EFFECT OF CUSTOMS REFORM STRATEGIES ON CUSTOMS REVENUE PERFORMANCE IN KENYA: A CASE OF EMBAKASI INLAND CONTAINER DEPOT

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DECLARATION

Student Declaration

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DEDICATION

This project is dedicated to my family: for their sacrifice, understanding, support and encouragement as I undertake my master's degree course.

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ABSTRACT

The Customs and Border Control Department (CBCD) is one of the revenue departments within the Kenya Revenue Authority. Despite Kenya's efforts in implementing custom reforms, customs and border control department has not been performing to the treasury's expectations. The Kenya revenue authority therefore initiated various reforms in 2004/2005 with the objective of transforming Kenya Revenue Authority (KRA) into a modem, fully integrated and Client-focused organization, with enhanced revenue performance. These reforms were necessitated by Kenya's customs revenue 0.84 percent annual decline over 1996-2005 period as affirmed by Moye and Ronge (2006). The study sought to examine the effect of customs reform strategies on customs revenue performance in Kenya, focusing on Embakasi Inland Container Depot (ICD) station, Nairobi County. In particular, the study interrogated the effect of information technology, capacity building, coordinated border management initiatives and customs processes/procedures reform strategies on customs revenue performance at ICD Embakasi. The study was anchored on two theories: technology acceptance model and porter's theory of competitive advantage theories. The study adopted a descriptive research design. The target population was drawn from key international trade players, importers, exporters, transporters, clearing and forwarding agents, and staff from KRA's customs department working at the Embakasi Inland Container Depot. Target population comprised of 351 stakeholders who participated in international trade at ICD Embakasi. The applied sampling technique was stratified random sampling that led to the selection of 187 respondents to from the study sample. Primary data was collected using a self-administered structured questionnaire on a 5-point Likert scale. Quantitative analysis was employed using the procedures within the Statistical package for social sciences (SPSS). Data was analysed using descriptive statistics, correlation and multiple regression analysis at 95% confidence level. The study findings found a strong positive correlation, as evidenced by an R-value of 0.75, between customs reform and customs revenue performance at ICD Embakasi-Kenya. The results also uncovered a statistically significant relationship between the information technology, capacity building, coordinated border management initiatives reform strategies and customs revenue performance at ICD Embakasi, as portrayed by p-values of 0.016, 0.029, and 0.005 <0.05. However, the research found no statistically significant relationship between the customs processes and procedures reform strategy and customs revenue performance as shown by a p value of 0.179 >0.05. Therefore, the study concluded that the information technology, capacity building, coordinated border management initiatives reform strategies had a significant effect on customs revenue performance at ICD Embakasi-Kenya. The study recommends adopting a post-clearance audit policy linked to the customs processes and procedures reform strategy for export and import clearance controls at ICD Embakasi. The study also recommends the need of formulating a risk management procedure outlining the essential risk assessment, treatment, consultation, communication and recording, and review and monitoring for improved customs revenue performance. The system should also stress the importance of proactive data collation, collection, and dissemination throughout the organization.

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ABBREVIATIONS AND ACRONYMS

ASYCUDA – Automated System for Customs Data Management

CBCD – Customs and Border Control Department

CBM – Customs Border Management

EACCMA – East Africa Community Customs Management Act

ICD – Inland Container Depot

ICMS – Integrated Customs Management System

ICT – Information Communication Technology

IDF – Import Declaration Form

ISCC – Integrated Scanner Command Centre

IT – Information Technology

iTax – Integrated Tax Management System

JKIA – Jomo Kenyatta International Airport

KRA – Kenya Revenue Authority

OECD – Organization for Economic Co-operation and Development

OSBP – One Stop Border Post

RECTS – Regional Cargo Tracking System

SPSS – Statistical Package for Social Sciences

TAB – Theory of Action Behaviour

TAM – Technology Acceptance Model

UNCTAD – United Nations Commission on Trade and Development

WCO – World Customs Organization

WTO – World Trade Organization

OPERATIONAL DEFINITION OF TERMS

Capacity Building Reform Strategy – is the process of enhancing the resources, procedures, instincts, and skills that communities and organizations need to survive, adapt, and thrive in a rapidly changing environment. It was operationalized in this study through training and skill development, orientations and demonstrations, sufficient staffing, and working resources.

Customs Border Management Initiatives Reform Strategy - the process in which two or more agencies work to solve a problem or meet a need. In this study it was measured using joint management initiatives (one stop border post), sharing of information and equipment and multi-agency cooperation.

Customs processes/ procedures reform Strategy - is a structured process that examines the pertinent commercial information, sales contracts, financial and non-financial documents, physical stock, and other assets of traders after Customs has released the shipment. In this study, it was assessed through inspections, standards, procedures, and visits for customs audits.

Customs Reforms – This relates to the full range of Customs modernization strategies. These are a set of laws, procedures, requirements, tools and systems and human resource

employed by various Customs and Border Control revenue departments to manage the movement of people and facilitate trade across various customs jurisdictions, examples are; information technology, capacity building, customs border management and customs processes/procedures reforms strategies.

Customs Revenue Performance - the measure of actual revenue collected as a percentage of the projected revenue target for any given financial year using the previous financial years as the baseline. In this study it was measured using amount of revenue collected, customs performance rate, revenue growth and extent of tax compliance.

Information Technology Reform Strategy – It is the use of computerization components as a catalyst to enhance organizational and operational effectiveness in custom processes and procedures using varying degrees of automation to support key customs functions like processing goods declarations, determining and collecting revenue, managing risk, and producing management reports.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter offers an overview of custom reform strategies, and customs revenue performance. The chapter is segmented into five primary sections comprising the background to the study, research objectives (general and specific research objectives), research hypothesis, the significance of the study, and the scope of the study.

1.1 Background to the Study

The 21st-century challenges are placing immense demands on customs administration, bringing about the need for customs administrations to be more responsive (Zake, 2011). These challenges have also generated the need to comprehend issues like the complexities of the global landscape, emerging policy directions, the trade supply chain technicalities, the dynamics of international trade, and globalisation (Gordhan, 2011). Besides, despite the straightforwardness of modernizing customs administration by fostering voluntary compliance by creating a self-assessment system reinforced by well-designed audit policies and developing simple and transparent procedures and policies, implementing this necessitates addressing numerous issues (Zake, 2011). These issues encompass developing incentive systems to tackle governance issues, addressing the suitable extent and nature of private sector involvement, the employment of new technologies, organisational reform, and links with trade policy (Zake, 2011). Nonetheless, these challenges indicate the evolving role of customs administration to address the global challenges attributed to borders becoming more open and the increased pressure from the changes in international trade (Gordhan, 2011).

Furthermore, the onset of the COVID-19 pandemic generated a new challenge for customs administration. The pandemic has impacted not only global trade but also the

customs officers' capacity to carry out their obligations and responsibilities (PWC, 2021). In an attempt to adapt to the new norm, some countries have utilised customs to minimize the pandemic's impact and promote a strong economic recovery (Pope, 2020). Most nations also understand the significance of implementing even the most rudimentary custom reforms. Pope (2020) asserted that the pandemic had revealed the significance of both the WTO Trade Facilitation Agreement (TFA) and the WCO Revised Kyoto Convention (RKC), including primary concepts supported by these tools: efficient risk management and an all-digital clearance process (Pope, 2020). However, the implementation of modern risk-based customs processes balancing trade facilitation and the need for compliance would help ensure the timely delivery of essential goods, compliance maintenance, and the digital and remote management of the clearance process for the protection of the exporters/importers and customs officers' health (Pope, 2020). These findings indicate the importance of custom reforms in supporting economic recovery and sustainable economic growth while maintaining an ideal balance between trade facilitation and compliance and adaptation to changes within the environment.

1.2 Custom Reforms

Custom reforms play a critical role in any country's economy by controlling the movement of goods across borders and promoting international trade, allowing countries to fast-track economic development and growth through increased international trade (Mwachiro, 2013). Custom reforms also enable effective revenue collection and trade facilitation, which is realised through effective and efficient use of information and tools in addressing the international movement of goods, people connected with the goods, and conveyances (Humels, 2010). In realising these benefits, the global environment has witnessed an increased reform and modernisation of

customs for increased customs' responsiveness to the challenges affecting societies and states (Mwachiro, 2013). Consequently, most custom administrations are partaking in a reformation of their process, for even the most advanced custom administrations perceive modernisation as a continuing process. The change and reformation in customs administrations are catalysed by a desire to attain interaction objectives most efficiently and effectively, trade policy administration, and enhanced revenue collection (Keen, 2013).

However, Keen (2013) asserted that administrations and governments are frequently intimidated by the magnitude of the reform task they experience and require a well-defined plan of action and strategy to implement it. Besides, the same strategy does not essentially fit in every custom administration. Thus, for successful reforms, customs administrations must understand their problem areas and the best reform approaches to address the identified problems.

Wei (2020) identified six primary and common problem areas that need to be addressed, especially for countries with revenue collection as their main objective. The first problem area comprised outdated customs procedures for administrations that have not kept pace with business practice, technology, and transportation developments. The second, inadequate legislation, embodied customs administrations with overly intricate trade procedures and policies, making it challenging to instigate the changes needed to facilitate new manners of conducting business, which allows customs administration to use legislation inadequacies as an excuse to delay or fail to adopt new procedures or systems. The third, the perception of computerisation as the answer to all problems, encompasses customs administrations' giving too little thought to comprehend the role of computers, the need to simplify procedures and utilise information generated by computer systems for effective operations control. The fourth problem is a lack of

understanding of the necessity for cooperation and coordination between customs and tax administrations. The final problem area is the high levels of corruption that continually impact many administrations leading to wider economic efficiencies, inequity, and loss of revenue. However, most administrations now understand that these problems can be addressed by formulating a reform strategy grounded on well-understood and well-designed procedures and transparent legislation.

1.2.1 Global and Regional Custom Reforms Perspective

WCO working committee meetings' reports indicate that a lot has been done in enhancing customs reforms and modernisation by the global customs community in collaboration with international donors and organisations (Wei, 2020). Additionally, Peterson (2017) asserted that countries have recently evolved in and adopted different types of custom reforms, including harmonising customs processing among regional trading partners, adopting risk assessment tools and "trusted trader" programs to speed customs clearance at border checkpoints, and utilising online single window systems in improving transparency and streamlining customs paperwork. The Kyoto Convention principles provide both the roadmap and impetus for customs reforms efforts by signatory nations (105 countries are Kyoto Convention signatories).

The Kyoto Convention promotes the harmonisation, standardisation, simplification, and transparency of customs procedures. These core principles are attained by the coordination between signatory countries' border management agencies, the implementation of customs inspection risk management tools that separate low-risk cargo from high-risk cargo, the utilisation of electronic platforms for customs clearance and filing, customs paper streamlining, and the online publication of customs regulations and rules.

Moreover, following the revised Kyoto Convention principles, many nations have pursued customs reforms. Notably, developed nations have been the forerunners in implementing institutional reforms (commonly termed the "soft" infrastructure of customs) that minimise customs officials' corruption, enhance transparency, and decrease customs inefficiency. The automation of customs documentation remains a focal element of most custom reforms. For instance, the European Parliament passed an "electronic customs initiative" legislative to enable customs declaration online exchange among EU members in 2008. This legislation sought to facilitate the accurate collection of customs duties, minimise clearance times, decrease customs processing-related administrative costs, facilitate export and import procedures, and boost customs data flow among EU nations.

The United States has implemented the Automated Commercial Environment (ACE) comprising a single-window platform. Similar to the Japanese and EU automated customs environments, the United States' ACE's primary objectives are to customs procedures' transparency and efficiency by facilitating the exchange of information between border agencies and traders, eradicating paperwork, and streamlining documentation. Other countries, including Vietnam, Indonesia, Colombia, Berlin, Sweden, Singapore, and Australia, have also adopted or are in the process of implementing single window systems, with varying degrees of the replacement of traditional paper-based systems with single windows. As a result, single-window systems operate alongside paper-based systems in some countries while they are used in others to handle all customs documentation. The latter approach is used in countries that lack the information technology (IT) required to fully implement an electronic single window system or in countries that must first create a supportive regulatory

environment in order to get around traditional paper-based systems, as is the case in Sub-Saharan African (SSA) countries.

Jackson (2017) posited that some of the customs reforms and modernisation strategies implemented in SSA countries are restricted in scope. For instance, Mauritius's single window system is restricted to collecting duties and customs declaration and fails to allow users to submit customs documentation to other government agencies. Similarly, Montagnat-Rentier and Parent (2012) asserted despite that there has been progress in the automation of procedures and operations, with constant and substantial efforts to enhance trade facilitation and strengthen revenue collection in some SSA countries, the scope and pace of modernisation remain insufficient. Notably, Montagnat-Rentier and Parent (2012) identify customs modernisation gaps in enhancing operational management and resources and in the development of customs enforcement and control capacities within some SSA countries, hence signifying a low commitment to custom reforms and modernisation within these countries.

1.2.2 Local Customs Reforms Perspective

In Kenya, at the onset of the year 2005, there has tremendous reforms in the customs department, the Kenya Revenue Authority (KRA) announced the existence of numerous custom modernisation reform strategies. These strategies aim to address the challenges of strengthening communication channels with the WCO, improving coordinated border management and reviewing data for enhanced performance, minimising revenue fraud through the harmonisation and exchange of valuation risk data, and the active technologies use. Regarding technology, KRA attributed the newly established "Regional Electronic Cargo Tracking System (RECTS)" and the "Integrated Scanner Command Centre (ISCC)" to tackling illicit trade, decreasing the incidence of misdeclaration, and curbing diversion of transit cargo. RECTS allows real-

time transit cargo tracking through an online digital platform from the port of Mombasa to its ultimate destination. The ISCC, launched in 2018, permits the use of ultramodern scanners in scanning all cargo at the port of Mombasa and the customs officials' receipt of the transmission of all scanned images in real-time in the main command centres in Mombasa and Nairobi.

Additionally, Gituku (2011) posits that the customs services department has also witnessed substantial changes in strengthening the administration of customs duties, reforming the tariff structure, encouraging exports, and restricting duty exemptions. The department has also been pursuing customs services automation, as evidenced by the implementation of the Simba 2005 system. Gituku (2011) considers the Simba system the focal of customs modernisation in Kenya, facilitating the automation of approximately 90 percent of customs operations. The automation is also attributed to a significant customs revenue growth in recent years (Gituku, 2011).

1.2.3 Customs Revenue Performance

Omosa (2020) identified Kenya's customs and border control administration has set revenue collection from customs as the gold standard for gauging its effectiveness. Fundamentally, customs is responsible for collecting taxes on both imported and exported goods, with an emphasis on the latter. Petroleum levies, excises, railway construction levies, tariffs, VAT, and import declaration forms are some of the taxes that customs collects (IDF). Taxes and levies paid on petroleum goods entering the county are included in the petroleum levy. A total of 2.5 percent of the FOB price of all commodities entering the nation goes toward the railway construction fee. Numerous products fall under the category of "Vatable Supplies," which results in input VAT of 16 percent. Every import into the Republic of Kenya is subject to the IDF, which is 2.25 percent.

Moye and Ronge (2006) found that Kenya's customs revenues experienced a 0.84 percent annual decline over 1996-2005. The study attributed the annual customs revenues to the protracted trade liberalisation processes under the regional and multilateral trade agreements and the structural adjustment programme. Mohamed and Younes (2019) note that the majority of developing countries are often faced with underperforming revenue collections. Therefore, the acceptable trade facilitation guidelines are often ignored in preference to revenue collection. In the FY 2018/19, Customs revenue exceeded KES 500 billion, a growth of 9.5% from the past two financial years (KRA, 2019). In the financial year 2019/2020, Customs revenue collected a total of Kenya Shillings 510.63 billion, contributing to about 32% of the total revenue realised. Even though strides have been made, the revenue target for the financial year 2019/20 was not achieved (KRA, 2020). In the financial year 2020/2021, Customs and Border Control collected KES 624.77 billion, surpassing its target of KES 606 billion with a performance of 103% and recording a surplus of KES 18.248 billion. Even though there is an improvement in revenue collection by CBCD, it is only for the first time after eight years that KRA has been able to meet its revenue target in FY 2020/2021 as highlighted in the table below. This good performance from Customs and Border Control is attributed to custom modernisation reforms strategies (KRA, 2021). Kenya Revenue Authority has implemented an ongoing transformation strategy in the management of its operations in response to this. The Revenue Administration Reform and Modernization Program was created as a result of this (RARMP). The initiative was started back in 2004 with the goal of transforming KRA into a contemporary, client-focused organization with complete consolidation. In order to attain compliance and improve revenue performance, the revenue administrations of Kenya, Uganda,

Tanzania, and Rwanda have made taxpayer engagement a key component of the changes.

Table 1.1: Four years Period Customs Revenue Performance Summary

Financial Year	Customs Revenue Target	Actual Revenue collected	Underperformance Rate
2016/2017	487.3 B	443.5 B	9%
2017/2018	484.97 B	469.97 B	3.09%
2018/2019	KES 545.21 B	KES 525.34 B	3.6%
2019/2020	KES 606.00 B	KES 510.63 B	15.7%

1.2.4 Inland Container Depot (ICD)

The Inland Container Depot (ICD) at Embakasi, Nairobi, is a significant installation in the transport and logistics chain along the Northern Corridor. The depot serves to minimise port congestion and bring port services closer to customers. A rail-tainer service on the Mombasa to Nairobi Standard Gauge Railway line connects the depot to the Mombasa Port container. Exports are consolidated at the depot before being railed to Mombasa Port, whereas imports are directly delivered from Mombasa to the depot.

Besides, through the Ministry of Transport, the Kenyan government considers the expansion and modernisation of the depot a vital component of the Mombasa to Malaba Standard Gauge Railway project. The project is perceived as a flagship under the Kenya Vision 2030 development agenda focusing on developing a new standard gauge railway for cargo transportation and passengers' transportation between Nairobi and Mombasa. The project is also projected to link Mombasa to Malaba, on the Ugandan border, and continue onward to Uganda's capital city, Kampala, before further running to Juba in South Sudan and Kigali in Rwanda. In 2017, the project implemented its first phase encompassing the opening of the Mombasa-Nairobi railway line. The completion of

this phase led to the enhancement of Embakasi's depot scale of operations. The staff numbers also grew from 34 officers to the current 120 officers. The depot also introduced additional KRA functions such as customs security and property and logistics, marketing and communication, Information Communication Technology (ICT), exemption, and customs valuation and tariff. Finally, the Standard Gauge Railway's inception also drove the depot to focus on cargo management, trade facilitation, and revenue enhancement initiatives to boost revenue collection.

For revenue enhancement, the depot has adopted three primary initiatives. The first encompasses intelligence-based cargo intervention through scanners intelligence guiding the detection of undeclared, concealments, restricted, and prohibited items. The second entails compliance with customs laws and regulations, including the declaration of accurate customs values concentrating on mixed items consignments. The third comprises focused initiatives to cater to diverse types of importers. The general Embakasi ICD revenue performance is highlighted below.

Table 1.2: Embakasi ICD Station Four-year General Revenue Performance Summary

Financial Year	Custom Station Revenue Target In %	Actual Station Revenue Collected	Underperformance Rate
2016/2017	100%	85-90%	15%
2017/2018	100%	90-95%	10%
2018/2019	100%	90-95%	10%
2019/2020	100%	80-85%	20%

1.3 Statement of the Problem

Performance in the area of customs revenue is essential to KRA reaching its revenue goals, which are vital for fostering economic growth. Despite Kenya's efforts in implementing custom reforms, Sigey (2010) found that the Customs and Border Control Department was not performing to the treasury's expectations till the financial year 2020/2021 when the target was first met. For instance, customs revenues declined by an index of 14.2% over the financial years (fy's) between 2010/2011 - 2019/20. According to annual revenue performance fy 2020/2021, the customs and border control (c&bc) revenue performance improved, kshs. 624.77 billion was collected surpassing its target of kshs. 606 billion representing a performance rate of 103.0%. This Scenario shows that if KRA's customs reform strategies are well implemented as emphasized in the year 2020 through the implementation of key reform strategies as enshrined in KRA's 8th Corporate Plan (2020), the Customs and Border Control Department in the future can collect more revenue passed the 103% financial year 2021/2022 revenue performance, hence this scenario forms the statement of the problem that shows the customs department has the capacity to even do better in revenue performace besides meeting the set revenue targets.

The customs and border control (c&bc) has the potential to attain a performance rate of upto 130% against its targets in its future if all its custom reforms are strategically well implemented. This anticipated performance can be affirmed by the recent financial 2022/2023 KRA quarterly report at the first quarter of the Financial Year 2022 period July -September period, showing Customs and Border Control (C&BC) sustained its excellent performance after collecting Sh173.2 billion against a target of Sh161.8 billion, reflecting a revenue surplus of Sh11.397 billion. The department recorded a growth of 25.4 per cent in the period under review, (KRA Quarterly Report,2022). The

Customs and Border Control therefore should therefore continue to drive compliance through investing in modern technology, enhanced active surveillance and enforcement operations that are reinforced by collaboration by the inter-agency approach. Customs operations will benefit from the investment in technology and, as a result, revenue growth will increase. The Customs cargo clearance and processing time, for instance, has decreased thanks to the Integrated Customs Management System (iCMS), which also improved compliance and boosted productivity. The average time it takes to clear air cargo has decreased from 6 days to 48 hours thanks to the system (2 days). Traders' losses have been mitigated, and the number of customer complaints received by ICD Embakasi Depot has been cut in half as a result of the improved clearance turnaround time, which accounts for the additional 66% increase in efficiency.

More taxpayers are now voluntarily complying with the law and contributing to the government by increasing the size of the tax base thanks to the widespread use of data and intelligence to uncover unpaid taxes. For instance, as part of the interagency cooperation reform strategy, the law allows the Authority to utilize data from a wide variety of sources, such as bank records, import documents, vehicle registration information, Kenya Power records, water bill information, and so on, in its pursuit of suspected tax evaders.

In addition, the ongoing achievement of planned revenue collection targets has contributed to the strengthening of integrity measures. In this regard, the fact that revenue collection can never flourish in the presence of interferences is illustrative. Counterfeiting of licenses and permits, collusion, cartels, and syndicates, and other forms of outside interference can all pose problems. In addition to undermining the ability to provide superior customer service, enforce revenue collection laws, and collect the full amount of revenue owed, a breach of integrity on the part of the officers

charged with these duties also undermines public confidence in the government. KRA has persisted in putting into action policies that support a culture free from corruption, including lifestyle audits, background checks on new hires, and stringent disciplinary actions that deal with unethical behaviour promptly. These measures are all aimed at ensuring that employees uphold integrity. Furthermore, only a few studies have addressed the subject matter of the effect of custom reform strategies on customs revenue performance. For instance, Muthama (2013) studied the effect of revenue system reforms on revenue collection at the Kenya Revenue Authority. However, to the researcher's knowledge, there was a lack of studies focusing on the effects of custom reforms on customs revenue performance at ICD Embakasi Kenya.

1.4 Research Objectives

The study was guided by one general objective and four specific objectives.

1.4.1 General Objective

The general objective was to examine the effect of customs reform strategies on customs revenue performance at ICD Embakasi, Nairobi County.

1.4.2 Specific Objectives

The study's specific objectives comprised:

i. To assess the effect of information technology reform strategy on customs revenue performance at ICD Embakasi -Kenya.
ii. To examine the effect of customs processes and procedures reform strategy on customs revenue performance at ICD Embakasi -Kenya.
iii. To determine the effect of the capacity building reform strategy on customs revenue performance at ICD Embakasi- Kenya.

iv. To determine the effect of customs border management initiatives reform strategy on customs revenue performance at ICD Embakasi- Kenya.

1.5 Hypotheses

The research hypotheses were:

H_{01}: There is no significant effect of information technology reform strategy on customs revenue performance at ICD Embakasi -Kenya.

H_{02}: There is no significant effect of customs processes and procedures reform strategy on customs revenue performance at ICD Embakasi -Kenya.

H_{03}: There is no significant effect of the capacity building reform strategy on customs revenue performance at ICD Embakasi -Kenya.

H_{04}: There is no significant effect of the customs border management initiatives reform strategy on customs revenue performance at ICD Embakasi -Kenya.

1.6 Significance of the Study

The findings of the study would benefit key players in various sectors on facilitation of international trade. The study's findings may be used by the Customs and Border Control Department (CBCD) to improve their interaction with both importers and exporters, passengers, transporters, freighters, clearance and forwarding agents, and other users of various border stations. The study's findings may be used to improve the need for capacity building to enhance the major goals of revenue collection, trade facilitation, and risk management across borders. The findings of the study may also enable the revenue authority to design better tools and instruments required to ensure that the provisions of the Customs Acts and other international laws operate harmoniously.

The international traders may use the study findings to improve their understanding of the customs reforms strategies that will necessitate the smooth flow of goods without unnecessary barriers. The study may also enlighten the international traders on the need to understand the challenges posed by illegal businesses and hence appreciate the possible and rigorous mechanisms placed by the Customs authorities to ensure that businesses involve only legal imports and exports. The study may also help the international traders appreciate the efforts made by various government agencies to ensure that their businesses face just competition without the need to lose money from counterfeits.

The study findings will benefit ICD Embakasi Kenya by providing the institution with comprehensive knowledge of its application of the customs reforms. The findings will also help the depot determine the effects of the customs reforms and customs revenue performance. In doing so, the study will highlight areas requiring improvement for better customs revenue performance.

The academic community may use the study's findings to further the understanding of the area of custom reforms as a critical avenue to generating customs revenue for various governments. The study's findings may also be used by various scholars to further conduct other research building on the gaps realized in this study while contributing to the academic body of knowledge. Scholars may use the findings of the study still to investigate areas of weakness in Customs administration which may help various governments to improve their interactions with various stakeholders in imports, exports, traveling, transporting, freighting, and clearance, among others.

1.7 Scope of the Study

The goal of the study was to determine how customs reforms affected Embakasi, Nairobi County's performance in collecting customs revenue. ICD Embakasi was specifically selected due to its capacity as a custom station to handle a larger volume of cargo using the various custom reforms for efficiency towards achieving its objectives as a customs station; this justifies its selection for the study. For the purpose of the study, stake holders involved in international trade at Embakasi Inland Container depot were targeted as respondents in the study. The study target population included 351 stakeholders participating in international trade at ICD Embakasi. 187 respondents made up the sample that was chosen using the stratified random sampling approach. The station's geographic location made it easier for the study to accomplish its goals and collect enough data for analysis and interpretation of the results. The study was conducted between January and October 2022.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews existing information and studies on customs reform strategies and customs revenue performance. The chapter is subdivided into five primary segments. They include a review of concepts, a review of empirical literature, summary of literature, the conceptual framework, and the theoretical framework.

2.2 Review of Study Concepts

The study intended to examine the effect of custom reform strategies on customs revenue performance in Kenya at ICD Embakasi station. From this research aim, the concepts of customs reforms and customs revenue performance arose.

2.2.1 Customs Revenue Performance

According to the International Energy Agency (2017), customs revenue performance is the method by which a company or economy evaluates its financial health by quantifying, optimizing marketing processes, and comparing estimates to targeted revenues. According to Montagnat-Rentier (2019), The total of customs duties and indirect taxes on imports, including value-added tax and excise duty, that are gathered by customs authorities inside a specific customs territory is known as customs revenue. The study assumes that customs revenue performance is dependent on several factors that would have some influence, whether positive or negative. These factors in this study include technology adoption, staff capacitation, and trade control tools.

In technology adoption, where indicators such as regional cargo tracking systems (RECTS), integrated cargo management systems (iCMS), and electronic cargo scanners could contribute to this influence. In staff capacitation, indicators such as training,

awareness creation, and orientations could contribute to this influence. On trade control tools' influence, indicators such as WCO cargo tracking system, cargo manifest, and cargo entry documents could affect revenue performance in one way or another (Rentier, 2019).

Kollie and Roosevelt (2021) analyzed the effects of the Automated System for Customs Data (ASYCUDA) on the performance of customs revenue at the Liberia Revenue Authority utilizing monthly series data from the Liberia Revenue Authority (LRA), the Central Bank of Liberia, and other Harmonized Tariff of Liberia series covering the period of four years from January 2015 to December 2018. The study's findings showed that ASYCUDA and the total trade of goods and services tax had a beneficial long- and short-term influence on customs revenue performance. The report also suggested that in order to increase the effectiveness of collecting customs revenue, the Customs and Revenue Authorities should adopt trade facilitation mandates, capacity building, importers and exporters data, and required trade facilitation techniques in their entirety.

2.2.2 Information Technology Reform Strategy

Gidisu (2012) Information technology is used to lessen the requirement for the involvement of people in the creation of goods and services. When used properly, information technology enables the efficient and accurate completion of complex operational tasks. The integrated customs management system (ICMS), automated system for customs data management, electronic scanning and tracking of commodities, simba system technology, and automation of customs papers were the customs and tax systems that made up the independent variables of this study (ASYCUDA). During passage scanning at ports of entry, scanners are a type of non-intrusive cargo verification equipment employed. (Peterson, 2017). By demonstrating the efficiency of border control, containerized cargo transit management, and vehicle transit control,

Freeman (2017) explains that a great illustration of the effectiveness of these many technologies is the Cargo Tracking system, a real-time monitoring system of cargo from the dumping point through an E-seal put on departing vehicles with transit goods. ICMS is an automated system that coordinates all aspects of customs administration, including the valuation, verification, and declaration of commodities (Trademark East Africa, 2018). The Automated System for Customs Data (ASYCUDA) was created in order to simplify international trade and transportation in a fully automated environment. Highly developed software solutions created and built for customs administrations and the trade community to satisfy international standards expedite import, export, and transit procedures.

2.2.3 Customs Processes and Procedures Reform Strategy

When you want to import or export goods, you must go through the Customs processes and procedures, which are the related set of managements and operations. This determinant starts with Products undergo a quality check prior to shipping in what is known as a pre-shipment inspection (PSI). Prior to import/export, a PSI inspection is conducted to guarantee that the manufactured goods meet the requirements of the purchase order or letter of credit.

Audit visits are carried out to make sure that importer declarations to Customs are accurate. Anticipation of such a visit has both preventative and discouraging effects on the importer. If control visits reduce the likelihood that importers will understate their liability when declaring their shipments, then they have a preventive effect. Insofar as importers are aware of audit/control activity and fear detection, this discourages them from avoiding or evading Customs requirements, which in turn increases revenue collection.

Lastly post-clearance audit (PCA) process has numerous definitions; the WCO defines the concept as entailing a structured assessment of a business's relevant physical stock and other assets, non-financial and financial records, sales contracts, and commercial systems as a means of boosting and measuring compliance. Collaboratively, the WCO and the United Nations Conference on Trade and Development (UNCTAD) defined PCA as comprising audit-based customs control performed following a cargo's release from customs custody. From this perspective, the PCA validates the authenticity and accuracy of declarations and covers the control of traders' books, records, business systems, and commercial data. A UNCTAD (2011) report further posited that PCA occurs at the trader's premises and may consider a 'transaction-based' audit, encompassing individual transactions, or cover exports and/or imports carried out over a specific period (often termed 'company-based' audit).

However, ultimately, the PCA's primary objective is to facilitate trade while ensuring the export and import of goods comply with national legislation (Hossain & Yusuf, 2013). Thus, PCA minimises costs and time of business for traders can immediately release their goods from the port after import, eradicating the need for additional port charges. PCA also benefits customs by minimising its workload (Hossain et al., 2013).

2.2.4 Capacity Building Reform Strategy

Building capacity is all about motivating and advancing individuals (shareholders) by empowering them with the knowledge and abilities required to grow and improve their efficiency and effectiveness. WCO approved the capacity-building reform strategy in 2003 and recognised the vital economic role of customs either as a secondary or primary function to maintain revenue streams, generate economic statistics, provide social protection, and manage the international supply chain (WCO, 2021). WCO (2021) described the capacity-building strategy as entailing all members having the capability

to sustain and implement the ideal operational policy, procedures, and support systems to meet several obligations. These obligations consist of international and regional obligations and policies management, construction, and influence that meet national requirements.

Besides, the WCO capacity-building reform strategy has six main principles. The first principle encourages partnerships between academia, development agents, donors, trade, and customs at the institutional, regional, and global levels. The second perceives ethics and integrity as an integral component of the capacity-building programme, implementation projects, and plans. The third requires the presence of a steering vision of the capacity-building results, with measurement of results and implementation, recognized programme management techniques, and concrete targets. The fourth necessitates the customs services empowerment to take complete ownership of the capacity-building programme. The fifth principle mandates the coupling of holistic development that accounts for the impact of changes across the whole of the customs service with a sustainable implementation approach. The last principle acknowledges commitment, leadership, and political will as necessary for successful capacity building.

2.2.5 Customs Border Management Initiatives Reform Strategy

Customs Border Management (CBM) Initiatives encompass; joint border committees (JBCs). JBC is a platform where customs, Partner Government Agency, and the private sector sit with the objective of trade facilitation and securing the border. It helps also in enhancing inter- agency collaboration, and promoting the sharing of available resources. Interagency Coordination Strategy is the process in which two or more agencies work to solve a problem or meet a need (Wang, 2018). Any plan to stop and punish human trafficking on a national or local scale will fail without widespread

cooperation between government agencies. National and international cooperation can be aided by coordination mechanisms that are able to develop and enact anti-trafficking policies, monitor their implementation, and bring together all relevant actors on the national level. They need to be responsible for the creation and coordination of measures to aid and protect victims of human trafficking, not just the prosecution of offenders. Joint management initiatives (one stop border post), information and equipment sharing, and multi-agency cooperation were used as indicators in this research.

In order for cooperation mechanisms to be effective, the roles of the various organizations must be clearly defined. In order to effectively implement a national or local strategy, it is crucial to develop such coordination mechanisms and define the precise responsibilities of each of the key agencies involved (Muiga, 2019).

2.3 Theoretical Review

Several theories support customs reforms and customs revenue performance. The study generally discussed these theories, related their importance to the study, and described how each theory supported it. These have further been discussed as follows.

2.3.1 Technology Acceptance Model Theory (TAM)

In 1989, Davis crafted the theory of technology acceptance model. One of the most widely-applied theories to explain people's adoption of IT is the Technology Acceptance Model. Users' acceptance and utilization of technology are modeled by the theory. Users, according to this model, are offered cutting-edge tools. They will use it when and how they think it will be most beneficial to them, which depends on a number of factors. The perceived usefulness of a system is how much its users believe it will

improve their efficiency at work. According to Davis (1989), ease-of-use is the extent to which a person anticipates minimal effort in making use of a given system.

Several investigations have been carried out, and these investigations have influenced recent revisions to the proposed model. The TAB-TPB combines elements of the technology acceptance model and the theory of planned behavior. TAM2, proposed by Vankatesh and Davis (2000), is an updated version of TAM that includes some new variables. The unified theory of acceptance and use of technology model was proposed by Vankatesh et al. (2003) in a study published in MIS quarterly. The technology acceptance model (TAM) was revised by Agarwal and Prasad (1998) to include the concept of compatibility. For their research on Internet adoption, Moon and Kim (2001) incorporated a new dimension—playfulness—into their equation. Changes to TAM were proposed by Lim (2000), who suggested incorporating factors like prior knowledge, confidence in one's own abilities, awareness of potential downsides, and social pressure.

Franco and Roldan (2005) found that among goal-oriented users of information and communication technologies, there was a strong correlation between perceived usefulness and the behavioral intention. Three models were compared by Chau and Hu (2000). TPB model compression that may be sufficient for the intended Hong Kong healthcare professional setting, Technology Acceptance Model, and the Theory of Planned Behavior. According to the findings, TAM was more effective than TPB in describing doctors' propensity to employ telemedicine. Researchers all over the world have turned to TAM in order to better grasp the extent to which various IT systems have been adopted by their respective target populations. Using TAM, Shafeek (2011) sought to gauge educators' openness to eLearning tools. By incorporating trust and perceived risk into his model, Pavlou (2003) was able to determine that a region's

adoption of e-commerce would be highest if its residents saw little to no danger in making purchases online. The Theory of Technology Acceptance Model has been studied and applied extensively, but it is not without its shortcomings. New technologies, such as personal computers, are complex, and decision-makers are uncertain about whether or not they will be successful in adopting the ICT. As a result, people develop beliefs and intentions about attempting to learn how to use new technology before actually making any efforts to use the ICT, as argued by Bagozzi et al. (2007). TAM's critics point to the theory's dubious heuristic value, weak explanatory and predictive power, triviality, and inapplicability (Chuttur, 2009).

Benbasat and Barki (2000) suggest that TAM has diverted researchers' attention away from other important research issues and has created an illusion of progress in knowledge accumulation. Technology Acceptance Model theory is relevant and supports the independent study variable of systems automation because any technology adopted by ICD Embakasi should first be accepted, tested, and confirmed to be working hence meeting the needs for which it was designed. The perceived usefulness of these technology and technological systems such as RECTS, iCMS, and iTax must outweigh the cost of implementation and user-friendliness and acceptability for it to be considered efficient and effective technology contributing to improved trade facilitation hence better revenue collection. Revenue performance must not be only the focus for adopting technology but other equal and important components in the design, uptake, and feedback for improvement should be equally important (Samia & DeCorby, 2017).

2.3.2 Porter's Theory of Competitive Advantage

In order to explain how businesses can better align their strategies with their goals and gain an edge in the market, Porter (1980) created the five-force framework. In addition, Porter's theory recognizes that the organization serves multiple constituencies whose

needs must be satisfied. There are a number of forces that Porter (1980) identifies as problems for the industry. Given the high number of participants in the industry, rivalries are to be expected. The existence of substitutes, the threat of new entrants, the bargaining power of suppliers, and industry rivalry are all identified within the framework as forces that cause an organization to form strategies. All four independent variables (information technology, capacity building, coordinated border management initiatives, and customs processes/procedure reform strategies) are supported by this theory, making it central to this investigation. The theory also sheds light on the undercurrents that might prompt a revenue collection unit to craft new tactics. This theory's explanation of how businesses can take action to boost their revenue performance is central to the research at hand. In order to foster improved performance, businesses need to make sure they are developing competitive advantages. The five-forces model is a useful indicator of whether or not an organization is taking steps to improve its position in the market. The framework specifies a process by which individual stakeholder goals can be met without undermining the success of any other group's goals or the goals of the governing institutions. Davis and Cobb (2010) argue that in order to successfully navigate environmental challenges, businesses must do so consciously and proactively. The purpose of strategic management is to devise and implement plans to achieve long-term objectives. In order to be successful, businesses must ensure that their plans are consistent with their mission and vision. Here, the Customs and Border Protection agency must coordinate its regular procedures with the targeted reform strategies that will boost its revenue collection goals. The revenue performance of the customs and border protection division should be prioritized in this plan. Investment in cutting-edge technology, increased active surveillance, and enforcement operations that can be bolstered by inter-agency cooperation are all ways

the department can work to improve compliance. Customs operations can benefit from IT investment, leading to higher revenue generation. Improved voluntary compliance and an expanded tax base can result from a comprehensive use of data and intelligence to uncover unpaid taxes, boarding taxpayers who were previously not paying their fair share of taxes.

2.4 Empirical Review

2.4.1 The Effect of Information Technology Reform Strategy on Customs Revenue Performance

Omosa (2020) evaluated how information technology affected Kenya's customs revenue performance. The study concentrated on the impact of scanner technology, the Cargo Tracking System, and Integrated Customs Management (ICMS) on Kenya's customs and border control department's revenue performance. The study divided the idea of information technology into three categories: scanner technology (transit, export, and import scanning); cargo tracking system (containerized cargo transit management); and integrated customs management systems (verification, valuation, and declaration of goods). Trade facilitation, border security, and revenue collection served as the metrics for evaluating the customs revenue performance variable. The Taro Yamane sampling method was used to pick a sample of 227 respondents from 902 clearing and forwarding organizations and customs KRA officers. The study also used structured questionnaires and data from previous studies for the data collection process. The study discovered that the performance of Kenya's customs income is greatly improved by information technology after analyzing the obtained data using both inferential and descriptive statistics. The study came to the conclusion that, despite the high expenses associated with system automation, such as those for infrastructure,

training, and security enhancements, their deployment is crucial for achieving operational efficacy and revenue development.

Like Omosa (2020), Kelvin (2017) studies the effects of system automation of revenue collection in the Kenya Revenue Authority. Contrarily, the study primarily focused on the SIMBA case study. The study found that the Authority had made significant strides toward automating various departmental processes leading to the full automation of the internal audit and legal departments' processes. The study also found high automation levels in the ICT (59%), Finance (71%), investigations and enforcement (78%), traffic revenue department (78%), marketing and communication (75%), and domestic taxes department (95%) departments. The study also linked air passengers service charge, Kenya Revenue Authority Valuation System, manifest management system, Customs Oil Stocks Information System, Cargo Manifest, and RECTS to automation of the Customs and Border Control operations. Finally, the study concluded that systems automation, especially the Simba system implementation, resulted in a progressive increase of custom revenues collected. However, the study had one primary limitation: its reliance on secondary data could introduce a research bias element to the study. The current study improved the research by depending on primary data to assess the effect of systems automation on customs revenue performance.

Polycap (2019) assessed the impact of computerized systems on the Kenya Revenue Authority's Customs and border control department's revenue performance. Using a descriptive survey and questionnaires, the study collected data from 120 staff working in various tax collection stations. Inferential and descriptive statistical analyses indicated that computerized systems positively impacted the customs department's revenue performance. The study also found that tax clearance time and cargo security variables also significantly impacted the customs department revenue performance.

However, the study could not determine other factors that could have affected the department's revenue performance. For the avoidance of the same mistake, the current study considered the probable effects of intervening variables on customs revenue performance.

Contrary to the other studies, Mumia (2021) focused on how the Kenyan port of Mombasa's customs performance was affected by the automation of the customs release process. System automation was deemed essential in the study for streamlining and harmonizing border and administrative processes. The study collected a 306-sample size of 1500 clearance agents at the port of Mombasa in Kenya using a Yamane formula and simple random sampling. The study's data collection tools were self-administered questionnaires. The study found that improving customs performance was a direct result of improving customs verification automation.

Mwongela (2016) investigated the consequences of customs changes, including system automation, performance of customs revenue, and effect of customs tax income on economic growth. Time series data from 1991 to 2015 were used in the study. A double log-linear model was also employed, with GDP, a one-year GDP lag, and customs tax revenue serving as the independent and dummy variables for RARMP tax revisions, respectively. The tests that were run included unit root testing and cointegration testing. According to the study's conclusions, the RARMP tax amendments had no appreciable impact on the collection of customs taxes. The entire tax take was found to be significantly impacted by GDP, though. The study's primary flaw was its reliance on secondary sources, which might have affected the validity of the findings. By studying the effects of customs automation changes on the performance of customs revenue, the current study improved the trustworthiness of its results by using primary data.

2.4.2 The Effect of Customs Processes and Procedures Reform Strategy on Customs Revenue Performance

Hossain and Yusuf (2013) asserted that audits visits assist customs administrations in maintaining accountability and transparency, it is why global organizations like the WTO and WCO emphasize the value of audit-based customs controls over the physical inspection of every cargo. In order to investigate the impact of post clearance audit (PCA) on Bangladesh's customs revenue performance, exploratory interviews were used in the study. The study concluded that if other support measures including automation, information sharing across the public agencies, and risk management were correctly implemented, the PCA mechanism might be used more efficiently. Bangladesh was also noted in the survey as having signed the 2016 WTO Trade Facilitation Agreement (TFA). PCA must be implemented by members of this agreement in order for products to clear customs quickly.

Moreover, the OECD (2014) study found that the implementation of TFA will reduce costs for low-income countries by 14.1%, lower-middle-income countries by 15.1%, and upper-middle-income countries by 12.9%. The study also discovered that PCA measures and TFA adoption might increase global trade by up to $1 trillion yearly. An exponential rise in the volume of cross-border cargoes over time was also attributed to PCA activities. The study also connected PCA results to a role in putting in place a useful risk management system for speedy detection of non-compliant traders and clearance. As a result, the information gathered might also be used to decide whether further audits are necessary. Finally, the study came to the conclusion that the PCA technique helped evaluate the effectiveness of the risk management system.

Cunningham (2011) identified the PCA strategy as a basic customs control instrument for balancing gaps and probable risks caused by any custom’s procedural

simplification. The study also established that PCA played a critical control function in developed customs administrations, whereas risk management contributes to effective PCA implementation. Besides, after assessing the Georgian Customs PCA, the research findings found the strategy to be at a very basic level at the time of the study. Nevertheless, the Georgian Customs Administration had established substantial trade facilitation measures that resulted in customs procedures' simplification. However, the simplification uncovered a dire need for alternative control mechanisms. The research recommended the implementation of risk-based PCA controls to function as an integral component of Georgian Customs' reform and reforms program.

Gebreyesus (2020) posited that the need for trade facilitation and the increment in the volume of international trade had imposed the adoption of audit-based controls and risk management. The study also identifies Post Clearance Audit as among the essential tools or means utilised by most nations in customs reform and reforms. In Ethiopia, the study asserted that the PCA was introduced in 2009 in the country's reform to enhance trade facilitation. The study used both qualitative and quantitative research approaches and primary and secondary data to assess Ethiopia's PCA. Structured questionnaires collected data from 128 respondents comprising non-PCA staff, agents or taxpayers, and the PCA staff. The study findings indicated that PCA contributes to revenue collection and trade facilitation. However, the study also established that the existing PCA did not cover all the customs regimes. Hence, the research recommended regular reviews of tax laws to address law loopholes, the adoption of risk management in the case selection, and the improvement of the PCA auditors' capabilities.

In the Kenyan context, Ndenga and Ayuma (2015) examined the impact of customs policies and practices on tax collection in Mombasa County's Customs Service Department. Customs pre-arrival clearance, customs audit visits, standards, and process

measures were used in the study to conceptualize the PCA variable. 110 respondents were selected for the study from a target group of 366 heads of Mombasa clearing and forwarding enterprises and staff members working on the Customs Services Department in Mombasa using a descriptive research design and stratified random selection approach. Quantitative data were analysed using descriptive and inferential statistics, while qualitative data were analysed using content analysis. The results showed that customs audit visits, pre-arrival clearance, post-clearance audit visits, and post-clearance audit standards had the greatest impact on revenue collection at the customs services department. The study also discovered that PCA practices shortened the time needed to clear items. The current study, which partially replicated the aforementioned study in the context of ICD Embakasi, used the same PCA measures (customs pre-arrival clearance, customs audit visits, customs audit standards, and customs audit procedures).2.4.3 The Effect of the Capacity Building Reform Strategy on Customs Revenue Performance

Montagnat-Rentier and Parent (2012) did a study on the reforms in Sub-Saharan Africa's francophone customs administration. Time series analysis was used in the study from 1995 to 2010. The study's findings suggest that in order to speed up the reform of customs in Francophone Sub-Saharan Africa, the authorities will need to make significant organizational and management changes, provide enough technical assistance and project management, and effectively implement modern customs standards. The research added that the pace and scope of reforms are still insufficient, especially when it comes to strengthening operational management and resources and increasing customs control and enforcement capabilities. The results also show that improving human resource capability is crucial for increased revenue performance.

Kashubsky and Hintsa (2014) In order to improve the professionalism and capabilities of customs experts and customs administrations through higher education, it was investigated how the World Customs Organization (WCO) had collaborated with the academic community in the context of the WCO Partnership in Customs Academic Research and Development (PICARD) program. The study also aimed to improve strategic decision-making regarding customs by using academic applied research. In order to determine whether the PICARD program had achieved its goals and met stakeholders' expectations, it also covered fundamental PICARD accomplishments and initiatives. The study's findings suggested that the WCO had given capacity building a high priority on its agenda for the twenty-first century. Notably, the study found that the 21st-century demands and challenges posed by elements like the dynamic nature of international trade, concerns about global security, rapid technological advancements, and globalization demanded a professional approach to the operations and management of the customs administrations. Therefore, modern customs managers need to have a thorough understanding of complex issues as well as the ability to apply new technology, best practices, and cutting-edge methodologies to knowledge to create operational policies and useful applications. The study also discovered that the growing complexity of customs work necessitates adopting a more rigorous approach to customs training and education and partnership with the academic world, which has successfully provided a framework for collaboration between academia and customs in the PICARD program.

Moreover, OECD (2016) identified commitment as a vital prerequisite to improving customs capacity. The study also recognized other key enablers of building customs and tax capacity. These enablers comprise a strengthened developing countries' engagement in international rule-setting, strong regional support and cooperation, a

strong evidence base and knowledge, strong coordination among results-oriented and well-informed providers, and a coherent revenue strategy as a constituent of a development financing plan. Nonetheless, despite providing sound capacity-building strategies, the study's focus on capacity building at the national level functions as its weakness. The current study improved on the research on discussing capacity-building reform strategy and its effect on customs revenue performance at the institutional level, primarily focusing on ICD Embakasi Kenya.

2.4.3 The Effect of the Coordinated Border Management Initiatives Reform Strategy on Customs Revenue Performance

Mbithe (2015) tried to discover economic integration and trade impediments between Kenya and Uganda. Examining how trade barriers impacted the integration of Kenya's and Uganda's economies was the study's main objective. Both qualitative and quantitative data were gathered by using a descriptive survey approach. The Ugandan Embassy, Ministry of Foreign Trade, and traders with both Kenyan and Ugandan citizenship participated in the study. According to the study, the main obstacles to commerce between the two countries were trade policies, nontariff barriers, and institutional hurdles. The study found that commerce between Kenya and Uganda has significant potential, and that attempts to promote regional cooperation can help this potential be realized. However, more effective trade regulations were required. As a result, the public sector is becoming increasingly cognizant of the need to invest time, money, and political capital in developing coordination structures throughout government in order to reduce redundancy, get rid of contradictions, increase accountability, and deal with cross-cutting concerns (Peters 2018). This strategy aims to guarantee that each individual activity is carried out by the agency that is most qualified to do so. (Davis, Machado and Jorge 2014). A recent administrative

assessment of interagency meetings in the United States came to the conclusion that coordination “improves the overall quality of decision making by introducing multiple perspectives and specialised knowledge, and structuring opportunities for agencies mutually to test their information and ideas” (ACUS 2012).

2.5 Critique of the Study

Custom reform strategies have been lauded to effectively improve revenue performance (Morini et al., 2017; Kollie & Prowd, 2021; Simiyu, Ruto & Byaruhanga, 2020). It is not always the case. Geourjon and Loporte (2005) studied risk management for targeting customs restrictions in underdeveloped nations is a risky enterprise for revenue performance. Risk management for this purpose has been examined. According to the report, customs authorities in developing countries frequently hesitate to abandon systematic inspections because they are concerned about potentially losing money even though customs reform programs aim to increase revenue performance. However, methods like physical inspections hinder trade rather than help it. Dutt and Gallagher (2020) assessed the fiscal impacts of trade and investment treaties in relation to revenue performance. They found that contrary to the assumptions of custom reform strategies, the automatic replacement of lost tariff revenue by other taxation measures, in particular, does not seem to be associated with liberalization. In other words, it is not necessary that when custom reform strategies are put in place, including information technology adoption, capacity building enhancement, improvement of custom processes and procedures and enhancing coordinated border management, revenue would be lost. Drobot et al. (2017) studied risk management control as a concept for improved customs revenue performance. A non-intrusive inspection system can be very helpful in minimizing the human role in customs control, even if the findings stated that customs administrations functioning in the contemporary global economy face a wide

variety of challenges. In order to treat all tactics equitably, the authors further claimed that customs control must strike a balance between costs and advantages, allowing trade to be facilitated effectively and efficiently while at the same time protecting citizens.

2.6 Research Gaps

Morini et al. (2017) conducted a study on trade facilitation and customs revenue collection. The study adopted survey methodologies using the variable of trade facilitation as its independent variable to analyse the effect of trade facilitation and customs revenue collection. Carriolle et al. (2018) conducted a study on measuring and improving the performance of customs valuation in Gabon. The study adopted comparison analysis with customs control measurements as the only independent variable. Mohamed and Boumaaz (2019) conducted a study on custom risk management in developing countries. The study adopted descriptive research used correlation and regression analysis using the variables of technology as a variable to manage customs risks. Bardash and Novak (2020) conducted a study on the identification of essence, and general principles of customs control globally. The study adopted dialectical, logical-semantic, transition abstract, and clarification of research concepts methods. The variable in the study was knowledge. Chen (2016) studied the effectiveness of a simplified air-cargo express and revenue performance. The variables in the study included the bottom-up approach and the top-down approach as the variables.

From the studies reviewed, there are several gaps identified. The majority of the studies' data sources were mostly secondary, and the variables range from trade facilitation, control measurements, simplification of technology, identification essences, and approaches. The scope of these studies was mostly globally, with very few in the context of developing economies (Cariolle et al., 2019; Kollie & Prowd, 2021). There

were also inadequate studies focused on the four customs reform strategies; information technology, customs processes and procedures, coordinated border management and the capacity building reform strategies and their effect on customs revenue performance. There also lacked a study discussing the four custom reform strategies and their effect on customs revenue performance in Kenya.

For bridging the research gap, the current study examined the effect of four custom reform strategies on customs revenue performance in Kenya at ICD Embakasi, Nairobi County. The study had five variables: customs revenue performance, information technology reform strategy, customs processes and procedures reform strategy, coordinated border management reform strategy and capacity-building strategy. The study also adopted an explanatory research methodology where data was from primary sources. The collected data was analysed using correlation and regression analysis. These insights into this study assisted in furthering the knowledge gap that has been realized and give direction for further studies based on the findings and outcomes of this study.

2.7 Summary of Literature Review

The chapter begins by reviewing the concept of the study where the existing assumptions were discussed. The study generally assumes that revenue performance is influenced by factors such as information technology, customs processes and procedures, coordinated border management and capacity-building. The chapter also reviewed theoretical frameworks that the study is anchored on, including technology acceptance model theory and porter's theory of competitive advantage. Each of these theories supports each of the study variables starting with the dependent to the last independent variable. The study further reviewed several scholarly articles in the area of customs and revenue performance. However, the majority of these studies were

focused globally and with the analysis of various time series using different variables apart from those proposed in this study. The study gaps were then analysed where the gaps existing included conceptual and contextual. Most studies looked into risks management, customs approaches, technology uptakes, among others. The chapter closes down with a conceptual framework upon summarizing the chapter.

2.8 Conceptual Framework

The figure below shows the relationship between the study variables. The study had four variables whereby customs revenue performance is the dependent variable and custom reform strategies, comprising information technology, customs processes and procedures, coordinated border management and capacity-building reform strategies are the independent variables as shown in Figure 2.1.

Independent Variables Dependent Variable

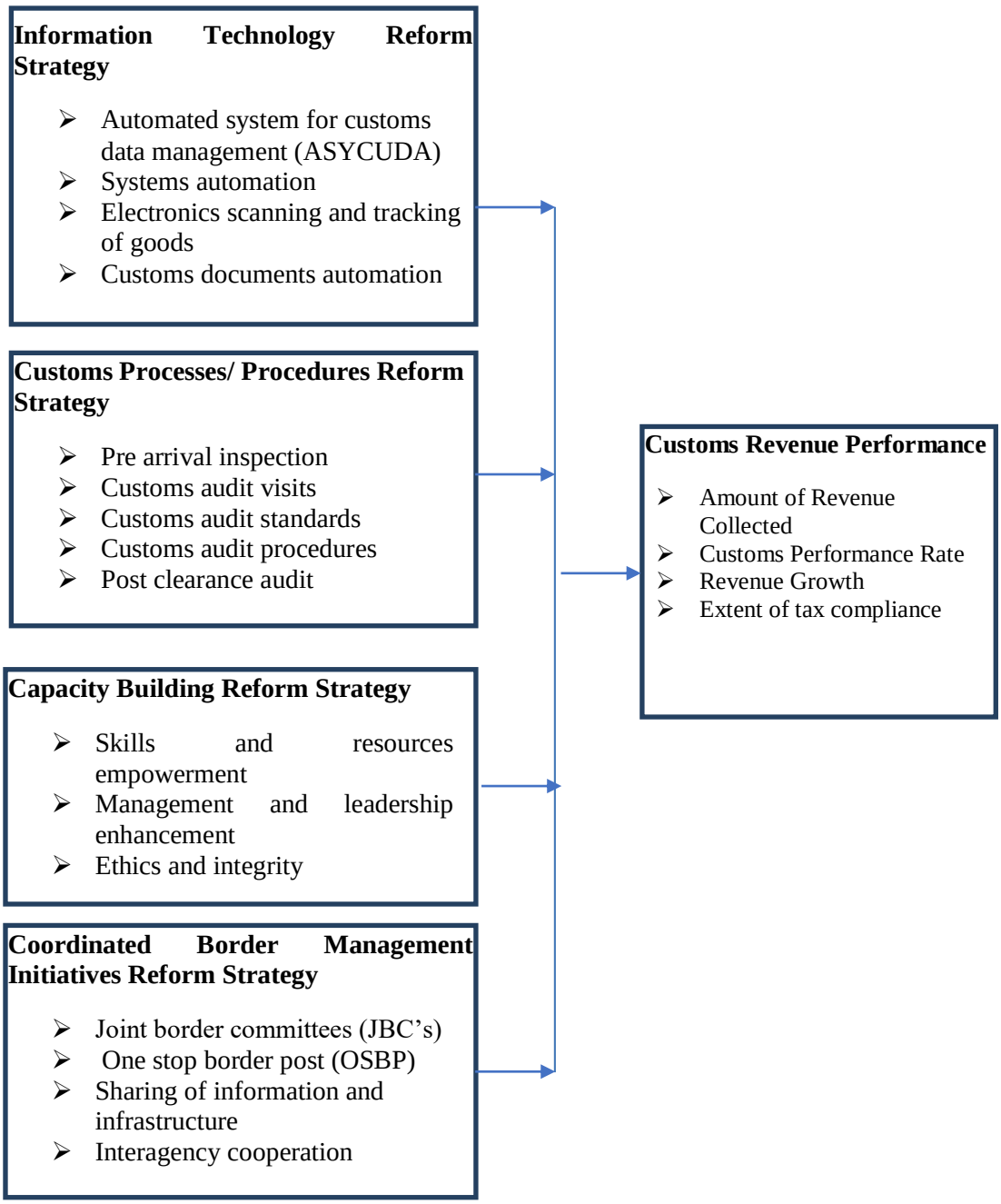

Figure 2.1: Conceptual Framework

Source: (Author, 2022)

The theoretical framework formed the foundation for developing the conceptual framework in Figure 2.1 above. The porter's theory of competitive advantage theory

informed the use of a mediating variable in describing the correlation between custom reform strategies and customs revenue performance at ICD Embakasi. The theory of constraints influenced the use of tax compliance extent to measure customs revenue performance. The theory established that the implementation of custom reform strategies could deter tax evasion, thus increasing an individual or organization's extent of tax payment compliance.

The importance of Porter's theory of competitive advantage to this investigation lies in its ability to illuminate the nuanced factors that can prompt a department responsible for revenue collection to devise tactics. Since it describes how businesses might implement tactics that enhance revenue performance, this theory is crucial to this study. For firms to support improved performance, it is crucial that they make sure they create competitive advantages. Finally, the Technology Acceptance Model stressed the need for any technology adopted by ICD Embakasi to first be accepted, tested, and confirmed to be working before its improvement of customs revenue performance. As such, the customs officers' acceptance levels of the custom reforms' strategies formed the study's mediating variable, signifying that extent to which the customs officers accepted working with the implemented custom reforms strategies affected the customs revenue performance at ICD Embakasi Kenya. In this context, a large extent of the officers' acceptance of the custom reform strategies would generate an improved customs revenue performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The procedures utilized to conduct this investigation are detailed in this chapter. It emphasizes the research design, the target population, the sample procedure and size, the data collection tools, the validity and reliability of the research instruments, the data gathering procedure, the data analysis approach, and lastly ethical considerations in the study.

3.2 Research Design

A descriptive research method was used for this study. Research designs, as defined by Kothari (2004), are the plans made for gathering data and analyzing it in order to test a hypothesis or provide answers to specific questions. Descriptive research, as defined by Mugenda and Mugenda (2003), is a "organized, empirical inquiry" that lacks direct control of independent variables because their manifestation has already occurred or because they inherently cannot be manipulated. In order to describe the connection between strategic management practices and increased revenue collection via the KRA, this study opted for this design. Descriptive research attempts to establish the existence of a connection between variables and to characterize the nature of that connection. A secondary factor in the study's decision to use a descriptive research strategy was the use of secondary data gleaned from an analysis of KRA records. When all you want to know is whether or not your variables show a relationship in their natural occurrence, a descriptive study is the way to go, as pointed out by Kothari (2004). The researcher wanted to find out how strategic management affected revenue collection in Kenya, so they opted for a descriptive research strategy. Descriptive research plans seek to describe such a context by focusing on the interplay of variables.

3.3 Target Population

A population is a group of individuals or objects that have the same form of characteristics (Mugenda & Mugenda, 2003). For the purpose of this study, the target population was drawn from key players in international trade comprising of importers, exporters, transporters clearing and forwarding agents and staff from KRA's customs department in managerial and supervisory levels working at the Embakasi Inland Container Depot (ICD) using stratified random sampling method. Based on the statistics obtained from Kenya Ports Authority (KPA) Annual Report (2017), there were about 351 stakeholders participating in international trade at ICD Embakasi, the number being the target population for the study. The choice of the target population was to ensure that data is collected from the people who are involved in decision making at ICD Embakasi. Table 3.1 below shows the total number of the target population of 351 respondents.

Table 3.1: Target Population

Category	Target population	Percentage
Customs Staff	62	17.60%
Exporters	87	24.70%
Importers	90	25.60%
Transporters	40	11.30%
Clearing agents	72	20.50%
Total	351	100%

Source: KPA Annual Report (2017)

3.4 Sampling Design

In research, the method or strategy for selecting items for the sample is known as the sampling design. It is possible that the sample size will be specified by the design of the sample itself. This research utilized a stratified random sampling method for its sampling. A form of random sampling called "stratified random sampling" is used to

examine subgroups (stratas) in greater depth (Marshall, 1996). A stratified random sample is drawn from a population by first dividing it into smaller, more homogeneous groups (strata). Then, items are selected at random from each category to make up the sample. The method provides more accurate estimates for each stratum because each stratum is more homogeneous than the total population, and by providing more accurate estimates for each of the component parts, we obtain a better estimate of the whole. The use of a random number table to select each member of the sample set is one method for ensuring a statistically valid sample. The use of a random number table ensures that each individual in the population has an equal and random chance of being included in the survey. To generate these numbers, we used a random number table with rows and columns of random sequences of digits from 0 to 9.

3.5 Sample Size Determination

The sample size was calculated by the formula advanced by Yamane (1967)

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

In the calculation, n stands for the sample size, N for the study's whole target population, and e for the level of error or significance. The five percent conservative significance level was used to strike a compromise between making Type I and Type II errors. The sample size was determined using the whole population of 351, with a significance threshold of 0.05, as shown below.

$$n = \frac{351}{(1 + 351(0.05)^2)} = 187$$

A sample of 187 was, therefore, drawn from the population. Stratified random sampling technique was used in selectin the sample size. The choice of this technique was

because of heterogeneity nature of the study population. The calculated sample proportionately distributed as shown in Table 3.2 below.

Table 3.2: Sample Size

Category	Target Population	Proportion of Sample Size	Sample Size
Customs staff	62	17%	32
Exporters	87	25%	47
Importers	90	26%	48
Transporters	40	11%	21
Clearing agents	72	21%	39
Total	351	100%	187

Source: Research (2022)

3.6 Data Collection Instruments and Procedures

3.6.1 Type of Data

Primary information was gathered by means of a questionnaire, making up the backbone of the study. According to Yang (2008), a study's structured questionnaire consists of questions or statements that are pertinent to the study's research questions. The questionnaire provides more structure to the research process than other methods, such as interviews, and this can increase the quality of the data collected and the clarity of the conclusions drawn. In order to ensure that respondents would choose an answer from among those provided, the researcher used closed-ended structured questions.

3.6.2 Data Collection

Gathering relevant information for use in an analysis or investigation is known as "data collection." In order to collect data for a study, researchers need to use specific instruments. According to Burns and Grove (2003), Data gathering, also known as data collection, is the act of methodically and precisely compiling material that is pertinent to the research sub-problems using techniques including participant observation, focus group discussion, narratives, and case studies.

A self-administered structured questionnaire was used to compile the study's data. This was the primary method by which information about each respondent was gathered. Standardized questions that one is confident will be interpreted the same way by all respondents are ideal for questionnaires, as pointed out by Cooper and Schindler (2012). Furthermore, they argued that questionnaires are typically employed in descriptive or explanatory studies. The questionnaire used in this study was predicated on closed-ended questions designed to elicit concise and detailed responses from the participants. The questionnaire, based on a 5-point Likert Scale, was designed to achieve the set goals of the study.

3.6.3 Data Collection Procedure

Questionnaires were used in this study to collect primary data. Prior to beginning the data collection process, the researcher ensured the questionnaire was reliable and accurate. The surveys were distributed directly by the researcher. The scientist also requested a permission for study from the National Commission for Science, Technology, and Innovation (NACOSTI). The researcher next set about gaining participants' agreement after receiving approval for the study.

Several research ethical issues were considered in order to increase the response rate. Respondents were briefed on the study's significance, and their identities and responses were guaranteed to remain anonymous and confidential. In order to give respondents ample time to fill out the questionnaires, they were collected one week after distribution. The researcher helped respondents who needed it with the questions. The data collection period was less than two weeks.

3.7 Pretesting of the Data Collection Instruments

3.7.1 Pilot Testing

A pilot study is a practice run for a larger research project. The researcher can see if their data-gathering tools are performing as expected by conducting a mock study. A pilot study only needs a small sample size of participants (10% according to Mugenda and Mugenda, 2003). As a result, participants in the pilot study were picked at random. So, at Jomo Kenyatta International Airport, we polled the customs agents there with 19 surveys (JKIA). In order to reduce the potential for bias, we decided to not include the pilot participants in the final analysis. The researcher can reword questions that might not be understood and pre-test the questionnaire to see if it can collect the desired results in the pilot study, making it an indispensable step in the research process.

Those who participated were prompted to offer clarifications on any questions they found unclear. Respondent feedback was used to revise the questionnaire before it was distributed to the sample again. Its reliability was examined by keeping track of and correlating both the first- and second-times respondents filled out the survey.

3.7.2 Reliability the Research Instrument

During the pilot study, the reliability of the questionnaires was evaluated. The same instrument was given twice to a different group using the test-retest methodology after a predetermined amount of time had passed since the previous test. To check the dependability of the instrument, the results of the first and second time tests were recorded and correlated. The Cronbach's Alpha Coefficient was employed in this study to evaluate the validity of the instrument's measure. It was deemed acceptable to use a test as an indicator of internal consistency if its reliability values were more than or

equal to 0.7. (Mohsen & Reg, 2011). The study obtained a 0.85 reliability, thus confirming internal consistency.

3.7.3 Validity of the Research Instrument

The standard of data a particular instrument delivers in relation to the information it is intended to gather is known as the validity of a research instrument. According to Castillo (2009), Validity, which occurs when the knowledge sought is attained through descriptions that enable a comprehension of the meaning and enhance experience, is the strength of qualitative research. Content, face, and concept validity were all used in this investigation. By definition, content validity indicates whether a piece of data can lead to inferences that are meaningful and valuable (Creswell, 2008). A strategic management specialist was hired by the study to help increase the content validity of the data gathering instrument. Experts are essential to social research because they offer advice on how to phrase the questions so that every respondent will comprehend them in the same way. In order to understand how the strategies for customs reforms and the performance of customs income, as well as if the questionnaire achieved its goals, the researcher enlisted the help of an expert in customs revenue. By ensuring that the responders to this study's research questions responded, face validity was guaranteed. The questionnaire was divided into numerous sections based on the study variables, which further ensured construct validity.

3.8 Assumptions of Multiple Regression Analysis

The data was examined to make sure that the assumptions of multiple regression analysis (normality, linearity, multicollinearity, and heteroscedasticity) had not been broken before multiple regression analysis was performed.

3.8.1 Normality Test

To ascertain if a data collection is regularly distributed, a normality test is utilized. If test results are visually represented, it may be seen whether they follow the typical bell-shaped distribution. (Amata, 2017). The Kolmogorov-Smirnov test was used to determine the test's normalcy. The probability indicates that the data is regularly distributed if it is greater than 0.05.

3.8.2 Linearity Test

According to linearity, a change in the dependent variable is correlated with a change in the independent variables to a certain extent. There may be a linear relationship between each prediction for the independent variable and the dependent variable. To check the correlation between the study's variables, linearity was checked using Pearson correlation., Cohen, et al. (2003) argues that the cut-off point is at 0.8.

3.8.3 Multicollinearity Test

Zainodin and Yap (2011) note that the presence of multicollinearity among independent variables should be checked because it can cause a variety of problems in data analysis. According to Alin (2010), in data analysis, one independent variable should be used in place of two or more when they are linearly dependent on one another. As a result, the results are biased and the standard errors rise. Determining whether the independent variables (IVs) have a multicollinearity problem by using a variance inflation factor (VIF) of values, a VIF value ≥ 10 shows there is multicollinearity while any VIF value ≤ 10 with a tolerance factor of ≥ 0.2 is an ideal and acceptable measure of multicollinearity.

3.9 Data Analysis

Data analysis is a comprehensive procedure that begins as soon as data is collected and finishes at the point of interpretation and processing (Cresswell, 2015). In order to ensure accuracy and uniformity before processing the answers, the surveys were modified after they were finished. In descriptive statistics, the data were analysed. The relationship between the strategic management practices and the revenue collection by the KRA is described using descriptive statistics, which involves computing means and standard deviations. Frequency charts and tables were used to display the data. In order to demonstrate how strategic management techniques affected the KRA's domestic taxes department's collection reduction, the study also used inferential statistics. The utilised analytical model in the study was a Multiple Regression Model as shown below:

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

Where: Y – Customs Revenue Performance

β_0- β_4 - regression coefficient of independent variables

X_1 – Information technology reform strategy as used by ICD Embakasi Kenya

X_2 –Customs processes and procedures reform strategy used by ICD Embakasi Kenya

X_3 – Capacity building reform strategy used by ICD Embakasi Kenya employees

X_4 – Coordinated border management initiative reform strategy used by ICD Embakasi Kenya

ε - error term, it considers all the possible factors that would possibly influence the dependent variable though not captured in the model.

3.10 Operationalization and Measurement of Variables

The study had one dependent variable, customs revenue performance. The variable measures comprised the amount of revenue collected, customs performance rate, and

revenue growth at ICD Embakasi. Alternatively, information technology reform strategy, customs processes and procedures reform strategy, capacity-building reform strategy, and coordinated border management initiative reform strategy at ICD Embakasi formed the dependent variables. The volume of cargo scanned and tracked, clearance times, level of efficiency, reduction of congestion at ICD Embakasi comprised the information technology reform strategy. The customs processes and procedures reform strategy indicators entailed ease of filing documentation, cargo declaration, cargo verification, compliance of customs audits standards at ICD Embakasi. The capacity-building reform strategy indicators encompassed training opportunities, working resources, skills empowerment, orientations and demonstrations at ICD Embakasi. Lastly, joint management initiative, equipment and information sharing, and a multi-agency cooperation formed the coordinated border management initiative reform strategy. Besides, the study analysed the five variables based on the respondents' responses from a five-point Likert Scale. Finally, the study performed a regression analysis to determine the relationship between the independent and dependent variables. The Table 3.3 below presents the measurements and operationalization of the study variables.

Table 3.3: Measurement and Operationalization of Variables

Objective	Type of Variables	Indicators	Measurement Scale	Research Approach	Tool ofanalysis
To determine the effect of information technology reform strategy on customs revenue performance at Embakasi Inland Container Depot	Independent Variable: information technology reform strategy	• Volume of cargo scanned and tracked • Clearance Times Savings • Level of efficiency • reduction ofcongestion	5- point Linkert Scale	Quantitative	Pearson's Correlation and Multiple Linear Regression
To identify the effect of customs processes and procedures reform strategy on customs revenue performance at Embakasi Inland Container Depot	Independent Variable: processes and procedures reform strategy	• Ease of filing • Cargo declaration • Cargo verification • Compliance of customs audits standards	5- point Linkert Scale	Quantitative	Pearson's Correlation and Multiple Linear Regression
To determine the effect of capacity building reform strategy on customs revenue performance at Embakasi Inland Container Depot	Independent Variable: Capacity Building reform Strategy	• Skills and resources empowerment • Management and leadership enhancement • Ethics and integrity	5- point Linkert Scale	Quantitative	Pearson's Correlation and Multiple Linear Regression
To determine the effect of coordinated border management initiatives reform strategy on customs revenue performance at ICD Embakasi- Kenya.	Independent Variable: Interagency coordination strategy	• Joint border committees (JBC's) • One stop border post (OSBP) • Sharing of information and infrastructure • Interagency cooperation	5- point Linkert Scale	Quantitative	Pearson's Correlation and Multiple Linear Regression
Customs Revenue Performance	Dependent Variable	• Amount of Customs Revenue Collected • Performance Rate • Revenue Growth Rate	5- point Linkert Scale	Quantitative	Descriptive Analysis

Source: (Author,2022)

3.11 Ethical Considerations

Respondents were reassured by the researcher that their identity would always be safeguarded and that all information submitted would be handled in the strictest of confidence. Additionally, the researcher followed all ethical guidelines on truthfulness, cultural sensitivity, informed consent, and voluntary involvement. Additionally, by upholding patents, copyrights, and acknowledging additional contributions from other parties and scholars, respect for intellectual property was made sure.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter focused on the findings' explanation and interpretation. The chapter presents results from descriptive and inferential statistics.

4.2 Response Rate

The study administered 187 questionnaires to employees at Embakasi Inland Container Depot (ICD). Of the 187 questionnaires, 174 were filled out and returned to the researcher, inferring a 93 percent response rate. Fincham (2008) identified 60 percent as the ideal response rate for any form of a survey, justifying the acquired response rate's capacity to sufficiently realize the study objectives while providing reliable data. However, a further assessment of the questionnaires indicated that only 162 were properly and fully completed. The 162 questionnaires formed the basis of the current research.

4.3 Respondents' Background Information

4.3.1 Years Worked at ICD

When asked the number of years that they had worked at ICD Embakasi, 28 respondents answered less than two years, 59 for between three and five years, 62 for between six and ten years, and 13 for more than ten years. Figure 4.1 below portrays a distribution of the respondents' demographic information on the number of years they had worked at ICD Embakasi.

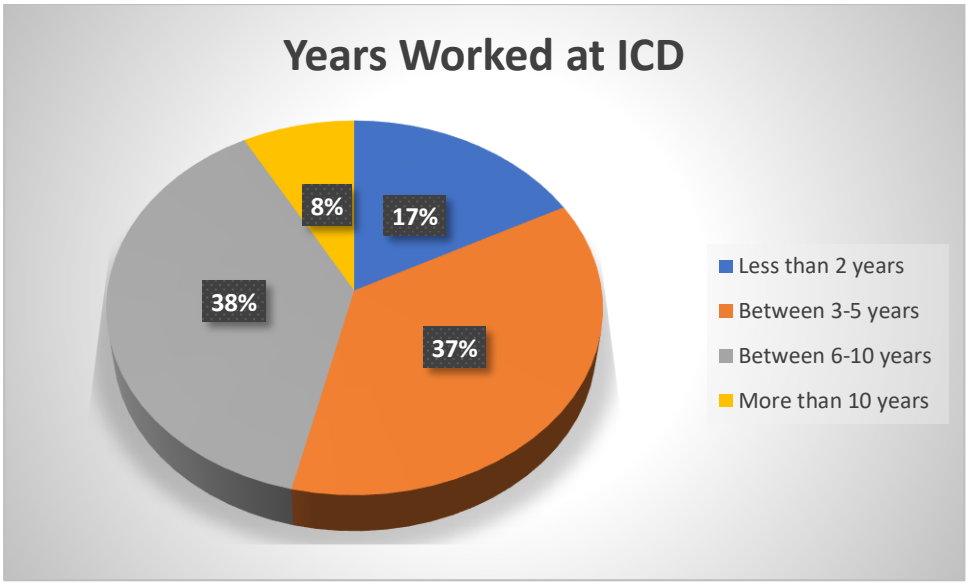

Figure 4.1: Years Worked at ICD

Source: Field Data (2022)

As depicted in Figure 4.1 above, a majority of the respondents had been working at ICD for six to ten years, whereas three-quarters of the respondents had worked at the depot for three to ten years, inferring a good knowledge of the depot's custom reforms strategies and customs revenue performance.

4.3.2 Respondents' Highest Level of Education

The respondents' highest education levels ranged from undergraduate degrees to Ph.D. levels. Figure 4.2 below portrays an allotment of the respondents' highest level of education.

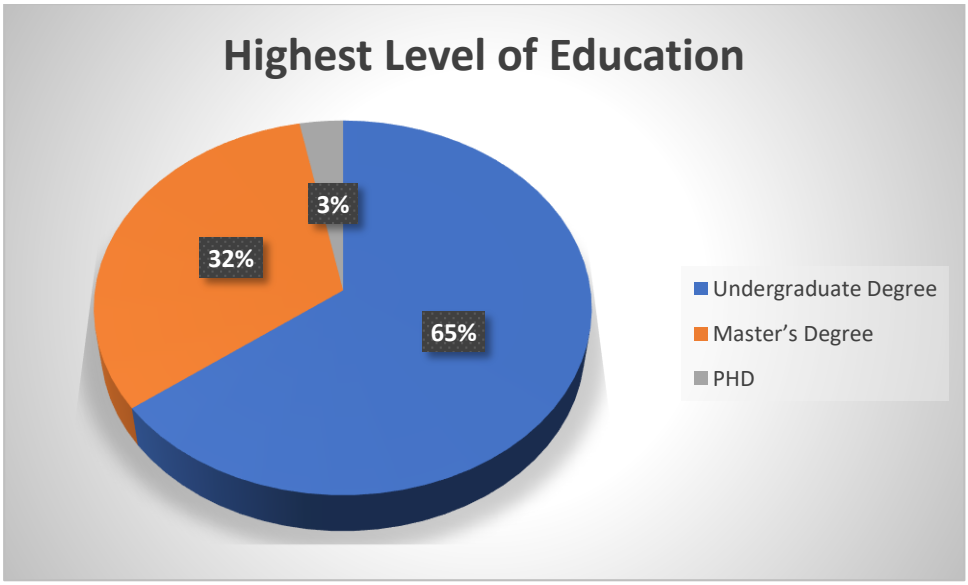

Figure 4.2: Respondents' Highest Level of Education

Source: Field Data (2022)

As depicted in Figure 4.2 above, most of the respondents, that is, 65 percent, had an undergraduate degree. 32 percent of the respondents had a Master's degree, whereas the remaining three percent, representing the least percentage of respondents, had Ph.D. degrees.

4.3.3 Respondents' Training

The study intended to determine the type of training offered to ICD Embakasi employees to enhance their knowledge and competencies connected to the implemented custom reforms strategies at the port. The respondents' responses differed, as shown in Figure 4.3.

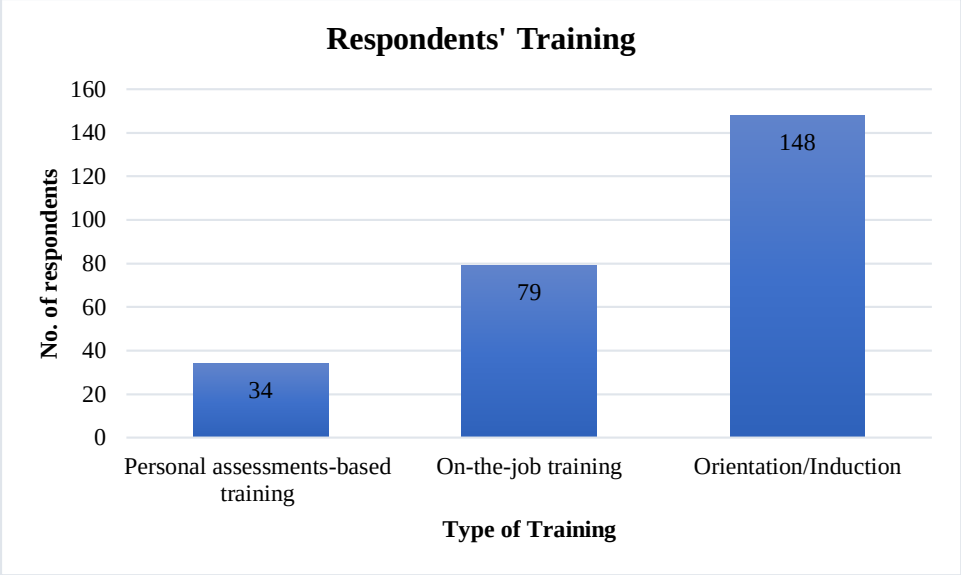

Figure 4.3: Respondents' Training Data

Source: Field Data (2022)

As depicted in Figure 4.3 above, most respondents (148) reported receiving an orientation or induction training. 79 of the 162 respondents stated that they had received on-the-job training to help improve their skills, whereas only 34 had received personal assessments-based training. These findings indicate a need to improve employee training and development at ICD Embakasi.

4.4 Descriptive Statistics

Responses to particular assertions that were created using the sub-constructs of the variables were requested from the respondents. The measure was determined using a five-point Linkert's scale, where 1 was strongly disagree, 2 was disagree, 3 was neutral, 4 was agree, and 5 was very agree. Descriptive statistics were used in the data analysis process along with measures of central tendencies. A majority of respondents disagreed with the assertions about input variables indicated by mean scores of 2.5, but most respondents agreed with the statements about input variables represented by mean scores of 2.5 to 5.0. The outcomes of the descriptive statistics are as follows.

4.4.1 Information Technology Reform Strategy

The study sought to determine how ICD Embakasi employed the information technology reform strategy consisting of systems automation and control in services and goods handling to minimize human intervention. Table 4.1 below indicates the descriptive data on the respondents' answers to the systems automation strategy statements.

Table 4.1: Information Technology Reform Strategy

Statements	Mean	Standard Deviation
Automated system for customs data management (ASYCUDA) adoption has increased efficiency at Embakasi ICD Station.	4.25	0.59
There is adequate ICT hardware use in Embakasi ICD Station such as electronic cargo scanners.	4.22	0.64
Automation of customs documentation and procedures saves time and has increased efficiency at Embakasi ICD Station.	4.12	0.65
The adoption of regional cargo tracking system has reduced fraud, cases of corruption and smuggling of goods on transit to and from ICD Embakasi Station.	4.11	0.82

Source: Field Data (2022)

The respondents agreed that the depot's adoption regional tracking system had decreased smuggling, corruption, and fraud cases, as indicated by the responses mean of 4.11. They also agreed that the depot had adequate ICT hardware, as evidenced by the 4.22 mean. Their responses also indicated an agreement that the automation of customs data management (evidenced by the 4.25 mean) and customs documentation and procedures had enhanced efficiency at the station (signified by the 4.12 mean). The high standard deviations above 0.50 across the statements suggested a low variation in the respondents' answers, meaning a close similarity to the responses. These findings indicated a proper implementation of the systems automation strategy and increased efficiency due to these implementations at ICD Embakasi.

4.4.2 Customs Processes and Procedures Reform Strategy

In examining the customs processes and procedures reform strategy, the study intended to evaluate how the depot employs the strategy to minimise its workload, costs, and time to facilitate ease of imports and exports. Table 4.2 signifies the post-clearance audit strategy-related descriptive data.

Table 4.2: Customs Processes and Procedures Reform Strategy

Statements	Mean	Standard Deviation
Customs audit visits have enhanced transparency and accountability at ICD Embakasi Station.	4.25	0.65
Customs audit standards has reduced control activities at ICD Embakasi Station to only those personnel necessary to determine the admissibility of goods.	4.14	0.73
Post clearance audit has led to increased compliance in declaration by importers at ICD Embakasi Station.	4.12	0.82
Customs audit procedures ensure there is a structured way of clearing goods, hence avoiding congestion of goods at ICD Embakasi Station.	4.05	0.69

Source: Field Data (2022)

The participants' responses concurred that the depot's implementation of post-clearance audits had boosted compliance in a declaration by importers, as shown by the mean of 4.12. Alternatively, the depot's customs audit visits had increased accountability and transparency (as shown by a 4.25 mean), whereas customs audit standards had minimised control activities at the station, as signified by a 4.14 mean. Finally, the 4.05 mean showed that the respondents agreed that the customs audit procedures had facilitated a structured manner of clearing, decreasing goods congestion at the station. These responses indicated that the post-clearance audit strategy had improved compliance, goods clearance, and human resource management at ICD Embakasi. The high standard deviations of above 0.60 across the statements inferred a convergence in the participants' responses.

4.4.3 Capacity Building Reform Strategy

In assessing the depot's capacity-building reform strategy, the study aimed to determine whether ICD Embakasi had adequate resources and support systems to sustain its operations.

Table 4.3: Capacity Building Reform Strategy

Statements	Mean	Standard Deviation
Custom officers are regularly trained on applicable customs laws, regulations, and procedures at ICD Embakasi Station.	4.12	0.68
There are adequate staff members to oversee the operations of ICD Embakasi Station.	4.04	0.63
Employee performance appraisal is regularly conducted to improve service delivery at ICD Embakasi Station.	4.03	0.69
There are adequate working resources at ICD Embakasi Station.	4.02	0.64

Source: Field Data (2022)

As depicted in Table 4.3 above, the respondents reported that the depot had adequate resources to sustain its operations. The respondents agreed that the ports conducted regular trainings (at a 4.12 mean and 0.68 standard deviation), employee performance appraisal (mean = 4.02 and standard deviation = 0.69), had adequate personnel (mean = 4.04, standard deviation= 0.63), and working resources (mean = 4.04, standard deviation = 0.64) to oversee and complete operations. The low standard deviations, below 1, signified a convergence of the respondents' answers around the mean, showing a high degree of conformity between the responses.

4.4.4 Coordinated Border Management Initiatives Reform Strategy

The current research sought to determine the effect of the coordinated border management initiatives reform strategy on ICD Embakasi's customs revenue performance. In realising the set objective, the study asked the respondents whether interagency coordination existed in the port. Table 4.4 presents the respondents' answers and the subsequent demographic data.

Table 4.4: Coordinated Border Management Initiatives Reform Strategy

Statements	Mean	Standard Deviation
ICD Embakasi personnel coordinate with other container depots for fast imports and exports clearance.	4.25	0.62
There is interagency collaboration between various arms of Government and departments which work towards one objective of ensuring free flow of exports and imports.	4.11	0.7
Customs information is shared timely across all stake holders at ICD Embakasi.	4.11	0.62
There exists joint management in initiatives for ICD Embakasi.	4.05	0.62

Source: Field Data (2022)

As portrayed in 4.4 above, the respondents concurred that coordination existed between ICD employees and other container depots' personnel across the country (mean = 4.25, standard deviation 0.62). They further concurred that collaboration existed between the port and government arms and departments working with exports and imports (mean = 4.11, standard deviation = 0.70). They also agreed to the availability of timely information sharing (mean = 4.11, standard deviation = 0.62) and joint initiatives management (mean = 4.05, standard deviation = 0.62) at ICD Embakasi. The low standard deviation values of below 0.70 demonstrated a low variation in the respondents' responses, showing an agreement to the availability of interagency coordination at the port.

4.4.5 Customs Revenue Performance

When asked whether the customs revenue performance had improved at ICD Embakasi, the research collected the responses shown in Table 4.5 below.

Table 4.5: Customs Revenue Performance

Statements	Mean	Standard Deviation
Custom reform strategies have increased the amount of revenue collected at ICD Embakasi.	4.15	0.66
There is always a review on strategies to help achieve the customs revenue yearly targets.	4.07	0.65
Revenue growth for ICD Embakasi is on an upward growth though not meeting the set targets.	4.06	0.59
Custom reform strategies have increased tax compliance at ICD Embakasi.	4.01	0.58

Source: Field Data (2022)

As demonstrated in 4.5 above, the research participants agreed that there was an increase in customs revenue performance at the port. They concurred that the port had experienced an increase in collected revenue (mean = 4.15, standard deviation = 0.66), strategies' review to realise the customs yearly targets (mean = 4.07, standard deviation = 0.65), revenue growth although this growth failed to meet the set targets (mean = 4.06, standard deviation = 0.59), and increased tax compliance (mean = 4.01, standard deviation = 0.58). These responses inferred a positive effect of the custom reform strategies on the customs revenue performance at ICD Embakasi. For more accurate responses, the research asked the respondents the degree to which the various strategies impacted customs revenue performance at the port.

4.4.6 Customs Reform Strategies and Customs Revenue Performance

The research requested the respondents to express the extent to which the four reforms strategies (information technology, capacity building, coordinated border management initiatives and customs processes/procedures) had an effect on ICD Embakasi's customs revenue performance. Table 4.6 below presents the descriptive data obtained from their responses.

Table 4.6: Customs Reforms Strategies and Customs Revenue Performance

Customs Reforms Strategy	Mean	Standard Deviation
information technology reform Strategy	4.29	0.8
customs processes/procedures reform strategy	4.24	0.59
coordinated border management initiatives reform	4.19	0.67
Capacity Building reform Strategy	4.02	0.59

Source: Field Data (2022)

As illustrated in Table 4.6 above, the information technology reform strategy had the highest effect on ICD Embakasi's customs revenue performance (mean = 4.29, standard deviation = 0.80). The second contributor to increased customs revenue performance at the port encompassed the customs processes and procedures reform strategy (with a mean of 4.24 and a standard deviation of 0.59), whereas the third contributor comprised the coordinated border management initiatives reform strategy (mean = 4.19, standard deviation = 0.67). Finally, the respondents identified the capacity-building reform strategy as having the least effect on ICD Embakasi's customs revenue performance (mean = 4.02, standard deviation = 0.59). For a more in-depth examination of the effect of customs reform strategies on customs revenue performance at the port, the study conducted a multiple regression analysis.

4.5 Regression Assumptions

4.5.1 Multicollinearity Test Assumption

Multicollinearity occurs when the independent variables are correlated. I the VIF values lies between 1-10, then there is no multicollinearity, whereas if the VIF < 1 or >10, then there is multicollinearity (Pallant 2010). The research employed the variance inflation factors (VIF) in testing for multicollinearity. Table 4.7 below portrays the obtained results.

Table 4.7: Multicollinearity Test

	Tolerance	VIF
information technology reform Strategy	0.706	1.304
customs processes/procedures reform strategy	0.735	1.32
Capacity Building reform strategy	0.853	1.129
coordinated border management initiatives reform	0.906	1.048

Source: Field Data (2022)

As indicated in Table 4.7 above, the variance inflation factor and tolerance values for information technology reform Strategy (tolerance = 0.706 and VIF = 1.304), for customs processes/procedures reform strategy (tolerance = 0.735 and VIF = 1.320), for the capacity building reform strategy (tolerance = 0.853 and VIF = 1.129), and the coordinated border management initiatives reform strategy (tolerance = 0.906 and VIF = 1.048). An assessment of these values depicted VIF values of below 10 and tolerance values of above 0.10 suggested that the data had no multicollinearity.

4.5.2 Normality Test

The research utilised the Kolmogorov-Smirnov to ascertain whether the residuals adhered to normal probability distribution. Table 4.8 below shows the Kolmogorov-Smirnov test results.

Table 4.8: Kolmogorov-Smirnov Test

	Kolmogorov-Smirnov	Sig.
information technology reform Strategy	0.328	0.274
customs processes/procedures reform strategy	0.297	0.132
Capacity Building reform strategy	0.373	0.218
coordinated border management initiatives strategy	0.356	0.126
Revenue Performance	0.367	0.21

Source: Field Data (2022)

As portrayed in Table 4.8 the information technology reform Strategy had p=0.274, customs processes/procedures reform strategy had p = 0.132, capacity building reform strategy had p = 0.218, the coordinated border management initiatives reform strategy had p = 0.126, and revenue performance had p = 0.210. An assessment of the probability values indicated that the values were above 0.05, suggesting the normal distribution of the data.

4.6 Inferential Statistics

Multiple regression analysis was used in the study to assess the correlation between the independent and dependent variables. The statistical software for social sciences was used to compute the analysis.

4.6.1 The Relationship between Custom Reform Strategies and Customs Revenue Performance

The research partook a multiple regression analysis to ascertain the relationship between customs reforms strategies and customs revenue performance at ICD Embakasi. The multiple regression model also intended to test the research hypotheses: H01: There is no significant effect of information technology reform strategy on customs revenue performance at ICD Embakasi-Kenya; H02: There is no significant effect of customs processes and procedures reform strategy on customs revenue performance at ICD Embakasi-Kenya; H03: There is no significant effect of the capacity building reform strategy on customs revenue performance at ICD Embakasi-Kenya; H04: There is no significant effect of coordinated border management initiatives reform strategy on customs revenue performance at ICD Embakasi-Kenya. The customs reforms strategies encompassing the information technology, customs processes and procedures, capacity building, and coordinated border management

initiatives reform strategies formed the independent variables. Alternatively, customs revenue performance entailed the dependent variable. Table 4.9 below presents the multiple regression model summary.

Table 4.9: Multiple Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.75	0.56	0.5	0.46

Source: Field Data (2022)

The R-value signifies the correlation between the independent variables (predictor values) and the dependent variable. In this context, the 0.75 R-value in Table 4.9 portrays a strong positive correlation between the four custom reforms strategies (information technology , customs processes and procedures, capacity building, and coordinated border management initiatives reform strategies) and ICD Embakasi's customs revenue performance. The 0.5 adjusted R-square value depicts that 50 percent of the variability observed in ICD Embakasi's customs revenue performance is explained by the regression model, demonstrating that the regression model is a good fit for the collected data. This indicates that the customs revenue strategies variables are good predictors of customs revenue performance. Finally, the standard error of the estimate value accounts for the absolute measure of the distance from the observed data points from the regression line.

Additionally, the ANOVA results in Table 4.10 below offer insights regarding the extent of variability within the regression model.

Table 4.10: ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Regression	38.86	20	1.94	9.05	0.000
Residual	30.28	141	0.21		
Total	69.14	161			

Source: Field Data (2022)

The F value in Table 4.10 determines the regression model's fitness to the observed data. The F-value of 9.05 exceeds the calculated critical value of F of 1.645 at a percent significance level. These results support the null hypothesis rejection, inferring that the model fits the observed data better than a model with no independent variables, meaning that the regression model offers a good fit for the observed data. Besides, the 0.000 Sig. value (p-value) is below the 0.05 significance level, suggesting that there is sufficient evidence to support the null hypothesis rejection, meaning that the changes in customs revenue performance (the dependent variable) are connected to changes in the customs reform strategies (the independent variables).

For an extensive evaluation of the effect of the independent variables on the dependent variable, the research retrieved the independent variables' regression coefficients, shown in Table 4.11 below.

Table 4.11: Multiple Regression Coefficients

	Unstandardized Coefficients				
	B	Std. Error	Beta	t	Sig.
(Constant)	2.9	0.43	0	6.74	0.000
Information technology	0.1	0.08	0.12	0.06	0.016
Customs processes/procedures	0.15	0.09	0.23	1.35	0.179
Capacity Building	0.11	0.07	0.23	1.53	0.029
Coordinated border management	0.05	0.08	0.06	0.66	0.005

Source: Field Data (2022)

An assessment of the unstandardized beta coefficients (B coefficients) in Table 4.11 above shows positive values across the four independent variables. These findings suggest a positive correlation between the four customs reform strategies with customs revenue performance at ICD Embakasi. A further observation of these values indicates the highest B value of 0.15 in the customs processes and procedures reform strategy inferring that the strategy has the highest effect on the port's customs revenue performance. The capacity building and the information technology reform strategies

(with B coefficients of 0.11 and 0.10, respectively) comprise the second and third highest effects on customs revenue performance. The coordinated border management reform strategy had the least effect on the port's customs revenue performance.

However, an inspection of the p-values across the four independent variables indicates a high value of 0.179 for the customs processes and procedures reform strategy. This p-value exceeds the 0.05 significance level, meaning the data's statistical insignificance. These findings indicate that the customs processes and procedures reform strategy is not statistically significant and that there is inadequate evidence in the obtained research sample to establish the existence of a non-zero correlation between customs processes and procedures reform strategy and customs revenue performance. Contrarily, the remaining three customs reform strategies, the information technology, capacity building, and coordinated border management reform strategies, had p-values of 0.016, 0.029, and 0.005, which are below the 0.05 significance level. These findings indicate a statistically significant relationship between the information technology, capacity building, and coordinated border management reform strategies and customs revenue performance at ICD Embakasi.

Besides, the regression coefficients generated the regression model:

$Y = 2.90 + 0.10X_1 + 0.15_{X2} + 0.11_{X3} + 0.05_{X4}$ ……Equation 4.1

Where:

Y signifies the dependent variable (customs revenue performance)

X_1 corresponds to the systems automation strategy

X_2 represents the post-clearance audit strategy

X_3 represents the capacity building strategy

X_4 signifies the interagency coordination strategy

4.7 Hypothesis Testing and Discussion of Findings

The research sought to test four hypotheses utilising the information presented in Table 4.11. Table 4.12 below presents a summary of the hypothesis testing and the adopted decisions based on whether the p-values surpassed or were below the significance level of 0.05.

Table 4.12: Hypotheses Test Results Summary

No.	Hypotheses	P-value	Decision
H_{01}	There is no significant effect of information technology strategy on customs revenue performance at ICD Embakasi-Kenya	0.016	Null hypothesis rejection.
H_{02}	There is no significant effect of customs processes and procedures reform strategy on customs revenue performance at ICD Embakasi-Kenya.	0.179	No enough evidence to reject the null hypothesis.
H_{03}	There is no significant effect of the capacity building reform strategy on customs revenue performance at ICD Embakasi-Kenya.	0.029	Null hypothesis rejection.
H_{04}	There is no significant effect of coordinated border management reform strategy on customs revenue performance at ICD Embakasi-Kenya.	0.005	Null hypothesis rejection.

Source: Field Data (2022)

As depicted in Table 4.12 above, the current study tested four hypotheses. Regarding the first hypothesis, the regression analysis computation found a p-value of 0.016 below the 0.05 significance level, supporting the rejection of the null hypothesis. Therefore, the study findings confirmed that the information technology reform strategy had an effect on customs revenue performance at ICD Embakasi-Kenya. These results concurred with Kelvin's (2017) findings that found a significant relationship between information technology and customs revenue performance.

Contrarily, the second hypothesis had a 0.179 p-value that exceeds the 0.05 significance level, inferring that there lacked sufficient information to reject the null hypothesis. Hence, the study concluded that there was no significant effect of customs processes and procedures reform strategy on customs revenue performance at ICD Embakasi-Kenya. Contrarily, Ndenga and Ayuma (2015) found that customs audits had the highest effect on revenue collection at the customs services department, Mombasa County. Alternatively, Hossain and Yusuf (2013) uncovered that the customs processes and procedures reform strategy could only enhance customs revenue performance in the presence of other support measures like automation, information sharing among the public offices, and proper implementation of risk management systems. Therefore, the lack of adequate support measures at ICD Embakasi could explain the results.

On the third hypothesis, the p-value of 0.029 was below the 0.05 significance level. These findings supported the null hypothesis rejection. Thus, the study verified the significant effect of the capacity-building reform strategy on customs revenue performance at ICD Embakasi-Kenya. Similarly, Montagnat-Rentier and Parent (2012) found a positive and significant relationship between the capacity-building reform strategy and customs revenue performance. Finally, the research found a significant effect of the coordinated border management reform strategy on customs revenue performance at ICD Embakasi-Kenya, as evidenced by the 0.005 p-values. Therefore, the study concluded that the information technology, capacity building, and the coordinated border management initiatives reform strategies had a significant effect on customs revenue performance at ICD Embakasi.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the research findings' summary, and the study conclusions, recommendations, and future research suggestions based on the findings.

5.2 Summary of the Research Findings

The study variables and objectives guided the presentation of the summary of the research findings. Generally, the research sought to examine the effects of customs reform strategies on customs revenue performance at ICD Embakasi, Nairobi County. Particularly, the research focused on four customs reform strategies at ICD Embakasi: information technology, customs processes and procedures, capacity building, and coordinated border management.

5.2.1 Information Technology Reform Strategy and Customs Revenue Performance

The first objective aimed to assess the effect of the information technology reform strategy on customs revenue performance at ICD Embakasi - Kenya. Firstly, the study established that ICD Embakasi had implemented an automated system for customs data management and a regional cargo tracking system, adequate ICT hardware, and automated customs documentation and procedures. These findings suggested that the depot had a good information technology reform strategy. The study findings also confirmed that the information technology reform strategy implementation had increased efficiency, time-saving, and reduced fraud, corruption cases, and smuggling of goods in transit to and from ICD Embakasi Station.

Secondly, the findings indicated an agreement among the respondents that the information technology reform strategy significantly contributed to ICD Embakasi's customs revenue performance. An assessment of the respondents' opinions on the extent to which the customs reforms strategies affected ICD Embakasi's customs revenue performance found that the information technology reform strategy had the highest effect. Complementarily, the regression analysis results found a 0.016 p-value, indicating a significant relationship between the information technology reform strategy and customs revenue performance at ICD Embakasi. As a result, the study rejected the null hypothesis and established the information technology reform strategy had a significant effect on customs revenue performance at ICD Embakasi.

5.2.2 Customs Processes and Procedures Reform Strategy and Customs Revenue Performance

The second objective sought to examine the effect of the customs processes and procedures reform strategy on customs revenue performance at ICD Embakasi -Kenya. The research findings indicated that ICD Embakasi's customs processes and procedures reform strategy implementation had minimised the depot's workload, costs, and time. The respondents agreed that post-clearance and custom audit visits, standards, and procedures had enhanced transparency and accountability, decreased control activities, increased importers' declaration compliance, and ensured a structured process of goods clearance.

However, the findings of the inferential statistics found statistically insignificant results on the effect of the customs processes and procedures reform strategy on customs revenue performance at ICD Embakasi. These findings inferred the lack of sufficient evidence to conclude with certainty that the customs processes and procedures reform strategy significantly affected customs revenue performance at ICD Embakasi. As a

result, the study suggested that despite the respondents' agreement that the customs processes and procedures reform strategy contributed to customs revenue performance, there was a need for a more in-depth analysis of the relationship between the two variables.

5.2.3 Capacity Building Reform Strategy and Customs Revenue Performance

The third objective intended to determine the effect of the capacity-building reform strategy on customs revenue performance at ICD Embakasi- Kenya. With this objective, the research sought to determine whether ICD Embakasi had sufficient resources and support systems and whether the existing processes facilitated the depot's operations. The study findings disclosed that the depot had regular personnel training on custom laws, regulations, and procedures, adequate staff members and working resources, and conducted regular employee performance appraisals.

Moreover, the respondents agreed that the capacity-building reform strategy influenced the customs revenue performance. The inferential statistics findings backed the respondents' opinion by finding a statistically significant relationship between the capacity-building reform strategy and customs revenue performance at ICD Embakasi. The regression results also supported the null hypothesis rejection. As a result, the study adopted an alternative hypothesis indicating that capacity-building reform strategy had a significant effect on the customs revenue performance at ICD Embakasi-Kenya.

5.2.4 Coordinated Border Management Reform Strategy and Customs Revenue Performance

The fourth objective sought to determine the effect of coordinated border management reform strategy on customs revenue performance at ICD Embakasi- Kenya. The study findings indicated the existence and implementation of a coordinated border

management reform strategy. The respondents agreed that ICD Embakasi personnel coordinated with other container depots and collaborated with numerous various arms of the government and departments. They also concurred that they shared information freely with other ICD stakeholders and partook in joint management initiatives like joint border committees.

Regarding the extent to which the strategy contributed to customs revenue performance, the respondents' outlooks indicated that coordinated border management reform strategy had the least effect on ICD Embakasi's customs revenue performance. The multiple regression analysis results uncovered a statistically significant relationship between the coordinated border management reform strategy and customs revenue performance. Therefore, the study rejected the null hypothesis and established that the coordinated border management reform strategy had a significant effect on customs revenue performance at ICD Embakasi-Kenya.

5.3 Conclusions

The study concluded that customs reform strategies strongly correlated with customs revenue performance at ICD Embakasi-Kenya. The information technology, capacity building, and coordinated border management initiatives reform strategies of the four customs reforms strategies had a statistically significant relationship with customs revenue performance at ICD Embakasi. Contrarily, the study found no statistically significant relationship between the customs prosses and procedures reform strategy and customs revenue performance at ICD Embakasi. The study therefore, concluded that information technology, capacity building, and coordinated border management initiatives reform strategies contribute significantly to customs revenue performance at ICD Embakasi. There was insufficient evidence to accurately expound on the effect of

customs processes and procedures reform strategy and customs revenue performance at the depot.

The study also concluded that ICD Embakasi had implemented operational information technology, capacity building, and coordinated border management initiatives reform strategies within the depot. The study concluded that the depot had implemented ample automated systems and procedures to enhance efficiency, save time, and decrease fraud, corruption, and smuggling cases within its operations. ICD Embakasi also had a definite customs processes and procedures reform strategy encompassing custom audit visits, standards, and procedures that improved transparency and accountability, decreased control activities, increased importers' declaration compliance, and ensured a structured process of goods clearance at the depot. Similarly, the depot had a capacity-building reform strategy as evidenced by the availability of sufficient resources and support systems, continual employee training, and performance appraisal procedures. Finally, the study concluded that ICD Embakasi had a proper coordinated border management initiatives reform strategy as depicted by the depot employees' coordination and collaboration with other container depots, arms of the government and departments, and other ICD stakeholders.

The study concluded that ICD Embakasi's customs revenue performance had increased due to the implementation of the four customs reform strategies. Specifically, the customs reform strategies had increased the amount of revenue collected and the depot's revenue growth. The strategies had also increased tax compliance at ICD Embakasi, corroborating the Porters theory of competitive advantage that asserted that customs reforms strategies impeded tax evasion, improving an organization's tax payment compliance. Therefore, the study concluded that the implementation of

customs reforms strategies had improved customs revenue performance while also modifying the depot's behaviour toward increasing tax compliance rates.

5.4 Recommendations

5.4.1 Recommendations for Policy

The study attributed the statistically insignificant relationship between the customs processes and procedures reform strategy and customs revenue performance to the probability of a lack of adequate support measures for the customs processes and procedures reform strategy. The World Customs Organization (2018) recommended using a customs processes and procedures reform strategy combined with a post-clearance audit policy, monthly and annual working plans, and risk management measures. From this perspective, the study recommends adopting a post-clearance audit policy linked to the customs processes and procedures reform strategy for export and import clearance controls at ICD Embakasi. The study also recommends formulating a risk management procedure outlining the essential risk assessment, treatment, consultation, communication and recording, and review and monitoring for improved customs revenue performance.

5.4.2 Recommendations for Practice

Besides, the depot can benefit immensely from implementing a risk intelligence system within its operations. The recommended risk intelligence system should be tailored to the depot's perceived risks and needs. The system should also stress the importance of proactive data collation, collection, and dissemination throughout the organization. As a result, the depot would have a sound customs processes and procedures reform strategy that accounts for all risk management contexts and enhances customs revenue performance at ICD Embakasi.

5.4.3 Recommendation for Further Research

The current study found no significant effect of customs processes and procedures reform strategy on customs revenue performance at ICD Embakasi-Kenya. These findings contradicted previous studies conducted on the customs service department in Mombasa. Therefore, there is a need for future studies to clarify the effect of customs processes and procedures reform strategy on customs performance.

Additionally, the current study limited its research parameters to four custom reforms strategies (the information technology, capacity building, customs processes and procedures, and coordinated border management initiatives reform strategies). As a result, the study results were limited to the four custom reforms strategies. Future studies should consider broadening their research scope to more than four customs reform strategies for more comprehensive research and the study parameters and results should not be constrained to one. Future studies, therefore, should focus on a national research scope for better results' generalisability. Further studies can be conducted to explore other factors that affect customs revenue performance in Kenya Customs Administration. These factors may include political, calamities or pandemics like currently the Covid 19, integrity of the staff and other stakeholders and lack of adequate resources to deliver on set policy objectives. These factors unfold further areas of future researchers.

5.4.4 Recommendation to Theory

Technology Acceptance Model theory is relevant and supports the independent study variable of information technology reform strategy. Most of the depot's operations and documentation are automated. Information technology reforms adopted by ICD Embakasi were accepted, tested, and confirmed to be working hence meeting the needs for which it was designed. The perceived usefulness of most technology and

technological systems such as RECTS, iCMS, and iTax outweighed the cost of implementation and proved to be efficient and effective technology contributing to improved revenue collection.

Porters theory of competitive theory is crucial to the study and supports all the four independent variables (of information technology, capacity building, coordinated border management initiatives and customs processes/procedures reform strategies). The hypothesis aids in illuminating the subliminal factor that can prompt a department responsible for revenue collection to devise methods. The significance of this theory to this study lies in its explanation of how organizations adopt strategies and align them to their missions and visions so as to able to attain their objectives and goals.

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APPENDICES

Appendix I: Letter of Introduction

Dear respondent,

I am a student at Kenya School of Revenue Administration conducting a study on the Effect of Custom Modernisation Reform Strategies on Customs Revenue Performance in Kenya, a Case study of ICD Embakasi Station, Nairobi County. This study will enlighten Customs and Border Control Department of the Kenya Revenue Authority, and the Customs staff in order to facilitate international efficiently. In order to accomplish the study, I humbly request you to complete this questionnaire.

The information obtained will be used purely for academic purposes and therefore, will be treated with utmost confidentiality and good faith. Thank you in advance for participating and making this study a success.

Yours sincerely

Joram Fuchingo Khisa

Appendix II: Research Questionnaire

This questionnaire is intended to collect data to examine the effect of customs reforms strategies on customs revenue performance at ICD Embakasi in Kenya. The information you provide will be used for purely academic purposes and treated with the utmost confidence. Kindly respond to all the questions as honestly as possible.

Section A: Background Information

Kindly indicate how long you have been working at Embakasi Inland Container Depot.

Less than 2 years ( ) b) between 3-5 years ( )

c) Between 6-10 years ( ) d) more than 10 years ( ).

Please indicate the highest level of education completed

Undergraduate Degree ( )

Master's Degree ( )

PHD ( )

Please select any training related to customs that you have attended.

Personal assessments-based training ( )

On-the-job training ( )

Orientation/Induction ( )

SECTION B: Information Technology Reform Strategy

Kindly indicate the extent to which you agree or agree with following statements on information technology.

Where: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4=Agree and 5 = Strongly Agree

Statements	**1**	**2**	**3**	**4**	**5**
1. The adoption of regional cargo tracking system has reduced fraud, cases of corruption and smuggling of goods on transit to and from ICD Embakasi Station.					
2. There is adequate ICT hardware use in Embakasi ICD Station such as electronic cargo scanners					
3. Automated system for customs data management (ASYCUDA) adoption has increased efficiency at Embakasi ICD Station.					
4. Automation of customs documentation and procedures saves time and has increased efficiency at Embakasi ICD Station.					

To what extent does information technology affect revenue performance at Embakasi Inland Container Depot?

To a very high extent [ ]

To a high extent [ ]

To a moderate extent [ ]

To a little extent [ ]

To no extent [ ]

SECTION C: Customs Processes and Procedures Reform Strategy

Kindly indicate the extent to which you agree or agree with following statements on customs processes and procedures

Where: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4=Agree and 5 = Strongly Agree

Statements	**1**	**2**	**3**	**4**	**5**
1. Post clearance audit has led to increased compliance in declaration by importers at ICD Embakasi Station					
2. Customs audit visits have enhanced transparency and accountability at ICD Embakasi Station.					
3. Customs audit standards has reduced control activities at ICD Embakasi Station to only those personnel necessary to determine the admissibility of goods					
4. Customs audit procedures ensure there is a structured way of clearing goods, hence avoiding congestion of goods at ICD Embakasi Station					

To what extent does customs processes and procedures affect revenue performance at Embakasi Inland Container Depot?

To a very high extent [ ]

To a high extent [ ]

To a moderate extent [ ]

To a little extent [ ]

To no extent [ ]

SECTION D: Capacity Building Reform Strategy

Kindly indicate the extent, to which you agree or agree with following statements on capacity building,

Where: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4=Agree and 5 = Strongly Agree

Statements	**1**	**2**	**3**	**4**	**5**
1. Custom officers are regularly trained on applicable customs laws, regulations, and procedures at ICD Embakasi Station					
2. Employee performance appraisal is regularly conducted to improve service delivery at ICD Embakasi Station at all levels					
3. There are adequate staff members to oversee the operations of ICD Embakasi Station					
4. There are adequate working resources at ICD Embakasi Station					

To what extent does capacity building affect revenue performance at Embakasi Inland Container Depot?

To a very high extent [ ]

To a high extent [ ]

To a moderate extent [ ]

To a little extent [ ]

To no extent [ ]

SECTION E: Coordinated Border Management Initiatives Reform Strategy

Kindly indicate the extent, to which you agree or agree with following statements on coordinated border management initiatives at ICD Embakasi,

Where: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4=Agree and 5 = Strongly Agree

Statements	**1**	**2**	**3**	**4**	**5**
1. ICD Embakasi personnel coordinate with other container depots for fast imports and exports clearance.					
2. There is collaboration between various arms of Government and departments which work towards one objective of ensuring free flow of exports and imports					
3. Customs information is shared timely across all stake holders at ICD Embakasi.					
4. There exists joint border management in initiatives for ICD Embakasi.					

To what extent does interagency coordination affect revenue performance at Embakasi Inland Container Depot?

To a very high extent [ ]

To a high extent [ ]

To a moderate extent [ ]

To a little extent [ ]

To no extent [ ]

SECTION F: CUSTOMS REVENUE PERFORMANCE

Kindly indicate the extent, to which you agree or agree with following statements on customs revenue performance at ICD Embakasi,

Where: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4=Agree and 5 = Strongly Agree

Statements	**1**	**2**	**3**	**4**	**5**
1. Custom reforms strategies have increased the amount of revenue collected at ICD Embakasi.					
2. There is always a review on strategies to help achieve the customs revenue yearly targets.					
3. Revenue growth for ICD Embakasi is on an upward growth though not meeting the set targets.					
4. Custom reforms strategies have increased tax compliance at ICD Embakasi.					

To what extent has the import and export volumes increased in relation to revenue since the establishment of Embakasi Inland Container Depot?

To a very high extent [ ]

To a high extent [ ]

To a moderate extent [ ]

To a little extent [ ]

To no extent [ ]

THE END

Thank you for your participation!

Appendix III: Authorization Letter from Moi University

Kenya School of Revenue Administration

KENYA REVENUE AUTHORITY

ISO 9001:2015 CERTIFIED

REF: KESRA/NBI/036

3rd February 2022

TO: WHOM IT MAY CONCERN

RE: REQUEST FOR RESEARCH DATA

JORAM FUCHINGO KHISA- REG. NO.: KESRA105/0050/2019

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

The named student is undertaking Research on TOPIC: **"EFFECT OF CUSTOMS MODERNIZATION ON REVENUE PERFORMANCE IN KENYA: A CASE STUDY OF ICD EMBAKASI CUSTOMS STATION"**

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

Your support to KESRA in this regard will be highly appreciated.

Thank you.

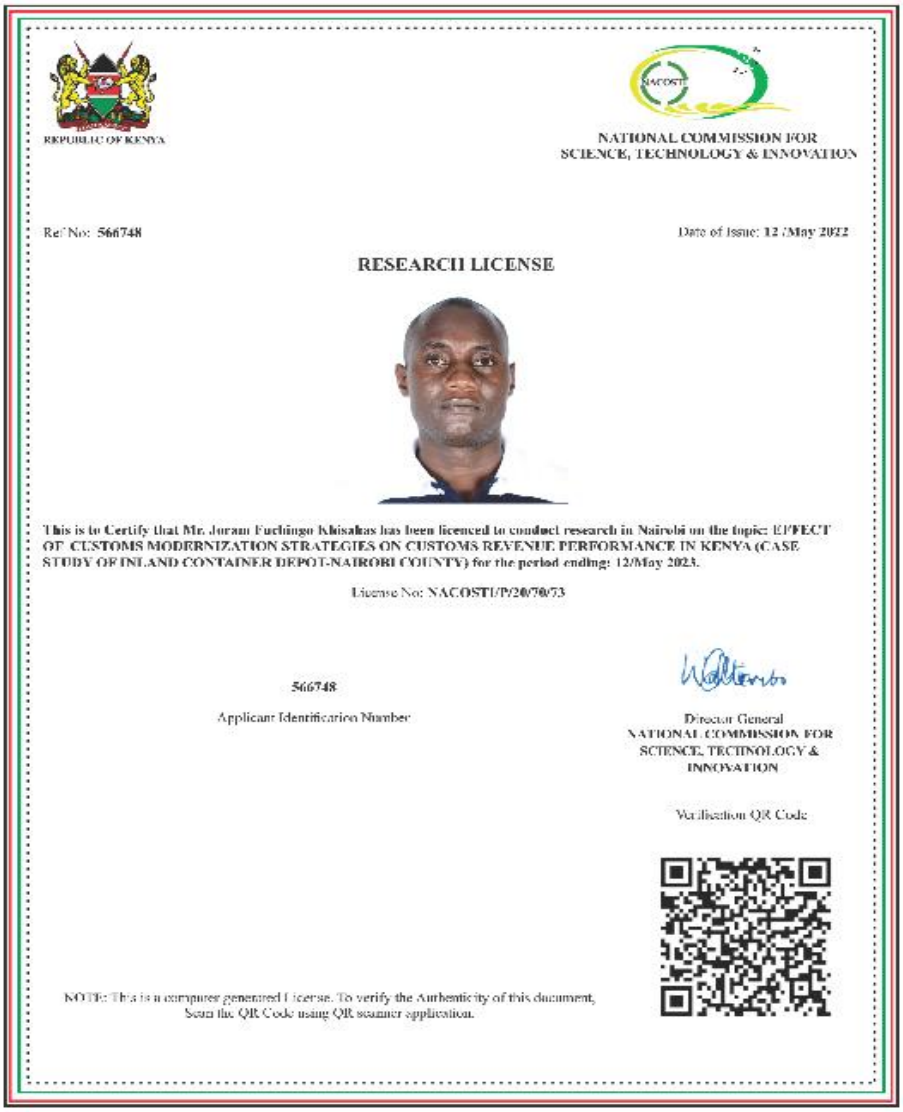
Dr. Marion Nekesa, PHD,
Head Academic Research
KESRA

KENYA SCHOOL OF REVENUE ADMINISTRATION
DEAN OF STUDIES
03 MAR 2022
ACADEMIC AFFAIRS DIVISION
NAIROBI

P. O. Box 48240 – 00100, Nairobi **Email:** kesratraining@kra.go.ke **Tel:** +254715877535/9

Tulipe Ushuru Tujitegemee!

Appendix IV: Research Permit



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 566748

Date of Issue: 12 /May 2022

RESEARCH LICENSE

This is to Certify that Mr. Juram Fuchingo Khisahas has been licenced to conduct research in Nairobi on the topic: EFFECT OF CUSTOMS MODERNIZATION STRATEGIES ON CUSTOMS REVENUE PERFORMANCE IN KENYA (CASE STUDY OF INLAND CONTAINER DEPOT-NAIROBI COUNTY) for the period ending: 12/May 2023.

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