economic development to augment the Gravity

Model. Regarding this study, the Gravity model enriches the perspective of the study by considering more variables to be included when it comes to analysis of the independent variables and their influence of the dependent variable. Despite what would be assumed to be common interests by Kenya and Tanzania at the border management, the two countries may be separately driven by their individual interests when pursuing trade facilitation at the common borders. The basic implication of the gravity model is that such export-import business dynamics as the respective country's economic base and existing laws would easily influence the flow of goods and movement of people across the common border.

Whereas the gravity model is viewed as directly applicable in explaining the relationship between coordinated border management and trade facilitation at border areas, Iwanow and Kirkpatric (2007) postulate that the interrelation between trade liberalization and no tariff barriers in combination with other global market dynamics may increase the cost of border trading hence disadvantaging other weaker countries or partners in the trade. In this sense, no tariff barriers will serve as a negative externality that leads to increased costs of doing business.

2.2 Conceptual Framework

A conceptual framework is a concise description of the phenomenon under study represented by graphical depiction of the major variables of the study (Mugenda, 2003). A conceptual framework presents a diagrammatical association between the independent and the dependent variables. In this case, the conceptual framework illustrates a theoretical relationship between cooperation of border agencies, coordination of border agencies and collaboration of border agencies as independent variables, and trade facilitation as the dependent variable. Each of the variables was further measured using various relevant sub-variables, as demonstrated in figure 2.1

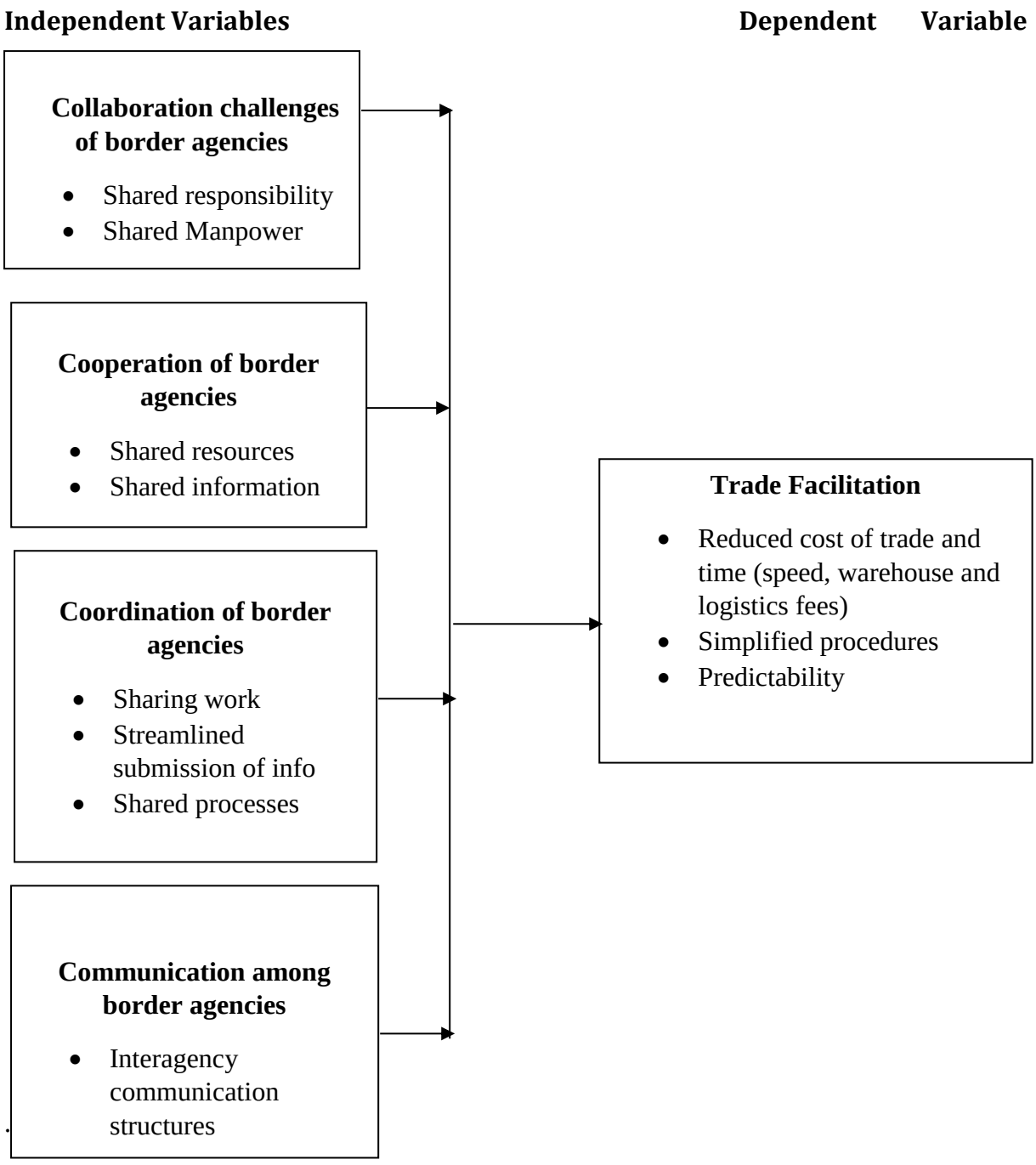

Figure 2.1 Conceptual Framework

2.3 Empirical Literature Review

The study addressed three independent variables and critically analyzes their influence on trade facilitation at border points. Numerous studies have been carried out on these factors and revealed different outcomes. As discussed in subsequent subsections, cooperation among

border agencies, coordination between border agencies and collaboration challenges between border agencies present various effects or impacts on trade facilitation.

2.3.1 Effect of Collaboration Challenges between Border Agencies on Trade Facilitation

Coordinated border management has several advantages when it comes to trade facilitation at border points. This concept provides room for bringing together various government ministries and state agencies of several countries together to institute harmonized trade systems and processes for the common good of the trading parties and the consolidated offices of the governments in question. However, due to various challenges as a result of the involvement of several players in the coordination of trade activities under the arrangement of coordinated border management, it sometimes becomes difficult to bring together all the border agencies so that they can speak in one voice on cross-border trade matters (Ogalo, 2010). Studies have also indicated that different policy perspectives from the various countries involved at any given time and border point, it sometimes proves untenable to push for certain trade rationalization agendas, and this could render some systems dysfunctional for a long time. Some of the challenges may also have to do with rallying all the stakeholders to identify common challenges and opportunities with regard to important operational and monitoring structures at the border. The failure to come up with a common approach to pertinent trade issues was likely to derail important procedures, such as effective inspections of goods and expeditious clearing of their movement to intended destinations (Kimanuka & Titeca, 2012).

Varied vested interests by the countries sharing a common border point have also been identified as an impediment to collaboration between border agencies for effective trade facilitation (Wanjiku et al, 2012). For the Namanga case, for instance, the one-stop border point (OSBP) on the Tanzania's side was funded by the JICA and on completion in 2014 due to some outstanding issues; the project was not immediately handed over to the government as earlier

anticipated. Some of the issues revolved around water connection and supply of furniture. On the Kenyan side, the project was funded by African Development Bank (ADB). However, the delay of completion of the project complicated matters between the project contractor and the engineer as the latter decided to levy liquidated damages to the former for failure to honor their initial contractual terms. The standoff led to dragging of completion of the project. The exemplar of the Namanga OSBP is typical of could derail collaboration among different players at the border points, which could in turn impede cross-border trade facilitation (Wanjiku et al, 2012).

Studies have also revealed how misunderstandings between countries can lead to difficulty in fostering collaboration among agencies for easy trade facilitation. For instance, in Chirundu OSBP in the Zambia-Zimbabwe border, in terms of management of infrastructure, there is an agreement that Zambia as the host country will be responsible for maintenance and rehabilitation, supply and replacement of office equipment, fixtures, and furniture whenever it is necessary to do so; installation of new facilities as and when the case arises; security infrastructure; cleaning provisions; and IT infrastructure as well as settling of water and electricity bills among other related costs. However, these promises are not always fulfilled, hence leading to occasional standoff between the two countries over management of the facility (Kieck, 2010). The misunderstandings may naturally further strain the relationship between border agencies thereby making it hard for their collaboration and trade facilitation. But, since these challenges may not be cross-cutting in all one-stop border points, this proposed study will be necessary to understand the effect of collaboration challenges between border challenges and trade facilitation at border points.

According to the East African Legislative Assembly (EALA), the Namanga OSBP has been associated with a number of organizational challenges which some business analysts feel could

jeopardize collaboration between various border agencies, both in Kenya and Tanzania. Some of the purported administrative challenges include lack of clear procedures for cross-border clearance or movement of local people, erratic power supply, lack of a joint border committee for reviewing financial needs for the operation of the border point, and lack of enough drive-through scanners for vehicles carrying goods, as well as lack of power points for plugging in refrigerated carriers of perishable and fresh farm produce. Other challenges are alleged to revolve around inadequate common space for hawkers do conduct their business, and inadequate knowledge and sensitization regarding the benefit of a common trade between Kenya and Tanzania and the entire East African Community (EAC) region (EALA, 2015).

2.3.2 Effect of Cooperation among Border Agencies on Trade Facilitation

Cross-border trade requires effective border management by various relevant offices so as to avoid unnecessary losses to the traders and the government that may be occasioned by the delay as a result of bureaucracies or noncooperation by different key players. A study by Ndumbe (2013) to examine the effect of cooperation among border management agencies on trade facilitation in Cameroon-Nigeria border revealed that agricultural cross-border trade which was dominated by women and small and medium scale dealers was often adversely affected in a situation where government authorities at the border did not expedite clearance to allow quick movement of their produce to their intended customer destinations. The study further indicated that female traders in the informal trading subsectors were more inconvenienced in their movement of the farm produce due to uncooperative customs officials at border points. Bogged by less supportive systems and driven by their desire to avoid any further businesses losses, some of the small-scale traders resorted to defying the legal trade regulations by using alternative routes to reach their intended market terminuses. Eventually, this may lead some traders to completely give up their business pursuits hence adding to the problem of

unemployment. Given the time lapse since this study was conducted, this proposed research is necessary to understand if the dynamics are any different now.

The USAID (2013) conducted another research on the relationship between border agencies' interrelations and trade facilitation among traders in Karonga market in Malawi-Tanzania border. The findings of the study indicated that men dominated formal export trade in most products, including value-added agricultural products and non-agricultural commodities. The study further noted that different government officials tended to listen to male traders more than female traders. The gendered differences in terms of access to support systems placed most women traders at disadvantaged positions, which sometimes forced them to use illegal means/routes to transport their goods. These findings were also echoed in another study in Rwanda where it was established that male traders at the border markets outnumbered their female counterparts in formal export trade by far (USAID, 2013). These studies further showed how different agencies at the border points treated traders based on gender biases. Overall however, the studies revealed that regardless of the gender or financial ability of the traders, there was need for harmonization of systems and processes to create a common ground for trade facilitation at the border points. This would help to minimize on losses and maximize on profits for the traders and eventually enable the government to earn good revenues in terms of customs. Despite these important findings by USAID (2013), it was important to conduct this proposed study to review the situation in a different study setting and historical period.

A study was carried out by Njiwa (2012) on how cooperation among border agencies impacted trade facilitation at border points. The findings of the study indicated that the nature of business, experience and financial resources of traders also determined the level of and speed with which assistance was offered to various cross-border business dealers. An individual or company's trading history further determined the level of cooperation or assistance to be expected from

border agencies. Other variables that were likely to be influenced by trading history of a trader when being facilitated at the border points included the profits generated or prominence of the trader, trading volume and strength, as well as the coping behaviour and practices in dealing with trade-related challenges. Experience of traders also counted significantly in terms of knowing who to talk to and other trading requirements that made clearance at the border less complicated. The study further noted that harmonized operations at the border points coupled with the traders' level of experience made it relatively easy to maneuver out of any challenges, including paying for licenses or catering for storages of goods and personal accommodation in the event that there were some delays at the clearance points. These findings clearly indicated that cooperation among various government agencies at the border is important in trade facilitation at the border. However, the study did not specifically focus on a single study site. Hence this current study was useful to critically evaluate the situation at Namanga border to find out if there are different dynamics that could come into play to explain the relationship between coordinated border management and trade facilitation at border points.

2.3.3 Effect of Coordination between Border Agencies on Trade Facilitation

A few studies have been conducted on coordinated border management and trade facilitation in Africa and elsewhere, but with different explanations as to the impact these have on countries' economic development. In Africa, cross-border trade is progressively increasing, thus offering thousands of households and individuals' income and job opportunities. A study by Yang and Gupta (2007) on the state of cross-border trade in the region established that since the 1990s the regional integration initiatives on the continent have resulted into tremendous growth of trade across the borders. The study further revealed that cross-border trade has particularly improved following the expansion of intraregional agricultural trade where women and the poor smallholder farmers in rural areas are benefiting immensely from the proceeds of cross-border trade. The study however noted that despite the good progress witnessed in the

growth of agricultural cross-border trade which is clearly driven by local communities in terms of production, consumption and interchange of the produce across borders, there are still a number of challenges that need to be addressed. Lack of proper coordination at the border points was a major impediment to the relatively small agricultural cross-border trade since most of the traders were discouraged by the huge business losses they sometimes incurred as a result of poorly managed trade facilitation. Despite these important findings, the study was carried out more than 12 years ago, hence the need for this current study.

Improved opening of cross-border trade in most countries in Africa has necessitated the need for removal of economic and regulation barriers to intrastate and intra-regional trade. In a study by the World Bank (2012) to understand how coordinated border management and trade facilitation at the border points can help in boosting cross-border trade in food staples, the study noted that removal of barriers to regional trade would greatly translate to more business opportunities for the traders and increase revenue base for the countries in terms of customs revenues. Furthermore, the study revealed that in order for the African countries to benefit more from cross-border trade, concerted efforts were required in management of activities at the border points so that harmonized systems and process are used to ease traffic and allow easy movement of goods and services. Better coordinated border management and trade facilitation will also reduce the cost of trade and improve profit margins for the traders and eventually encourage more investment for expansion of the economy. The study by the World Bank (2012) however did not focus on specific countries hence giving room for vagueness in their findings. This current study specifically addressed the research problem with reference to Namanga border point. Specific study site will enhance credibility of the findings for possible generalization to other areas with similar characteristics.

Progressively, various bilateral, multilateral and regional trade treaties have been encouraged by a number of African economies to facilitate flow of trade within the region and across the globe. This move is important for ensuring that there is liberalization of businesses, which would in turn increase completion and encourage expanded markets (Guthiga et al., 2011). Yet, for the trade policies to be translated into actions there is need for harmonized systems and processes to allow common perspectives on critical aspects of the trading process. Coordinated border management and trade facilitation at the border points provide a common ground for all key trade stakeholders to easily navigate through their challenges (Afrika & Ajumbo, 2012). This includes less-privileged players such as small scale and women traders who play a critical role in production, consumption and trading of agricultural commodities which are the mainstay the economy in most African countries. In a study by Ama et al *(*2013) to understand the dynamics of trade at cross-border areas in Africa, the findings revealed that as the debate for regional integration in trade intensifies, for this to be fully realized formal systems of trade must be instituted. Yet, there is evidence that a good proportion of intra-regional and cross-border trade is carried out using informal structures.

The sentiments in Ama et al (2013) study were echoed in a similar study by the United States Agency for International Development (USAID, 2013) which indicated that a number of cross-border businesses that especially involved women and other less-financially able groups were conducted informally (USAID, 2013). This scenario ended up increasing the cost of doing business hence denying profits to the traders and customs revenues to the government. The study by USAID (2013) further noted that agricultural trade which was mostly dominated by women was particularly affected by lack of proper coordination and trade facilitation at border points since their perishable produce often ended up rotting if they were not expeditiously cleared so that they could reach their intended destinations in good time. On the other hand, storage and boarding costs went high as clearance was being awaited for at some of the

disjointed relevant offices at the border. The aforementioned literature is just representative of what happens to cross-border trade under circumstances where there is no effective coordinated border management and trade facilitation.

2.3.4 Effect of Communication among Border Agencies on Trade Facilitation

Availability of relevant information commonly contributes to reduction of trade costs. Studies have indicated that a number of international freight forwarding firms in Serbia experienced unwarranted delays at the border due to inadequate documented information, which ended up causing about 30% of all the delays experienced in border trade transactions (Alcantara et al, 2015). These findings concur with Moise and Sorescu (2013) who suggest that lack of proper communication and inadequate information among agencies were some of the common delaying factors when it comes to exports globally. These weaknesses ended up causing major delays at clearing points hence eating into profits and loss of customs revenues for the concerned countries.

In their efforts to cement and institute proper communication channels, a number of countries or agencies have actively tried to improve coordinated border management for the sake of effective trade facilitation. Streamlining and harmonization of business transaction procedures help border agencies to optimize their operations hence curbing the problem of roles duplication and in the process allowing efficient flow of goods and movement of people across the common border (Ehrich & Axel, 2018). Through open and transparent mechanisms amongst border agencies, there are high chances of rationalization of tax and customs administration, improvement in physical infrastructure at the customs crossing points, as well as introduction of automated customs systems to ease communication and flow of relevant information required for making critical decisions at particular levels of the trade facilitation

chain (WCO, 2017). However, the impact of communication among agencies on trade facilitation at the border still remains unclear, hence the need to explore it further.

Beyond information availability and sharing, some agencies however are reluctant to commit to consistency in coordination and sharing. Hence, this requires further interrogation of the whole broader question of communication and inculcation of sense of reciprocity in information sharing among different agencies tasked with trade facilitation at the borders (WTO, 2015). According to the United States Agency for Development (USAID, 2017), effective communication among agencies facilitating trade at the borders requires trained staff, up-to-date references, and constant touch with other key stakeholders as well as updated websites where the right and current information can always be picked with ease.

Although it is important to have the right information for decision making by different agencies dealing with trade facilitation at the border, the information should also be as consistent as possible. Hence, there is need for constant harmonization of information to ease communication amongst all the agencies involved. On this basis, intense border agency coordination and integration based on mutual recognition and respect should be critical be critical in guiding the process (Ehrich & Axel, 2018). Mutual recognition agreements further help to move forward the process in a smooth manner, while at the same time eliminating chances of duplications in certifications and issuance of any relevant documents for trade (Pelkmans et al, 2016).

2.4 Summary and Research Gap

A study was carried out by Njiwa (2012) on how cooperation among border agencies impacted trade facilitation at border points. His findings clearly indicated that cooperation among various government agencies at the border is important in trade facilitation at the border. The study did not specifically focus on a single study site, however. Hence this proposed study is useful to

critically evaluate the situation at Namanga border to find out if there are different dynamics that could come into play to explain the relationship between coordinated border management and trade facilitation at border points. In a study by the World Bank (2012) to understand how coordinated border management and trade facilitation at the border points can help in boosting cross-border trade in food staples, the study noted that removal of barriers to regional trade would greatly translate to more business opportunities for the traders and increase revenue base for the countries in terms of customs revenues. The study revealed that in order for the African countries to benefit more from cross-border trade, concerted efforts were required in management of activities at the border points so that harmonized systems and process are used to ease traffic and allow easy movement of goods and services.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents relevant research methods that were used to achieve the objective of the study. These include research design, target population, sample and sampling technique, data collection instruments, data collection procedures data collection instruments, pilot testing, data analysis and presentation, and measurement of the study variables.

3.2 Research Design

This study adopted causal research design. A causal research design investigates the cause-and-effect relationships. While focusing on analysis of a phenomenon, causal research explains the pattern of relationships between variables if specific causal evidence is found to exist. Explanatory research designs go beyond description and attempts to explain the reasons for the phenomenon. This study intended to understand the effect of coordinated border management on trade facilitation in Kenya, with specific focus on Namanga border. Hence, the causal research design was suitable to help in explaining how coordinated border management leads to trade facilitation.

3.3 Target Population

The target population for this study comprised of border control officers from key border agencies involved in clearing goods at Namanga border. It comprised of KRA Customs officers, staff of other border control agencies namely: KEBS, Port Health, Immigration, and Kenya National Police. The target population was obtained from various government agencies at the Namanga border area involved with cross-border trade facilitation.

Table 3.1: Target Population at Namanga OSBP

Respondents	Target Population
KRA Customs Officers	60
KEBS Staff	4
Port health Staff	10
Immigration Staff	10
Kenya National Police	10
Total	**94**

Source: (Compiled by Researcher, 2020)

3.4 Sampling and Sample Size

Owing to the relatively small number of the target population, the study used the entire population (census) where all the research participants were involved in the study. These were grouped into various relevant categories, as stratified in table 3.1.

3.5 Data Collection Procedures

All necessary preparations were made before fieldwork began. Data collection authorization was obtained from KESRA before proceeding for fieldwork. Additionally, all the necessary materials for data collection were assembled, including printing enough blank questionnaires. The researcher then made initial visits to the selected border agencies to inform the management about the research, including providing clear explanations about the intention of the study. Fieldwork started by the researcher delivering blank questionnaires to the respondents and requesting them to complete the same before filled ones were picked on agreed dates. Where necessary, the researcher administered the questionnaires to the respondents through face-to-face interactions. This alternative approach was informed by the respondents' conveniences and preferences.

In the case of self-administered questionnaires, completed ones were collected later by the researcher. For the respondents who were not able to self-administer the questionnaire, the

researcher booked appointments and scheduled time for visiting them so that the questionnaires could be administered. Throughout data collection process, all field protocols were adhered to, including strictly observing the principles of informed consent, confidentiality, and anonymity. These required that the respondents be properly informed about the objectives of the study so that they could make informed decisions regarding their participation in the study. Furthermore, the information shared by the respondents was kept in confidence and published anonymously without revealing their true identity so that they could be properly protected from any possible harm as a result of their participation in the research.

3.6 Data Collection Instruments

The study used a questionnaire for collecting primary data. The questionnaire comprised of close-ended questions to allow for fixed and elaborative responses from the respondents. A questionnaire was preferable for data collection due to its ability for allowing uniform understanding of the questions as well as its convenience for collection, collation, and analysis of collected data. A questionnaire was also more convenient to handle during fieldwork thereby saving time during data collection.

3.6.1 Reliability of Data Collection Instruments

Reliability of a research tool denotes the extent to which it can produce consistent results after repeated trials (Gall, Gall & Borg, 2008). Cronbach's alpha (α) coefficient was used to test reliability of the questionnaire before it was taken to the field. This strategy was applied to measure internal consistency of the questionnaire where a value of 0.7 or more was used to determine high reliability of the research tool. The higher the score the more reliable the scale was considered to be. Hence, a value of 0.7-1.0 was deemed to indicate remarkably high reliability of the questionnaire.

3.6.2 Validity of Data Collection Instruments

Validity of a research tool implies its ability to measure what it was intended for and perform the anticipated function accordingly (Kothari, 2013). The questionnaire was tested for content and construct validity where expert opinion was sought from the researcher's supervisor and other faculty members from the university department who offered effective guidance and input on the study topic. This approach ensured that the questionnaire was revised well and accordingly.

3.7 Pilot Testing

Piloting is a fieldwork process that involves subjecting the research instruments to a few selected respondents prior to the actual data collection. This move provides an opportunity for improving the research instruments accordingly (Orodho, 2005). The questionnaire was tested for validity and reliability prior to being applied in the field for data collection. Pilot testing involved 6 respondents, which constituted the accepted 10% of the sample size. The respondents for piloting were selected from Internal Container Depot - Nairobi OSBP, to avoid any possible biases during the actual data collection. This process was important for helping to improve the research tool in terms of proper and objective interpretation of the questions in the questionnaire by all the respondents.

3.8 Data Analysis and Presentation

The study used quantitative which was analyzed using descriptive (frequencies & percentages) and inferential (multiple linear regression) statistics. Quantitative data was processed using Statistical Package for Social Sciences (SPSS) computer software and excel worksheets where the findings were presented using frequency distribution tables and narratives.

The multivariate regression model used was: $Y= \beta_0X_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon$

Where:

Y = Trade facilitation

X_1 = Cooperation of border agencies

X_2 = Coordination of border agencies

X_3 = Collaboration challenges between border agencies

X_4 = Coexistence among border agencies

X_5 = Communication among border agencies

ε = Error Term for the regression model

$\beta_0 X_0$ = Beta Coefficient

β_1, β_2, β_3, β_4, β_5 were the regression coefficients for the variables X_1, X_2, X_3, X_4, & X_5 respectively. Overall significance of the model was tested using analysis of variance by use of F statistics at 95% confidence level whereas the coefficient of determination R_2 was used to show the contribution of independent (predictor) variables on the dependent variable (outcome of the study).

3.9 Measurement of Study Variables

The study measured five independent variables which included cooperation of border agencies, coordination of border agencies, collaboration challenges between border agencies, coexistence, and communication among border control agencies. Table 3.2 presents operational definition of variables and how they were measured.

Table 3.2 Operational Definition of Variables

Variables **Independent Variables**	**Indicators**	**Data analysis techniques**	**Tools of Analysis**
Cooperation of border agencies	• Shared resources • Sharing information	• Descriptive statistics • Inferential statistics • Content analysis	• SPSS & Excel
Coordination of border agencies	• Sharing work • Streamlined submission of information. • Shared processes	• Descriptive statistics • Inferential statistics • Content analysis	• SPSS & Excel
Collaboration challenges between border agencies	• Shared responsibility • Shared manpower	• Descriptive statistics • Inferential statistics • Content analysis	• SPSS & Excel
Coexistence among border agencies	• Shared interests • Formal frameworks	• Descriptive statistics • Inferential statistics • Content analysis	• SPSS & Excel
Communication among border agencies	• Interagency communication structures • Stakeholder willingness	• Descriptive statistics • Inferential statistics • Content analysis	• SPSS & Excel
Dependent Variable			
Trade facilitation	• Reduced cost of trade and time. • Simplified procedures • Predictability of delivery times	• Descriptive statistics • Inferential statistics • Content analysis	• SPSS & Excel

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This study sought to find out the effect of coordinated border management on trade facilitation at Namanga Kenya/Tanzania border. Specific objectives included to establish the effect of cooperation among border agencies on trade facilitation, to find out the effect of coordination between border agencies on trade facilitation, to determine the effect of border collaboration challenges between border agencies on trade facilitation, to understand the effect of coexistence among border agencies on trade facilitation, and to examine the effect of communication among border agencies on trade facilitation at the Namanga border. This chapter presents findings and discussions of these findings. The presentation is based on the specific objectives of the study.

4.2 Response Rate

All the five categories of the respondents participated in the study, and a summary of the response rate is presented in table 4.1.

Table 4.1 Response Rate

Respondents	Sample Size	Number participated (f)	Achieved Return Rate (%)
KRA Customs Officers	60	51	85
KEBS Staff	4	3	75
Port health Staff	10	9	90
Immigration Staff	10	7	70
Kenya National Police	10	6	60
Total	**94**	**76**	**81**

From table 4.1 above, out of a sample size of 94, 76 respondents managed to participate in the study, which was a response rate of 81%. In all the five categories of respondents, at least 60%

of them participated in the study, which was representative enough to objectively answer the research questions.

4.3 Reliability of the study

Reliability is the degree to which a research tool produces consistent results after repeated tests. Cronbach's Alpha test was used to test reliability of the research constructs and the findings are summarized in table 4.2.

Table 4.2 Reliability Tests of Variables

Variables	Cronbach's Alpha
Cooperation of border agencies	0.812
Coordination of border agencies	0.741
Collaboration challenges between border agencies	0.801
Coexistence among border agencies	0.711
Communication among border agencies	0.753

Based on the analysis in table 4.2, cooperation of agencies had a coefficient of 0.812, coordination of border agencies had 0.741, collaboration challenges between border agencies had 0.801, coexistence among border agencies had 0.711, and communication among border agencies had a coefficient of 0.753. According to Robins and Judge (2007), a coefficient of 0.7 or more indicates a high degree of reliability of data. Hence, the analysis in table 4.2 implies that all the five independent variables measure the effect of coordinated border management on trade facilitation at Namanga Border, Kenya.

4.4 Respondents' Demographic Information

The respondents' demographic information was collected based on their gender, age, level of education, and the period they had served for their respective companies. This data is presented and discussed accordingly in subsequent subsections.

4.4.1 Respondents' Gender

The respondents were asked about their gender, and figure 4.1 provides a summary of these findings.

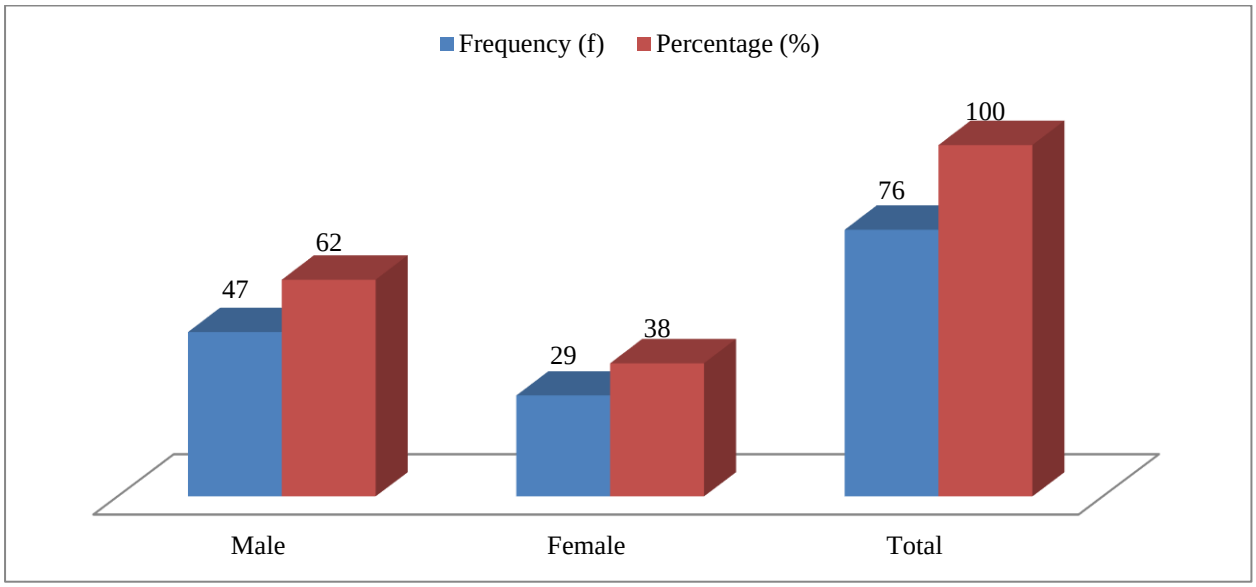

Figure 4.1 Distribution of Respondents by Gender

Based on the statistics on figure 4.1, 47 (62%) of the respondents were male while 29 (38%) of them were female. The disproportionate number of male and female respondents may be explained by the general trend in the formal employment sector in Kenya where there are commonly more men than women in majority of the industries or subsectors. However, the number of either gender was representative enough to give unbiased information.

4.4.2 Respondents' Age

The respondents were asked about their age, and figure 4.2 presents a summary of these findings.

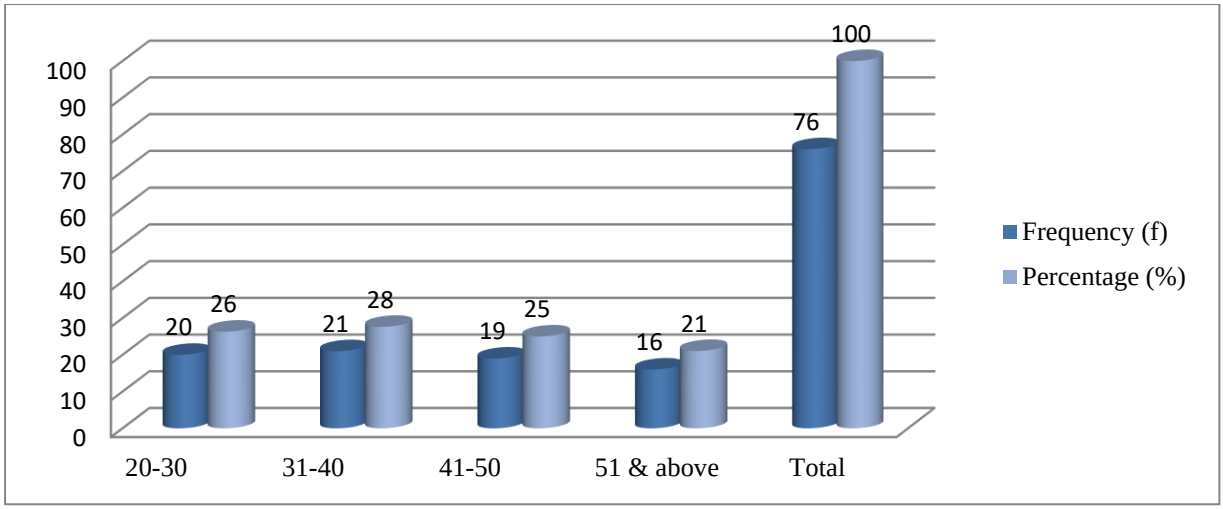

Figure 4.2 Distribution of Respondents by Age

As indicated in figure 4.2, majority of the respondents were aged 31-40 years, totaling to 21 (27%). These were followed by those aged 20-30 years who totaled to 20 (26%), 41-50 years old amounting to 19 (25%), and finally those in the category of 51 years and above who accounted for 16 (21%) of the total. From the age distribution, a greater majority of the respondents were still in their prime career years. This may explain why they were likely to give objective information for the study which could possibly be used to address any likely challenges for the good of their careers and the organizations they worked for.

4.4.3 Respondents' Level of Education

The respondents were asked about their level of education to gauge their abilities in their career roles and responsibilities. Their level of education was measured in terms of secondary education, professional certificate, diploma, degree, and master's Certificates. Figure 4.3 presents a summary of these statistics.

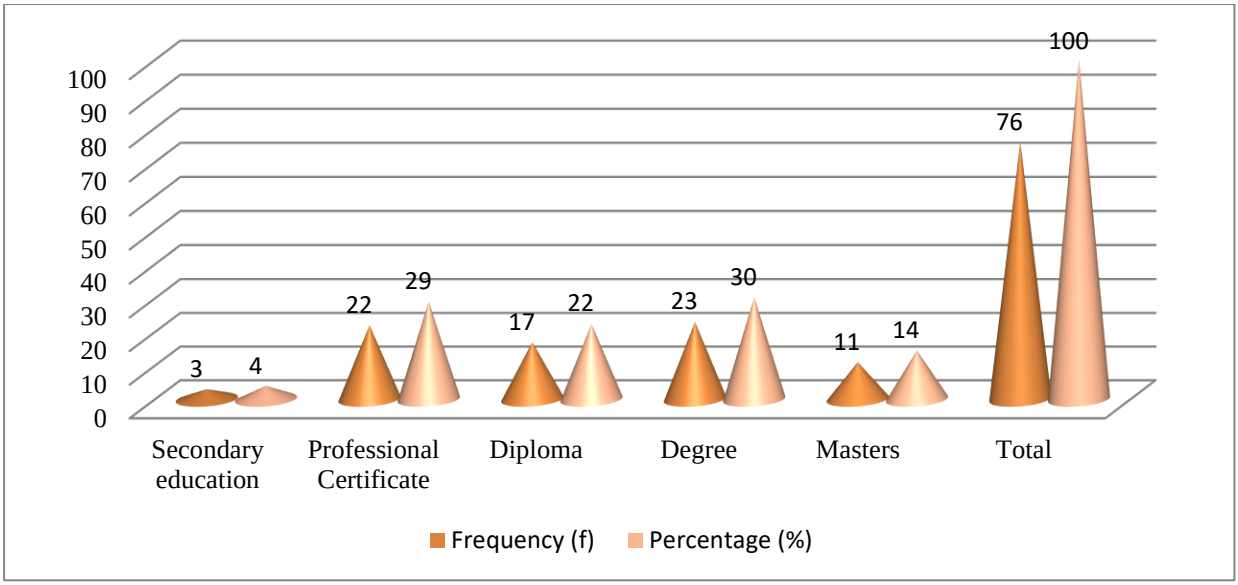

Figure 4.3 Distribution of Respondents by Level of Education

From the statistics in figure 4.3, majority of the respondents were degree holders, totaling to 23 (30%). Those who had professional certificates amounted to 22 (29%), those who had diploma qualification were 17 (22%), those with masters were 11 (14%) while 3 (4%) had secondary education qualification. Generally, a greater majority of the respondents had at least a professional certificate, with only 4% being the least qualified, with secondary education qualification. The respondents' education trend may further imply that a greater majority of the respondents had the right qualifications for the job and therefore provided credible data for answering the research questions.

4.4.4 Respondents' Period of Service for Employers

The respondents were also asked about the number of years they had spent with their respective employers. This was important for understanding their level of knowledge about the workings of various organizations that were involved in the study. Statistics of this information are presented in figure 4.4.

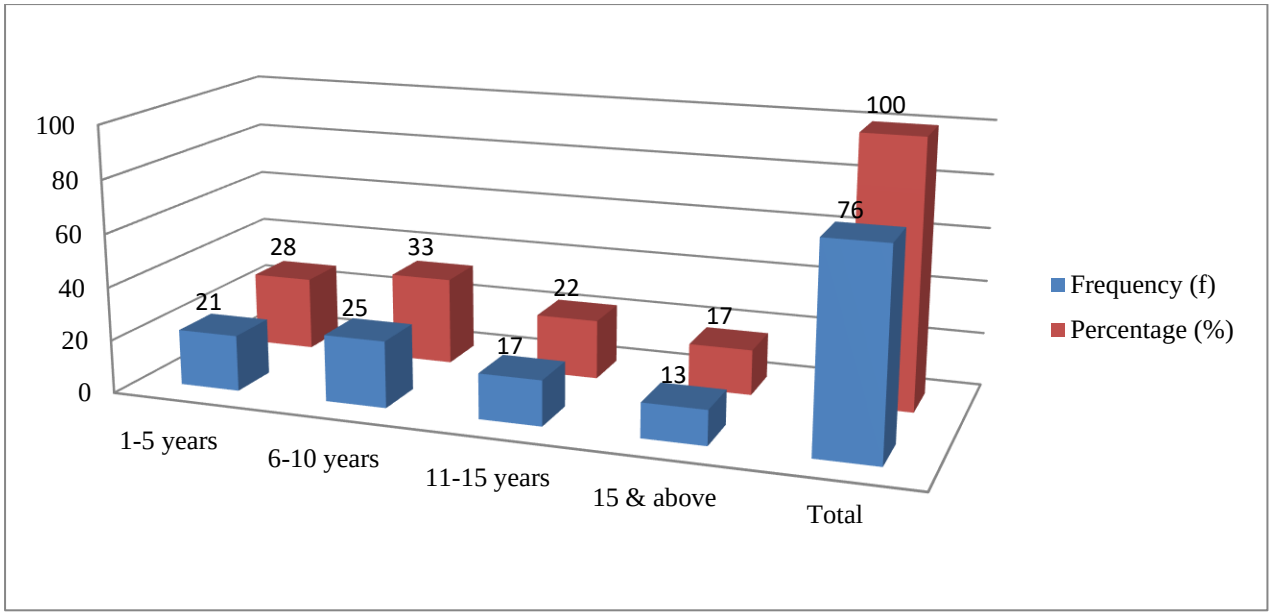

Figure 4.4 Distribution of Respondents by Years of Experience with Employers

Figure 4.4 shows that majority, 25 (33%) of the respondents had worked for their employers for 6-10 years while the least, 13 (17%) had worked for 15 years and above. Further, 21 (28%) of them had worked for 1-5 years while 17 (22%) had worked for 11-15 years. Generally, a greater majority of the respondents had over 6 years' experience, accounting for 55 (72%) of them. This implied that they had a good understanding of the operation of their respective companies and therefore provided credible information for answering the research questions.

4.5 Descriptive Analysis of Independent Variables

The study featured the effect of cooperation, coordination, border collaboration challenges, coexistence among border agencies, and the effect of communication among border agencies on trade facilitation at the Namanga border. These factors are further discussed in detail in the subsequent subsections.

4.5.1 Cooperation among Border Agencies and Trade Facilitation at Namanga Border

A number of propositions were used to measure the effect of cooperation among border agencies on trade facilitation at Namanga border. A summary of the findings was presented in table 4.3.

Table 4.3 Cooperation among Border Agencies and Trade Facilitation

Test Items	***1=strongly disagree***	***2=disagree***	***3=neutral***	***4=Agree***	***5=Strongly Agree***	***Total***
	n (%)	***n (%)***	***n (%)***	***n (%)***	***n (%)***	***n (%)***
There is enhanced sharing of resources e.g., scanners, among border control agencies at the OSBP	21 (28)	19 (25)	12 (16)	13 (17)	11 (14)	76 (100)
Border control agencies hold regular meetings together	13 (17)	23 (36)	9 (12)	16 (21)	15 (20)	76 (100)
There is enhanced sharing of information among border control agencies	11 (14)	17 (22)	12 (16)	19 (25)	17 (22)	76 (100)
Border control agencies often pursue common projects e.g., awareness programs for traders, customs agents, travelers to enhance faster clearance and compliance	8 (11)	11 (14)	14 (18)	23 (30)	20 (26)	76 (100)

Statistics in table 4.3 indicate that 21 (28%) of the respondents strongly disagreed while 19 (25%) of them disagreed that there is enhanced sharing of resources, such as scanners, among border control agencies at the Namanga one-stop border post (OSBP). Furthermore, 13 (17%) of the respondents agreed, 11 (14%) disagreed while 12 (16%) of them had neutral perspectives regarding this account. Almost a similar trend was also noted relating to whether border control agencies hold regular meetings together where 23 (36%) of the respondents disagreed, 13 (17%) strongly disagreed, while 9 (12%) indicated they neither agreed nor disagreed. On the

other hand, 16 (21%) of the respondents agreed while 15 (20%) of them strongly agreed that border control agencies hold regular meetings together. Generally, it would appear that there is no joint cooperation amongst all the agencies at the border when it comes to holding meetings for charting a common purpose.

Regarding whether there is enhanced sharing of information among border control agencies, 19 (25%) of the respondents agreed, 17 (22%) strongly agreed, 17 (22%) disagreed, 11 (14%) strongly disagreed, whereas 12 (16%) had neutral opinions. There were equally mixed views regarding whether border control agencies often pursue common projects such as awareness programs for traders, customs agents, travelers to enhance faster clearance and compliance. Majority of the respondents 23 (30%) agreed, 20 (26%) strongly agreed, 11 (14%) disagreed, 8 (11%) strongly disagreed while 14 (18%) had neutral views. Generally, a 56% of the respondents were in favour of the fact that border control agencies often pursue common projects e.g., awareness programs for traders, customs agents, travelers to enhance faster clearance and compliance.

4.5.2 Coordination between Border Agencies and Trade Facilitation at Namanga Border

Regarding coordination between border agencies and its effect on trade facilitation at Namanga border, the respondents gave varied views based on different test items. Table 4.4 presents a summary of these responses.

Table 4.4 Coordination between Border Agencies and Trade Facilitation

Test Items	*1=strongly disagree*	*2=disagree*	*3=neutral*	*4=Agree*	*5=Strongly Agree*	*Total*
	n (%)	*n (%)*	*n (%)*	*n (%)*	*n (%)*	*n (%)*
There are streamlined mechanisms for submission of information by traders and customs agents to relevant offices between border agencies	11 (14)	17 (22)	11 (14)	19 (25)	18 (24)	76 (100)
There is enhanced sharing of processes e.g., verification, inspection, border patrol etc. by border control agencies	13 (17)	19 (25)	9 (12)	21 (28)	14 (18)	76 (100)
There is formal communication between border control agencies on a regular basis	7 (9)	12 (16)	15 (20)	24 (32)	18 (24)	76 (100)
Sometimes there is sharing of work among border control agencies	3 (4)	7 (9)	19 (25)	25 (33)	22 (29)	76 (100)

Based on the findings in table 4.4, majority 19 (25%) of the respondents agreed that there are streamlined mechanisms for submission of information by traders and customs agents to relevant offices between border agencies. Additionally, 18 (24%) of them strongly agreed with this account whereas 17 (22%) disagreed, 11 (14%) strongly disagreed and 11 (14%) indicated that they neither agreed nor disagreed. Generally, 51% of the respondents were in favor of this account against 36% of those who had contrary opinions. Equally significant was the indication that there is enhanced sharing of processes such as verification, inspection, and border patrol among other undertakings by border control agencies. Majority (28%) of the respondents agreed, 14 (18%) strongly agreed, 19 (25%) disagreed, 13 (17%) strongly disagreed while 9 (12%) did not agree or disagree with this view. Based on the distribution of the responses, a

near equal number of the respondents held opposing views, accounting for 46% of those who were in favor against 42% of those who opposed the proposition that there is enhanced sharing of processes e.g., verification, inspection, border patrol etc., by border control agencies.

Also, majority 32%) of the respondents agreed and 18 (24%) that there is formal communication between border control agencies on a regular basis. On the other hand, 12 (16%) of the respondents disagreed, 7 (9%) strongly disagreed while 15 (20%) held neutral views. Based on the distribution of the responses, a greater majority (56%) of the respondents were in favor of the view that there is formal communication between border control agencies on a regular basis as opposed to the minority (25%) who opposed it. There were also indications that sometimes there is sharing of work among border control agencies, where 25 (33%) of the respondents agreed, 22 (29%) strongly agreed, 7 (9%) disagreed wile 19 (25%) appeared not sure. Only 3 (4%) of the respondents strongly disagreed that sometimes there is sharing of work among border control agencies. Generally, a greater majority (62%) of the respondents were in favor of this view against only 13% of those who opposed it.

4.5.3 Border Collaboration Challenges between Border Agencies and Trade Facilitation at Namanga Border

The respondents were also asked about the effect of border collaboration challenges on trade facilitation at Namanga border, where different views were presented based on various propositions or test items for analysis of the effect of collaboration challenges between border agencies on trade facilitation at the Namanga one-stop border point. The findings are summarized in table 4.5.

Table 4.5 Border Collaboration Challenges between Border Agencies and Trade Facilitation

Test Items	*1=strongly disagree*	*2=disagree*	*3=neutral*	*4=Agree*	*5=Strongly Agree*	*Total*
	n (%)	*n (%)*	*n (%)*	*n (%)*	*n (%)*	*n (%)*
There is sharing of responsibilities by border control agencies at Namanga OSBP	11 (14)	17 (22)	11 (14)	19 (25)	18 (24)	76 (100)
There is adequate manpower to enable each border control agency to fulfill their mandate	13 (17)	19 (25)	9 (12)	21 (28)	14 (18)	76 (100)
There is sharing of standard operating procedures among border control agencies	6 (8)	8 (11)	14 (18)	25 (33)	23 (30)	76 (100)
Border control agencies collaborate to ensure there is no congestion at the border	15 (20)	12 (16)	13 (17)	23 (30)	13 (17)	76 (100)
There is formal partnership between border control agencies	4 (5)	7 (9)	17 (22)	28 (37)	20 (26)	76 (100)
Border control agencies work together towards a common goal	3 (4)	12 (16)	19 (25)	26 (34)	16 (21)	76 (100)

Table 4.5 indicates that majority 19 (25%) and 18 (24%) of the respondents agreed and strongly agreed respectively with the view that there is sharing of responsibilities by border control agencies at Namanga OSBP. On the other hand, 17 (22%) and 11 (14%) of them disagreed and strongly disagreed respectively with this view while 11 (14%) had neutral stand. Based on the distribution of the statistics, 49% of the respondents were in favor of the view that there is sharing of responsibilities by border control agencies at Namanga OSBP, whereas 36% had contrary opinions while at the same time 14% of the respondents did not agree or disagree with

the view. Furthermore, 21 (28%) and 14 (18%) of the respondents respectively agreed and strongly agreed that there is adequate manpower to enable each border control agency to fulfill their mandate, on the other hand, 19 (25%), 13 (17%), and 9 (12%) of the respondents respectively disagreed, strongly disagreed, and indicated that they neither agreed nor disagreed (neutral).

At the same time, 25 (33%) and 23 (30%) of the respondents respectively agreed and strongly agreed that there is sharing of standard operating procedures among border control agencies. On the contrary, 8 (11%) and 6 (8%) of them respectively disagreed and strongly disagreed while 14 (18%) took neutral stand. There were also mixed views regarding whether border control agencies collaborate to ensure there is no congestion at the border, where 23 (30%) and 13 (17%) of the respondents respectively agreed and strongly agreed that border control agencies collaborate to ensure there is no congestion at the border. In contrast, 15 (20%) and 12 (16%) of the respondents respectively strongly disagreed and disagreed with this account while 13 (17%) indicated that they were not sure.

Moreover, majority 28 (37%) and 20 (26%) of the respondents respectively agreed and strongly agreed that there is formal partnership between border control agencies. However, 7 (9%), 4 (5%), and 17 (22%) in that order disagreed, strongly disagreed and held neutral stance about the view that there is formal partnership between border control agencies. Overall, a greater majority of 63% of the respondents were in favor of this view, as opposed to 14% and 22% respectively of those who opposed and expressed indifference. Almost a similar trend was noted regarding whether border control agencies work together towards a common goal, where 26 (34%) and 16 (21%) of the respondents correspondingly agreed and strongly agreed with this proposition. On the contrary, 12 (16%), 3 (4%), and 19 (25%) of them respectively disagreed, strongly disagreed, and indicated neutrality in their responses.

4.5.4 Coexistence among Border Agencies and Trade Facilitation at Namanga Border

The fourth objective of the study was to understand the effect of coexistence among border agencies on trade facilitation at the Namanga border. The respondents' sentiments on this variable are summarized in table 4.6.

Table 4.6 Coexistence among Border Agencies and Trade Facilitation

Test Items	***1=strongly disagree***	***2=disagree***	***3=neutral***	***4=Agree***	***5=Strongly Agree***	***Total***
	n (%)	***n (%)***	***n (%)***	***n (%)***	***n (%)***	***n (%)***
Border control agencies at the Namanga border work autonomously when it comes to trade facilitation.	12 (16)	14 (18)	9 (12)	21 (28)	20 (26)	76 (100)
There is no formal communication between border control agencies at the border	9 (12)	11 (14)	16 (21)	26 (34)	14 (18)	76 (100)
Border control agencies develop policies and services independent of each other.	11 (14)	17 (22)	12 (16)	24 (32)	12 (16)	76 (100)
Border control agencies have common concerns regarding clearance of cargo.	5 (7)	7 (9)	19 (25)	25 (33)	20 (26)	76 (100)

Based on the statistics in table 4.6, 21 (28) and 20 (26%) of the respondents respectively agreed and strongly agreed that border control agencies at the Namanga border work autonomously when it comes to trade facilitation. On the contrary, 14 (18%) and 12 (16%) of them respectively disagreed and strongly disagreed with this account whereas 9 (12%) had neutral views. Similarly, majority 26 (34%) agreed and 14 (18%) strongly agreed that there is no formal communication between border control agencies at the border. On the other hand, 11

(14%) of them disagreed, 9 (12%) strongly disagreed while 16 (21%) had neutral views regarding this proposition.

At the same time, 24 (32%) and 12 (16%) of the respondents respectively agreed and strongly agreed that border control agencies develop policies and services independent of each other. There were also opposing voices, where 17 (22%) disagreed and 11 (14%) strongly disagreed while 12 (16%) had neutral views. Based on the distribution of the statistics, 48% of the respondents were in favor of this proposition against 36% of those who opposed. Also, 25 (33%) and 20 (26%) of the respondents in that order agreed and strongly agreed that border control agencies have common concerns regarding clearance of cargo. For those who opposed this view included 7 (9%) of those who disagreed and 5 (7%) of those who strongly disagreed. Nineteen (25%) of the respondents held neutral views. Based on the distribution of the responses, it was evident that a greater majority (59%) of the respondents were in favor of the view that there are several challenges among border agencies at Namanga that make it impossible for coexistence for effective trade facilitation, as opposed to 16% of those who had a contrary opinion.

4.5.5 Communication among Border Agencies and Trade Facilitation at Namanga Border

The fifth objective was to examine the effect of communication among border agencies on trade facilitation at the Namanga border. Table 4.7 presents a summary of these findings.

Table 4.7 Communication among Border Agencies and Trade Facilitation

Test Items	***1=strongly disagree***	***2=disagree***	***3=neutral***	***4=Agree***	***5=Strongly Agree***	***Total***
	n (%)	***n (%)***	***n (%)***	***n (%)***	***n (%)***	***n (%)***
Many border control agencies at Namanga have elaborate communication structures for interagency sharing of information	13 (17)	19 (25)	14 (18)	16 (21)	14 (18)	76 (100)
There is a clear policy requiring border control agencies at Namanga border to share information for enhancing trade facilitation.	6 (8)	7 (9)	16 (21)	23 (30)	24 (32)	76 (100)
Border control agencies at Namanga are keen on embracing the principle of interagency communication.	7 (9)	13 (17)	19 (25)	20 (26)	17 (22)	76 (100)
Border control agencies get together to work on common interests	2 (3)	4 (5)	14 (18)	29 (38)	27 (36)	76 (100)

Statistics in table 4.7 indicates that 19 (25%) and 13 (17%) of the respondents disagreed and strongly disagreed respectively with the view that many border control agencies at Namanga have elaborate communication structures for interagency sharing of information while 14 (18%) did not agree or disagree. At the same time, 16 (21%) and 14 (18%) of them agreed and strongly agreed respectively. Based on this distribution, generally 42% of the respondents opposed while 39% were in support of this view. A different trend was however noted regarding the view that there is a clear policy requiring border control agencies at Namanga border to share information for enhancing trade facilitation, where 62% of the respondents were in support against 17% who were not in agreement while 21% held neutral ground.

Specifically, 24 (32%) and 23 (30%) strongly agreed and agreed respectively while 7 (9%) and 6 (8%) disagreed and strongly disagreed in that order.

Majority 20 (26%) of the respondents also agreed that border control agencies at Namanga are keen on embracing the principle of interagency communication while 17 (22%) of them strongly agreed. For the respondents who had differing stand included 13 (17%) of those who disagreed and 7 (9%) of those who strongly disagreed. At the same time, 19 (25%) of the respondents had neutral views. A similar trend was noticed relating to the view that border control agencies get together to work on common interests, where 29 (38%) agreed, 27 (36%) strongly agreed. On the other hand, only 4 (5%) and 2 (3%) disagreed and strongly disagreed respectively, while 14 (18%) had neutral views.

4.5.6 Coordinated Border Management and Trade Facilitation at Namanga Border

In a general sense, the study was about the effect of coordinated border management on trade facilitation in Kenya, with a focus at the Namanga border. A number of test items were used to measure this variable, and as summary of the findings is presented in Table 4.8.

Table 4.8 Coordinated Border Management and Trade Facilitation

Test Items	*1=strongly disagree*	*2=disagree*	*3=neutral*	*4=Agree*	*5=Strongly Agree*	*Total*
	n (%)	*n (%)*	*n (%)*	*n (%)*	*n (%)*	*n (%)*
There is predictability of time spent clearing goods at the border as a result of coordinated border management	2 (3)	5 (7)	16 (21)	29 (38)	24 (32)	76 (100)
There is less dwell time at the border as a result of coordinated border management	3 (4)	4 (5)	14 (18)	28 (37)	27 (36)	76 (100)
Traders are familiar with cargo clearance procedures at the border	7 (9)	11 (14)	13 (17)	25 (33)	20 (26)	76 (100)
There is ease of sharing of information as a result of coordinated border management	6 (8)	10 (13)	17 (22)	21 (28)	22 (29)	76 (100)
There is reduction of trade costs incurred by traders at the border e.g., warehouse fees, as a result coordinated border management.	7 (9)	9 (12)	11 (14)	23 (30)	26 (34)	76 (100)
There is transparency of laws and regulations applied in clearance of cargo at the border	10 (13)	17 (22)	6 (8)	22 (29)	21 (28)	76 (100)

Based on statistics in table 4.8 regarding how coordinated border management influenced trade facilitation, 29 (38%) and 24 (32%) of the respondents agreed and strongly agreed respectively with the view that there is predictability of time spent clearing goods at the border as a result of coordinated border management. However, 5 (7%) and 2 (3%) of them disagreed and strongly disagreed in that order. It was also evident that there is less dwell time at the border as a result of coordinated border management, where 28 (37%) agreed and 27 (36%) strongly agreed. Conversely, 4 (5%) and 3 (4%) disagreed and strongly disagreed respectively, while 14 (18%) had neutral views.

Majority 25 (33%) of the respondents agreed that traders are familiar with cargo clearance procedures at the border while 20 (26%) strongly agreed with this view. However, 11 (14%) and 7 (9%) disagreed and strongly disagreed respectively, while 13 (17%) neither agreed nor disagreed. A similar trend was noted regarding whether there is ease of sharing of information as a result of coordinated border management, where 22 (29%) strongly agreed while 21 (28%) agreed. With the opposing views included 10 (13%) and 6 (8%) of the respondents who disagreed and strongly disagreed, respectively. Seventeen (22%) of them did not agree or disagree. Similarly, 26 (34%) of the respondents strongly agreed while 23 (30%) agreed that there is reduction of trade costs incurred by traders at the border e.g., warehouse fees, as a result coordinated border management. There were however respondents who had differing views, where 9 (12%) disagreed, 7 (9%) strongly disagreed while 11 (14%) had neutral views. It also emerged that there is transparency of laws and regulations applied in clearance of cargo at the border, with 43 (57%) of the respondents agreeing with this view as opposed to 27 (35%) who opposed the view and 6 (8%) who were not sure.

Coordinated border management remains an integral part of effective trade facilitation at the border points. The World Customs Organization (WCO) (2017) noted that through open and transparent mechanisms amongst border agencies, there are high chances of rationalization of tax and customs administration, improvement in physical infrastructure at the customs crossing points, as well as introduction of automated customs systems to ease communication and flow of relevant information required for making critical decisions at particular levels of the trade facilitation chain.

According to the United States Agency for Development (USAID, 2017), effective border management among agencies facilitating trade at the borders requires trained staff, up-to-date references, and constant touch with other key stakeholders as well as updated websites where

the right and current information can always be picked with ease. Pelkmans et al (2016) also noted that there must be consistence on border management where all key players are guided by a formal policy document touching on various aspects of the operation. Hence, there is need for constant harmonization of information to ease communication amongst all the agencies involved. On this basis, Ehrich and Axel (2018) argue that there is need for intense border agency coordination and integration based on mutual recognition and respect among various agencies to guide the process holistic process of border management.

4.6 Inferential Analysis of Independent Variables

Besides descriptive analysis, inferential data analysis was carried out to establish the relationship between independent (predictor) variables and the dependent variable, or the outcome of the study.

4.6.1 Analysis of Independent Variables

The study applied Pearson correlation analysis to examine the strength of the relationship between coordinated border management and trade facilitation in Kenya. Furthermore, regression analysis was used to examine the nature of the relationship as well as test the study hypotheses. The study used the level of significance at 5%. According to Oso and Onen (2009), this level of significance gives the researcher 95% chances of making the correct decision regarding the existence of a significant relationship between dependent and independent variables.

4.6.2 Pearson Correlation Coefficient of Dependent and Independent Variables

The study sought to establish the strength of the relationship between cooperation among border agencies, coordination between border agencies, border collaboration challenges, coexistence among border agencies, communication among border agencies (independent/predictor variables), and trade facilitation (dependent variable or outcome of the

study). To achieve this Pearson's correlation coefficient was performed since both the independent and dependent variables are in a ratio scale. Table 4.11 presents.

Table 4.11: Correlation Analysis

		Trade facilitation	Cooperation	Coordination	Collaboration challenges	Coexistence	Communication
Trade facilitation	Pearson Correlation	1					
Cooperation among border agencies	Pearson Correlation	.631**	1				
	Sig. (2-tailed)	.000					
Coordination between border agencies	Pearson Correlation	.525**	.633**	1			
	Sig. (2-tailed)	.000	.000				
Collaboration challenges	Pearson Correlation	.591**	.132	.428**	1		
	Sig. (2-tailed)	.000	.203	.000			
Coexistence among border agencies	Pearson Correlation	.645**	.121	.423**	.433**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
Communication among border agencies	Pearson Correlation	.683**	.533**	.459**	.460**		1
	Sig. (2-tailed)	.000	.000	.000	.000		

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

Based on the statistics in table 4.11, there was a positive and a significant relationship between the dependent variable trade facilitation and the independent variables: cooperation among border agencies, coordination between border agencies, border collaboration challenges, coexistence among border agencies, and communication among border agencies.

4.6.3 Model Summary

The findings of the coefficient of correlation R and the coefficient of determination R square (R^2) are presented in Table 4.13.

Table 4.13 Model Summary for Coordinated Border Management and Trade Facilitation

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	.801[a]	.676	.671	.73456

a. Predictors: cooperation, coordination, collaboration, coexistence, communication

From the model summary above, the coefficient of correlation R is .801, indicating that there is a strong relationship between the independent (predictor) variables and the dependent variable (trade facilitation) which is the outcome of the study. The coefficient of determination R square (R^2) was 0.676, and this meant that 67.6% change in trade facilitation was explained by the independent variables. Hence, this further implied that apart from the predictor variables which were the subject of this study, there were other factors accounting for 32.4% which influenced trade facilitation at the Namanga border post. But, since these factors were not within the scope of this study, future research should focus on them.

4.6.4 Analysis of Variance (ANOVA)

The analysis of variance of the regression model was carried out to test the significance of the correlation between the independent and dependent variables. Table 4.14 presents the ANOVA findings.

Table 4.14 Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.615	1	25.62	27.63	.000[b]
	Residual	68.597	74	0.93		
	Total	94.212	75			

a. Dependent Variable: trade facilitation

b. Predictors: cooperation, coordination, collaboration, coexistence, communication

From the ANOVA in table 4.14, the P-value was 0.000. The statistics further showed that the *F* statistic (1, 74) at 95% level of significance (0.93) was less than *F* calculated (27.63). Hence,

this indicated that the regression model was significant in predicting the effect of independent variables (coordinated border management) on trade facilitation, the outcome of the study.

4.6.5 Multivariate Analysis

A multivariate regression analysis was performed to establish the strength of the influence of the independent variables on the dependent variable (trade facilitation). Table 4.12 presents regression coefficients with P-values of individual variables used in the study.

Table 4.12 Multiple Regression Analysis

Predictor	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	Beta		
Constant	4.121	0.041		1.531	0.000
X_1 Cooperation among border agencies	0. 532	0. 109	0. 4121	3.312	0.001
X_2 Coordination between border agencies	0.321	0.037	0.301	1.510	0.000
X_3 Border collaboration challenges	-0.351	0.047	0.209	2.231	0.061
X_4 Coexistence among border agencies	0.291	0.064	0.411	2.233	0.003
X_5 Communication among border agencies	0.423	0.103	0.515	1.918	0.002

a. trade facilitation

Based on the statistics in table 4.12 above, the following model was established: $\mathbf{Y=4.121+0.532X_1+0.321X_2+(-0.351X_3)+0.291X_4+0.423X_5}$, where Y represents trade facilitation, and X_1 stands for cooperation among border agencies, X_2 coordination between border agencies, X_3 border collaboration challenges, X_4 coexistence among border agencies, and X_5 communication among border agencies. Taking all factors at zero, the constant was 4.121, implying the level of trade facilitation. However, a unit increase in cooperation among border agencies when all other factors remained constant would lead to a 0.532 increase in trade facilitation. Besides, at 5% level of significance, it implied that P=001<0.05, cooperation among border agencies had a strong effect on trade facilitation at Namanga border post.

The statistics further showed that assuming all factors at zero, a unit increase in coordination between border agencies would result into a 0.321 improvement in trade facilitation at Namanga border point. Also, at 5% level of significance where P=000<0.05, this meant that coordination between border agencies positively influenced trade facilitation at Namanga border point. Also, a unit increase in border collaboration challenges when all other factors were considered to be constant would result into a -0.531 performance of trade facilitation at Namanga border point, which was a negative effect. But, at 5% level of significance where P=061>0.05, this implied that border collaboration challenges between border agencies strongly negatively influenced trade facilitation at Namanga border point.

The findings further indicated that a unit increase in coexistence among border agencies assuming that other factors were held at zero, would improve performance of trade facilitation by 0.291. Additionally, at 5% level of significance where P=003<0.05, it implied that coexistence among border agencies had a positive effect on trade facilitation at Namanga border point. At the same time, the coefficient for communication among border agencies was 0.423. This meant that a unit increase in communication among border agencies, all other factors held at zero, would result into a performance improvement of trade facilitation by a factor of 0.423. This further implied that at 5% level of significance and a P-value of P=002<0.05, communication among border agencies had a strong influence on trade facilitation at Namanga border point.

4.7 Discussion of Key Findings

The findings were processed based on five specific objectives of the study. These included the effect of cooperation, coordination, collaboration challenges, coexistence, and communication among border agencies on trade facilitation. This subsection provides a discussion of key

findings of the study in line with the specific objectives and alongside previous literatures on these subthemes.

4.7.1 Effect of Cooperation among Border Agencies on Trade Facilitation

The findings of this study were a reflection, to a greater extent, of what previous research had revealed. A study by Ndumbe (2013) to examine the effect of cooperation among border management agencies on trade facilitation in Cameroon-Nigeria border established that the failure of border agencies to work closely for facilitation of cross-border small and medium size businesspeople caused them huge losses. The negative effect was particularly common among women and the youth since they did not have enough resources and networks to enable them to withstand the inconveniences for a long time without incurring huge losses. Furthermore, small business and medium business operators were often despised by officials at the border points, mostly due to their uncooperative nature. The study further indicated that female traders in the informal trading subsectors were more inconvenienced in their movement of the farm produce due to uncooperative customs officials at border points.

Indeed, descriptive statistics of this study indicated that a greater percentage (53%) of the respondents were opposed to the idea that there is enhanced sharing of resources, such as scanners, among border control agencies at the Namanga one-stop border post (OSBP) to effectively facilitate trade. As noted by Ndumbe (2015), discouraged by unsupportive systems, but driven by their desire to avoid any further businesses losses, some of the small-scale traders resorted to defying the legal trade regulations by using alternative routes to reach their intended market destinations. Ultimately, such moves led to collapse of a number of businesses and rendering many people jobless. Further, inferential analysis indicated that enhanced cooperation among border agencies clearly led to improvement in trade facilitation at the border areas. These findings were further a reflection of previous revelations by the USAID

(2013) in a study carried out at Malawi-Tanzania border and established that there was a direct relationship between border agencies' interrelations and trade facilitation among traders in Karonga market in Malawi-Tanzania border.

The study further noted that different government officials tended to listen to male traders more than female traders hence introducing the aspect of gender and by extension categories of traders when it came to being assisted at the border areas. The gendered differences in terms of access to support systems placed most women traders at disadvantaged positions, which sometimes forced them to use illegal means/routes to transport their goods. At the end of it all, the government stood to lose more in terms unpaid customs revenues as a number of traders used unidentified routes to run away from unscrupulous border agency officials. Overall, however, the studies revealed that regardless of the gender or financial ability of the traders, there was need for harmonization of systems and processes to create a common ground for trade facilitation at the border points. This would help to minimize on losses and maximize on profits for the traders and eventually enable the government to earn good revenues in terms of customs.

Another study by Njiwa (2012) on how cooperation among border agencies impacted trade facilitation at border points also emphasized the importance of working together by all the agencies to harmonize their systems for the sake of effective trade facilitation. An individual or company's trading history further determined the level of cooperation or assistance to be expected from border agencies. Under circumstances where there is no harmonization of trade facilitation systems at border points due to vested interests of various organizations, such a situation increased cases of corruption as some traders were forced to bribe their ways around in order to get favours. The study further noted that harmonized operations at the border points along with the traders' level of experience made it relatively easy to maneuver out of any

challenges, including paying for licenses or catering for storages of goods and personal accommodation in the event that there were some delays at the clearance points.

Hence, the findings of this study, like other numerous past studies, emphasized the importance of cooperation among various government agencies at the border for trade facilitation at the border. Evaluation of the situation at Namanga border helped to reveal different dynamics that often come into play to explain the relationship between coordinated border management and trade facilitation at border points. The findings further cemented the need for all systems at the border point to work closely to make facilitate trade and enable business organizations to avoid huge losses unnecessarily and make profit.

4.7.2 Effect of Coordination between Border Agencies on Trade Facilitation

From both the descriptive and inferential analyses, the study evidently revealed that effective coordination between border agencies was critical for trade facilitation at the border points. The findings further were a reflection of what previous studies had discovered. A study by Yang and Gupta (2007) on the state of cross-border trade in the region established that since the 1990s the regional integration initiatives on the continent have resulted into tremendous growth of trade across the borders. This success was partly linked to good coordination efforts among various border agencies. These views were replicated in this current study. In order for the agencies to enhance their effectiveness and efficiency, they needed to improve their coordination to ensure that they always have a common main agenda; that of trade facilitation at the border point. That is because lack of proper coordination at the border points was a major impediment to the relatively small cross-border trade since most of the traders were discouraged by the huge business losses they sometimes incurred as a result of poorly managed trade facilitation. As small businesses, it was difficult to recover losses once the companies

experienced such losses. The sentiments by Gupta (2007) were replicated in this current study, even more than 13 years since the previous study was carried out.

Effective interagency coordination at the border points was critical for improved opening of cross-border trade among many countries, which also necessitated removal of economic and regulation barriers to intrastate and intra-regional trade. A study by the World Bank (2012) to understand the relationship between coordinated border management and trade facilitation at the border points revealed that there was a direct link between the two concepts. Improved interagency coordination can help in boosting cross-border trade barriers, thus creating more business opportunities for the traders and increasing revenue base for the countries in terms of customs revenues. These earlier findings were clearly echoed in this current study where majority (56%) of the respondents indicated that regular formal communication between border control agencies was important for ensuring that all the agencies controlling business flow at border points often read from the same script.

Furthermore, like the previous study by the World Bank (2012), this current study emphasized the need for enhanced formal interagency communication at the border points to boost trade and for the countries to benefit more from such arrangements. Better coordinated border management and trade facilitation would also reduce the cost of trade and improve profit margins for the traders and eventually encourage more investment for expansion of the economy. The current study at Namanga border point provided an update of how border coordination is critical in boosting business across numerous countries engaged in cross-border businesses. Guthiga et al (2011) noted that various bilateral, multilateral and regional trade treaties have been encouraged by a number of African economies to facilitate flow of trade within the region and across the globe through enhanced border management through effective coordination among various corporate players.

4.7.3 Effect of Border Collaboration Challenges between Agencies on Trade Facilitation

Collaboration challenges between border control agencies have negative influence on trade facilitation at the border points. Inferential analysis indicated that a unit increase in collaboration challenges when other factors were held to be constant would lead to a negative performance of 0.531 (-0.531) of trade facilitation at the border. These findings were a reflection of the revelations by previous studies that enhanced collaboration between border control agencies played a critical role in boosting interstate businesses. A study by Ogalo (2010) revealed that poor collaboration between border control agencies made it difficult for traders at the border to access the necessary services for timely movement of their goods and services. Similarly, a study by Kimanuka and Titeca (2012) noted that conflicting trade policies by various countries operating at border points made it extremely difficult for traders to access necessary services. The divergent policy perspectives would imply that each major player at the border control points was likely to pursue its own individual agenda at the expense of a broader common agenda, hence derailing business transactions.

Furthermore, Wanjiku et al (2012) noted that there was also a likelihood that poor collaboration would likely lead to vested interests by the countries sharing a common border point have to be a serious impediment to collaboration between border agencies for effective trade facilitation if there was no official policy document clearly spelling out terms of engagement. For the Namanga case for instance, the one-stop border point (OSBP) on the Tanzania's side was funded by the JICA and on completion in 2014, due to some outstanding issues the project was not immediately handed over to the government as earlier anticipated. On the Kenyan side, the project was funded by African Development Bank (ADB). However, the delay of completion of the project complicated matters between the project contractor and the engineer as the latter decided to levy liquidated damages to the former for failure to honor their initial contractual terms. According to Wanjiku et al (2012), the standoff led to dragging of

completion of the project. The exemplar of the Namanga OSBP is typical of what could derail collaboration among different players at the border points, which could in turn impede cross-border trade facilitation. The sentiments by earlier research about the effect of poor cooperation among different border control agencies on trade facilitation were clearly echoed in this current study.

According to the East African Legislative Assembly (EALA) (2015), the Namanga OSBP has been associated with a number of organizational challenges which some business analysts feel could jeopardize collaboration between various border agencies, both in Kenya and Tanzania. Some of the purported administrative challenges include lack of clear procedures for cross-border clearance or movement of local people, erratic power supply, lack of a joint border committee for reviewing financial needs for the operation of the border point, and lack of enough drive-through scanners for vehicles carrying goods, as well as lack of power points for plugging in refrigerated carriers of perishable and fresh farm produce. Other challenges revolve around inadequate knowledge and sensitization regarding the benefit of a common trade between Kenya and Tanzania and the entire East African Community (EAC) region. This view may have been succinctly captured by this current study through inferential analysis, that a unit increase in border collaboration challenges when any other factors were considered to be constant would result into a -0.531 of trade facilitation at Namanga border point, hence a negative effect. Further, at 5% level of significance where P=061>0.05, this implied that border collaboration challenges between border agencies negatively influenced trade facilitation at Namanga border point. Hence, the question of effective cooperation between border control agencies remained paramount in as far as trade facilitation at the border points was concerned.

4.7.4 Effect of Coexistence among Border Agencies on Trade Facilitation

Coexistence among border control agencies is an important concept for enhancing businesses at the border points. Arvis et al (2016) defines coexistence among border agencies as maintaining a good working relationship between all players at the border points for enhancing effective flow of information to help in moving forward operations of trading systems. Inferential analysis of the current study indicated that a unit increase in coexistence among border agencies when all other factors were held constant improved performance of trade facilitation by 0.291. Further, at 5% level of significance where P=000<0.05, this meant that coexistence among border agencies had a positive effect on trade facilitation at Namanga border point. The findings by the current study were a reflection of the research by Kieck (2010) which established that effective coexistence and communication among border agencies is instrumental in empowering control agencies to maintain an active correspondence relationship with other key stakeholders in the trading chain.

Effective coexistence and communication also ensure that control officers at work effectively through interagency exchange of information and crucial data to help business transactions at the border. These sentiments were also replicated in a study by Atkin and Dave (2015) which noted that enhanced coexistence among border control agencies also enabled control zones comprising of offices, inspection areas, and other related facilities which are located within shared physical territories or neighborhoods to effectively serve the business community. Carballo, Georg, and Christian (2016) further revealed that such a structure would ensure that immigration, import and export formalities or transactions among various agencies are handled seamlessly. This would further remove or lessen bureaucracies that tend to hinder faster service delivery at all levels which may eventually cause a lot of delays when it comes to the general trade facilitation. Ehrich and Axel (2018) indicated that lack of good working relationships

between various border control agencies was a recipe for sabotage amongst various entities which may end up ruining many cross-border businesses.

Coexistence among various border control agencies also led to simplification of customs duties so as to minimize the risks of duplication of roles by various agencies operating at the border. Establishment of customs clearance zones would also improve movement of people and clearance of goods so as to enhance the whole process of trading at the border areas. Like this current study, Carballo et al (2016) also noted that cross-agency dialogue, coordination and integration remain critical in enhancing trade facilitation at the border areas. Based on proper communication and the principle of coexistence, dialogue, coordination and integration tend to ensure that there are minimal cases of duplication of complying requirements by various players at the borders, hence expediting movement of goods and services in a more transparent business environment.

4.7.5 Effect of Communication among Border Agencies on Trade Facilitation

Based on the inferential analysis, the present study revealed that a unit increase in communication among border agencies when all other factors were held into constant would lead to performance improvement of trade facilitation by a factor of 0.423. Further, at 5% level of significance and a P-value of $P=002<0.05$, communication among border agencies had a strong influence on trade facilitation at Namanga border point. These revelations backed the descriptive analysis which indicated that 48% of the respondents were in agreement that effective interagency communication was instrumental for trade facilitation at the border point, against 33% of the respondents who thought otherwise. These sentiments were generally a reflection of findings by previous studies on this subject. For instance, Alcantara et al (2015) discovered that availability of relevant information commonly contributes to reduction of trade costs as different players are able to make appropriate key decisions for their business

progress. The previous study further established that a number of international freight forwarding firms in Serbia experienced unwarranted delays at the border due to inadequate documented information, which ended up causing about 30% of all the delays experienced in border trade transactions.

Similarly, Moise and Sorescu (2013) noted that lack of proper communication and inadequate information among border control agencies commonly interfered with exports business globally, especially when it came to clearing of goods across borders. These weaknesses ended up causing major delays at clearing points hence eating into profits and occasioning huge losses of customs revenues to the affected countries. Ehrich & Axel (2018) noted that a number of countries or agencies have actively tried to improve coordinated border management for the sake of effective trade facilitation through effective communication channels. Streamlining and harmonization of business transaction procedures help border agencies to optimize their operations hence curbing the problem of roles duplication and in the process allowing efficient flow of goods and movement of people across the common border.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary, conclusions, and recommendations of the research as well as suggestions for future studies.

5.2 Summary of Research Findings

The study investigated the effect of coordinated border management on trade facilitation in Kenya, focusing on Namanga Border. Specifically, the study examined the effect of cooperation among border agencies, coordination between border agencies, border collaboration challenges between border agencies, coexistence among border agencies, and communication among border agencies on trade facilitation at the Namanga border. Each of these variables are summarized in the subsequent subsections.

5.2.1 Cooperation among Border Agencies and Trade Facilitation

The study established that cooperation among border agencies significantly influenced trade facilitation at the border. It also emerged that there was generally no enhanced sharing of resources such scanners among border control agencies at the OSBP, hence making it difficult for the agencies to operate at the same level. Furthermore, border control agencies did not conduct regular joint meetings to understand areas that required reviews and general improvements; hence this derailed the agencies' efforts to realize important business objectives at the border point. In a sense, negative competition among border control agencies tended to negatively impact the running of business transactions at the border point at Namanga.

The study also revealed that there was a challenge when it comes to sharing of information among border control agencies, as a number of them preferred to work alone. This was due to the possibility of some agencies gaining competitive advantage over the rest, especially based

on crucial information they had for making critical operations decisions. It also emerged that although border control agencies often pursue common projects such as awareness creation programs for traders, customs agents, and travelers to enhance faster clearance and compliance, this practice was not as common as it would have been expected. This meant that there often cases of competition among such agencies hence leading to delays in crafting common operational rules where necessary.

5.2.2 Coordination between Border Agencies and Trade Facilitation

The study noted that coordination between border agencies had significant effects on trade facilitation at Namanga border. Enhanced coordination among different key players in coordinated border management played a critical role in facilitating trade at the border point. Although there was expected to exist streamlined mechanisms for submission of information by traders and customs agents to relevant offices between border agencies, this was not the case, hence derailing quick clearance exercises for the movement of both the people and goods at the border point.

It was also evident that there was no enhancement of absolute information sharing processes, such as verification, inspection, border patrols by border control agencies. This also meant that there were often unnecessary delays as the agencies acted at cross-purposes. The study also noted that although it was expected to be formal communication between border controls agencies on a regular basis, there were no mechanisms to guarantee that. Additionally, there was no the aspect of shared responsibilities among border control agencies, and this made it difficult to address certain critical decisions relating to trade facilitation at the border.

5.2.3 Border Collaboration Challenges between Border Agencies and Trade Facilitation

There were a number of collaboration challenges between border agencies that clearly influenced trade facilitation at the border point. For instance, although there were indications

there is sharing of responsibilities by border control agencies at Namanga OSBP, this was only possible to the extent of obvious undertaking such as clearing of goods and movement of people at the level each agency. However, sometimes these efforts were even more interrupted due to competition over public recognition and other individual interests by different players. There were also mixed views regarding whether there is adequate manpower to enable each border control agency to fulfill their mandate. This meant that lack of assured business skills and the right manpower for execution of the objectives of the agencies often put into jeopardy operations at the border point.

The study also revealed that there was no guaranteed sharing of standard operating procedures among border control agencies, which made it difficult to always have a common agenda at the border point. The same applied when it came to border control agencies collaborating to ensure there is no congestion at the border, with some of the agencies preferring to operate independently. This often derailed smooth operation of transactions at the border point. Furthermore, despite existing of formal partnership between border control agencies, this partnership was not consistently demonstrated through common policy guidelines to enhance business at the border point.

5.2.4 Coexistence among Border Agencies and Trade Facilitation

To understand the effect of coexistence among border agencies on trade facilitation at the Namanga border, a number of test items used to evaluate this variable indicated that a lot still needed to be done. For instance, it emerged that there was no guarantee for all agencies at the Namanga border to work hand in hand when it comes to trade facilitation. Furthermore, there are no established frameworks for coexistence of border agencies at Namanga border to enhance trade facilitation. This meant that there was bound to be unnecessary completion among different players at the border point charged with the responsibility of trade facilitation.

The study revealed that there was negative competition among border agencies at Namanga border which tended to negate the spirit of coexistence for enhancing trade facilitation. The mixed reactions from the respondents meant that a lot remained to be done for all the border control agencies to earn lasting respect for each other; a situation which was likely to encourage long-term coexistence for improved trade facilitation among all the business players in the cross-border businesses. Similarly, there are several challenges among border agencies at Namanga that make it impossible for coexistence for effective trade facilitation, with majority (59%) of the respondents holding this view.

5.2.5 Communication among Border Agencies and Trade Facilitation

Communication among border control agencies was a critical element in helping all the relevant organizations to facilitate cross-border trade at the Namanga one-stop border post. Yet, there were a number of challenges affecting this factor. For instance, it emerged that not all border control agencies at Namanga have elaborate communication structures for interagency sharing of information, which usually makes it difficult to make common key decisions to help in trade facilitation across borders. Also, there were mixed reactions regarding whether there is no clear policy requiring border control agencies at Namanga border to share information for enhancing trade facilitation.

Furthermore, a number of border control agencies at Namanga are not keen on embracing the principle of interagency communication, which made it difficult to often understand key operational principles among different agencies at the border. Generally, therefore, the study noted that a lot of improvement is required to enhance trade facilitation interagency communication among border control agencies at Namanga border.

5.3 Conclusions

Drawing from the research findings, it was evident that coordinated border management has a significant effect on trade facilitation in Kenya. To a greater extent, operations of key border

control agencies require harmonization for smooth facilitating of trade across borders. Relating to specific aspects of coordinated border management for enhancing trade facilitation, a lot still needed to be done on cooperation among border agencies, and coordination between border agencies. It was also evident that border collaboration challenges between border agencies, ineffective coexistence among border agencies, and weak strategies for communication among border agencies that together derailed trade facilitation at the Namanga border. Therefore, the situation calls for the government and other stakeholders in cross-border business facilitation to increase their efforts for enhancement of cooperation, coordination, collaboration, coexistence, and communication among border control agencies for the sake of improving the general operations of interstate trade at the border points and generally enhance trade facilitation for the long term.

5.4 Recommendations

There is need for the government and other key stakeholders to create a harmonized business environment that enhances cooperation among border agencies on trade facilitation at Namanga border point.

Mechanisms should be put in place to ensure that there is effective coordination between border agencies at Namanga border for effective and efficient trade facilitation.

The government and other relevant agencies should create a policy which compels all border control agencies at Namanga one-stop border point to collaborate on key areas in order to enhance effectiveness of trade facilitation at the border point. For instance, cross training of personnel of border control agencies and sharing of Standard Operating Procedures.

The government and other stakeholders in cross-border business should institute policy and operational structures that allow proper coexistence among border control agencies for more effective and efficient trade facilitation at the Namanga border.

All border control agencies must have a common communication mechanism for helping them to make harmonized key decisions for effective and efficient trade facilitation at the Namanga border. In addition, constant communication between government agencies and private sector will be instrumental to ensure that feedback provided by the private sector is integrated to improve operations.

5.6 Suggestions for Further Studies

1. A comparative study could be carried out on the effect of coordinated border management on trade facilitation in at least two border points.
2. A study could be conducted on how the government is addressing challenges of coordinated border management to improve trade facilitation.
3. A study could be initiated on how border control agencies are coping with weaknesses of coordinated border management to improve trade facilitation.

REFERENCES

Afrika JG and Ajumbo G. (2012). Informal cross-border trade in Africa: Implications and policy recommendations. Africa Economic Brief 3(10). Tunis: AfDB (African Development Bank).

Ama N.O., Mangadi K.T., Okurut, F. N. and Ama H. A. 2013. Profitability of the informal cross-border trade: A case study of four selected borders of Botswana. *African Journal of Business Management* 7(40):4221–4232.

Arvis, J., Yann, D., Ben, S., Chorthip, U., and Anasuya, R. (2016). "Trade Costs in the Developing World: 1996 –2010." *World Trade Review* 15 (3): 451–74.https://doi.org/10.1017/S147474561500052X.

Atkin, D. and Dave, D. (2015). "Who's Getting Globalized? The Size and Implications of Intra-National Trade Costs." National Bureau of Economic Research.

Australian Customs and Border Protection Service (2011), *Who we are*, www.customs.gov.au/site/ page4222.asp.

Bowman, GW (2006), 'Thinking outside the border: homeland security and the forward deployment of the US border', *Houston Law Review*, vol. 44, no. 2, pp. 189-251.

Brown, S. J., Coulson, N. E., and Engle, R.F. (1992), 'On the Determinants of Regional Base and Regional Base Multipliers', *Regional Science and Urban Economics,* vol. 22, pp. 619-35.

Carballo, J, Georg, S., and Christian, V. (2016). "Trust No One? Security and International Trade." IDB Working Paper Series.

Department for International Development (DFID) 2008, *Modern and efficient border controls: theory of one stop border posts (OSBP). Lessons learnt on the Chirundu OSBP project*, http://siteresources. worldbank.org/EXTAFRSUBSAHTRA/Resources/DFID-ChirunduLessons.pdf.

Doyle, T (2011), 'The future of border management', in G McLinden, E Fanta, D Widdowson & T Doyle (eds), *Border management modernization*, IBRD/World Bank, Washington, DC.

Duval, Y., Nora, N., and Chorthip, U. (2016). "Do Trade Facilitation Provisions in Regional Trade Agreements Matter? Impact on Trade Costs and Multilateral Spillovers." ARTNeT Working Paper Series.

Ehrich, M., and Axel, M. (2018). “The Role of Private Standards for Manufactured Food Exports from Developing Countries.” *World Development* 101 (January): 16–27. https://doi.org/10.1016/j.worlddev.2017.08.004.

Evenett, S., and Keller, J (1998). "On Theories Explaining the Success of the Gravity Equation." National Bureau of Economic Research Working Paper #6529.

Gall, M., Gall, J., & Borg, W. (2008). *Educational Research; An Introduction* (8th ed.). Upper Saddle River, New Jersey: Pearson.

Grainger, A (2010), ‘The role of the private sector in border management reform’, in G McLinden, E Fanta, D Widdowson & T Doyle (eds), *Border Management Modernization*, World Bank, Washington, DC, pp. 157-74.

Grainger, A (2012), ‘Trade facilitation’, in K Heydon & S Woolcock (eds), *Ashgate trade policy handbook*, Ashgate, Aldershot, UK.

Grainger, A 2011, ‘Trade facilitation: a conceptual review’, *Journal of World Trade*, vol. 45, no. 1, pp. 39-62.

Guthiga P, Wambugu S, Ogada M, Massawe S, Karugia J, Oehmke J and Katjiuongua H. (2011). An assessment of the impact of cross-border trade in maize on welfare in the East African Region. Technical Report submitted to USAID (United States Agency for International Development).

Haddal, CC (2010), *Border security: key agencies and their missions*, CRS Report to Congress, RS21899, Congressional Research Service, www.fas.org/sgp/crs/homesec/RS21899.pdf.

Kieck, E (2010), ‘Coordinated border management: unlocking trade opportunities through one-stop border posts’, *World Customs Journal*, vol. 4, no. 1, pp. 3-13.

Kivuva A and Magara Z. (2012). *Agricultural cross-border trade between Kenya, Uganda and Tanzania*. Market development Division of Agribusiness, Market Development Directorate, Ministry of Agriculture, Nairobi, Kenya.

Kothari, C. K. (2013). *Research Methodology: Methods and Techniques* (2nd ed.). Mumbai: New Age International Publishers.

Krugman, P., and Venables, A. (1993), ‘Integration, Specialization, and Adjustment’, NBER Working Paper no. 4559, National Bureau of Economic Research, Cambridge, Mass.

Krugman, P.R. (1979), ‘Increasing Returns, Monopolistic Competition, and International Trade’, *Journal of International Economics*, vol. 9, pp. 469-79.

Leichenko, R.M. (2000), 'Exports, Employment and Production: A Causal Assessment of U.S States and Regions', *Economic Geography*, vol. 76, no. 4, pp. 303-25.

Moise, E., and Sorescu, S. (2013). "Trade Facilitation Indicators: The Potential Impact of Trade Facilitation on Developing Countries' Trade." OECD.

Ndumbe N. L. (2013). Unshackling women traders: Cross-border trade of Eru from Cameroon to Nigeria. Africa Trade Policy Notes 38. Washington, DC: World Bank.

Njiwa D. (2012). Informal cross-border trade: Challenges and opportunities: A case of COMESA and its STR implementing borders.

North, D. C. (1957), 'Location Theory and Regional Economic Growth', *Journal of Political Economy*, vol. 63, no. 3, pp. 243-58.

Ogalo V. (2010). Informal cross-border trade in EAC: Implications for regional integration and development. Research paper, CUTS African Resource Centre, Nairobi, Kenya.

Poon, J. (1997), 'The Cosmopolitanization of Trade Regions: Global Trends and Implications 1965-1990', *Economic Geography*, vol. 73, pp. 390-404.

Suranovic, S. (2006), *International Trade Theory and Policy*; viewed online at: http://internationalecon.com/Trade/Tch60/T60-0.php.

Thirlwall, A.P. (2006), *Growth and Development with Special Reference to Developing Economies*, 8th edn, Palgrave MacMillan, New York.

Tiebout C.M. (1956), 'Exports and Regional Economic Growth', *The Journal of Political Economy*, vol. 64, no. 2, p. 160-85.

Titeca K and Kimanuka C. (2012). Walking in the dark: Informal cross-border trade in the Great Lakes Region. International Alert, in collaboration with UN WOMEN, London.

USAID (United States Agency for International Development) (2013). Rwanda cross-border agricultural trade analysis. Publication produced for the United States Agency for International Development by the USAID Enabling Agricultural Trade (EAT) Project, implemented by Fintrac Inc.

USAID. (2017). "Improving the Effectiveness of the WTO SPS and TBT Enquiry Points and Notification Authorities in 12 African Countries."

Wanjiku J, Ogada M, Guthiga P, Karugia J, Massawe S and Wambua J. (2012). Exploiting opportunities in intra-regional trade in food staples in COMESA region. ReSAKSS (Regional Strategic Analysis and Knowledge Support System), Nairobi, Kenya.

Webster, E., Mathis, E.J., and Zech, C.E. (1990), 'The Case for State-level Export Promotion Assistance: A Comparison of Foreign and Domestic Export Employment Multipliers', *Economic Development Quarterly*, vol. 4, pp. 203-10.

World Bank (2010), *Trade and transport facilitation assessment: a practical toolkit for country implementation,* A World Bank Study, No. 55838, World Bank, Washington, DC.

World Bank. 2012. Africa can help feed Africa: Removing the barriers to regional trade in food staples. Poverty Reduction and Economic Management, Africa Region. Washington, DC: World Bank.

World Customs Organization (WCO) (2007), *WCO SAFE Framework of Standards to Secure and Facilitate Global Trade*, WCO, Brussels.

World Customs Organization (WCO) (2010), *List of countries who have expressed their intention to implement the WCO Framework of Standards*, www.wcoomd.org/files/1.%20Public%20files/PDFandDocuments/Enforcement/FOS_bil_03.pdf.

World Customs Organization (WCO) (2015), "Coordinated Border Management", *WCONews,* February2015, No. 76.

World Customs Organization (WCO). (2017). "Annual Report 2016-2017." World Customs Organization.

World Trade Organization (WTO) (2011), 'Negotiating Group on trade facilitation: draft consolidated negotiating text: revision', TN/TF/W/165/Rev.8, WTO, Geneva.

World Trade Organization (WTO). (2015), "World Trade Report 2015—Speeding up Trade: Benefits and Challenges of Implementing the WTO Trade Facilitation Agreement." WTO.

World Trade Organization/Organisation for Economic Co-operation and Development (WTO/OECD) (2010), Doha Development Agenda Trade Capacity Building Database (TCBDB), WTO/OECD, Geneva.

Yang Y and Gupta S. (2007). Regional trade agreements in Africa: Past performance and the way forward. *African Development Review*, 19(3), 399–431.

Zaki (2010) *'Towards a n explicit modelling of Trade Facilitation in Computable Equilibrium Models: Evidence from Egypt'.*

Zarnowiecki, M (2011), 'Borders, their design and their operation', in G McLinden E Fanta, D Widdowson & T Doyle (eds), *Border management modernization*, IBRD/World Bank, Washington, DC, pp. 37-78.

APPENDICES

APPENDIX I: INTRODUCTION LETTER

CATHERINE MOGERE

Dear Respondent,

RE: DATA COLLECTION

My name is Catherine Mogere, a Customs student from Jomo Kenyatta University of Agriculture and Technology studying for a Post Graduate Diploma in Customs.

In partial fulfillment of the requirements for the award of a Post Graduate Diploma in Customs Administration**,** I am conducting an academic research on **Coordinated Border Management and Trade Facilitation at Namanga Border, Kenya**

This letter is to humbly request you to respond to the questions in the attached questionnaire to enable me carry out this research. This is an academic exercise, and you are assured of anonymity and confidentiality.

Thank you in advance for your willingness to generously contribute to this research.

Yours truly,

Catherine Mogere

APPENDIX II: QUESTIONNAIRE

This questionnaire is meant for collection of data on the effect of Coordinated Border Management on trade facilitation in Kenya, focusing on Namanga Border.

PART A: PERSONAL AND DEMOGRAPHIC INFORMATION

1. Gender of the respondent
   - Male ☐
   - Female ☐
2. Age bracket of the respondent
   - 20-30 ☐
   - 31-40 ☐
   - 41-50 ☐
   - 51-& above ☐
3. Highest Education level of the respondent
   - Secondary education ☐
   - Professional Certificate ☐
   - Diploma ☐
   - Degree ☐
   - Masters ☐
4. Period you have worked for your company.
   - 1-5 years ☐
   - 6-10 years ☐
   - 11-15 years ☐
   - 15 & above years ☐

SECTION I: EFFECT OF COOPERATION AMONG BORDER AGENCIES ON TRADE FACILITATION

5. In a 5-point Likert scale where ***1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree,*** what is your opinion on the following propositions regarding the effect of cooperation among border control agencies on trade facilitation at Namanga OSBP?

Statements		**1**	**2**	**3**	**4**	**5**
i.	There is enhanced sharing of resources e.g., scanners, among border control agencies at the OSBP.					
ii.	Border control agencies hold regular meetings together					
iii.	There is enhanced sharing of information among border control agencies					
iv.	Border control agencies often pursue common projects e.g., awareness programs for traders, customs agents, travelers to enhance faster clearance and compliance					

SECTION II: IMPACT OF COORDINATION BETWEEN BORDER AGENCIES ON TRADE FACILITATION

6. In a 5-point Likert scale where ***1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree,*** what is your opinion on the following propositions regarding the impact of coordination between border agencies on trade facilitation at Namanga border?

Statements		**1**	**2**	**3**	**4**	**5**
i.	There are streamlined mechanisms for submission of information by traders and customs agents to relevant offices between border agencies.					
ii.	There is enhanced sharing of processes e.g., verification, inspection, border patrol etc. by border control agencies					
iii.	There is formal communication between border control agencies on a regular basis.					
iv.	Sometimes there is sharing of work among border control agencies.					

SECTION III: HOW COLLABORATION CHALLENGES BETWEEN BORDER AGENCIES AFFECT TRADE FACILITATION

7. In a 5-point Likert scale where ***1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree,*** what is your opinion on the following propositions regarding how collaboration challenges between border agencies affect trade facilitation at Namanga border?

	Statements	**1**	**2**	**3**	**4**	**5**
i.	There is sharing of responsibilities by border control agencies at Namanga OSBP.					
ii.	There is adequate manpower to enable each border control agency to fulfill their mandate					
iii.	There is sharing of standard operating procedures among border control agencies					
iv.	Border control agencies collaborate to ensure there is no congestion at the border.					
v.	There is formal partnership between border control agencies					
vi.	Border control agencies work together towards a common goal					

SECTION IV: EFFECT OF COEXISTENCE BETWEEN BORDER AGENCIES ON TRADE FACILITATION

8. In a 5-point Likert scale where ***1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree,*** what is your opinion on the following propositions regarding the effect of coexistence between border agencies on trade facilitation at Namanga border?

Statements		**1**	**2**	**3**	**4**	**5**
i.	Border control agencies at the Namanga border work autonomously when it comes to trade facilitation.					
ii.	There is no formal communication between border control agencies at the border.					
iii.	Border control agencies develop policies and services independent of each other					
iv.	Border control agencies have common concerns regarding clearance of cargo.					

SECTION V: EFFECT OF COMMUNICATION BETWEEN BORDER AGENCIES ON TRADE FACILITATION

9. In a 5-point Likert scale where ***1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree,*** what is your opinion on the following propositions regarding the effect of communication between border agencies on trade facilitation at Namanga border?

Statements		**1**	**2**	**3**	**4**	**5**
i.	Border control agencies at Namanga have an elaborate communication structures for interagency sharing of information.					
ii.	There is a clear policy requiring border control agencies at Namanga border to share information for enhancing trade facilitation.					
iii.	Border control agencies at Namanga are keen on embracing the principle of interagency communication.					
iv.	Border control agencies get together to work on common interests.					

SECTION VI: EFFECT OF COORDINATED BORDER MANAGEMENT ON TRADE FACILITATION

10. In a 5-point Likert scale where ***1=strongly disagree, 2=disagr ee, 3= neutral, 4=agree, 5=strongly agree,*** what is your opinion on the following propositions regarding the effect of coordinated border management on trade facilitation at Namanga border?

Statements		**1**	**2**	**3**	**4**	**5**
i.	There is predictability of time spent clearing goods at the border as a result of coordinated border management					
ii.	There is less dwell time at the border as a result of coordinated border management.					
iii.	Traders are familiar with cargo clearance procedures at the border					
iv.	There is ease of sharing of information as a result of coordinated border management.					
v.	There is reduction of trade costs incurred by traders at the border e.g., warehouse fees, as a result coordinated border management.					
vvi	There is transparency of laws and regulations applied in clearance of cargo at the border					

THANK YOU FOR YOUR TIME