

**EFFECT OF CUSTOMS REFORMS AND MODERNIZATION ON CUSTOMS  
REVENUE COLLECTION IN KENYA CUSTOMS ADMINISTRATION**

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**DECLARATION**

This research project is my original work and has therefore not been submitted to any other University Institution.

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## DEDICATION

I dedicate this research project to my lovely daughter Cassey and all family members for they have been a great inspiration all through my research period.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>ASYCUDA</b>	Automated Systems for Customs Data
<b>AEO</b>	Authorized Economic Operators
<b>BPM</b>	Business Process Management
<b>CBS</b>	Community Based Systems
<b>CRM</b>	Customs Reforms and Modernization
<b>EAC</b>	East African Community
<b>EACCMA</b>	East African Community Customs Management
<b>IRM</b>	Intelligence Risk Management
<b>ICMS</b>	Integrated Customs management System
<b>IFMIS</b>	Integrated Financial Management Information
<b>JKIA</b>	Jomo Kenyatta International Airport
<b>KRA</b>	Kenya Revenue Authority
<b>KESRA</b>	Kenya School of Revenue Administration
<b>OSBP</b>	One Stop Border Post
<b>RKC</b>	Revised Kyoto Convention
<b>RECTS</b>	Regional Electronic Cargo Tracking System
<b>RTMS</b>	Real Time Monitoring System
<b>SCT</b>	Single Customs Territory
<b>SIRM</b>	Strategy Innovation and Risk management
<b>SDG</b>	Sustainable Development Goals
<b>TD</b>	Technological Determinism

**UNCTAD** United Nations Conference on Trade and Development

**USAID** United States Agency for International Development

**VAT** Value Added tax

**WCO** World Customs Organization

**WTO** World Trade Organization

**WB** World Bank

## **ABSTRACT**

The study delves into the effects of custom revenue reforms and modernization regarding revenue collection. Global and local perspectives on how the reforms have influenced the customs revenue collected has also been put into consideration so as to make a comparison to the performance of the same at the Kenya Customs Administration. The study has the following key objectives: influence of automated systems on customs revenue collected, influence of capacity building on customs revenue, effect of intelligence risk management on customs revenue and lastly, to explore how enforcement strategies affect customs collected. Various theories related to the stated variables have also been discussed in the study. The statistical data used in the research includes that collected in the past ten years on the following customs revenue types: import duty, excise duty and the Value Added Tax. The study used descriptive design to clearly show the relationship revolving around independent variable termed as customs revenue collection and the dependent variables which include automated systems, capacity building, intelligence risk management and enforcement measures. Both primary and secondary data have been used in the study to collect the data required so as to come up with a quality study. Empirical review has also been emphasized in the paper through putting into consideration other related studies, for example study (Akala Jackson Ukiru ,2013) on impacts of changes and modernized performance of custom revenue department, (Kelvin Gitaru ,2017) on impact of system automation on customs revenue collected and (Janet Muthama ,2013) on the effects of modernization of revenue system and collection. A critique of these related studies is also illustrated and reflects its inadequacy in determining the influence of customs reforms and modernization on customs revenue hence

creating an area for further study. The sample size was established according to the percentage recommended by (Mugenda and Mugenda) of at least 30%. The sample size used in this study was the total population which totaled to 140 customs officers. Finally, different ways of data presentation and analyses are outlined. For data presentation, tables were used. For the purpose of analyzing the collected data, the following methods were used; statistics as well as multiple regression table, descriptive analyses such as mean and standard deviation. From the data collection exercise, the study obtained a response rate of 85.71% satisfactory enough to complete the study. The results showed that automation, capacity building, intelligence risk management and enforcement strategy had a significant relationship with customs revenue collection therefore it was recommended that so as to collect more customs revenue, the Kenya Customs Revenue Administration should explore fully automated systems, train personnel on the use of the systems, employ intelligence risk management as well as enforcement strategies like scanning of cargo and strengthening clearance audits.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Any organization's or institutions success is measured on the basis of the extent to which it has achieved its set targets or objectives within set time frames. Any deviations, from these set objectives call for an objective audit of the organizations objectives, systems and culture

and other bottlenecks that may have contributed to non-achievement or under performance hence the deviations (Dimtry, 2014). The changing technology, nature of conduct of business, globalization and its attendant governing trade regulations and sophistication of crime have all exposed yawning gaps in the preparedness of the customs administration authorities.

To meet revenue collection targets and maintain a healthy business environment and enhance willful compliance while making revenue evasion unattractive, the revenue authorities must embrace reforms as a matter of survival and relevance. It is said that change is the only constant thing. The bedrock of such change must be on the pillars of change of attitude, values, systems, policy and practice. It has to be a transformation of both the hardware and the software. Systems are only as good as those who use them. World class systems operated by morally vacuous staff will deliver disappointment for as the dictum goes, garbage in garbage out (Alouis, 2013). Modernization must go hand in hand with moralization if institutional transformation will be worth the paper it is drafted on.

Kenya Customs Administration has however been subjected to criticism for not meeting the set targets in collection of customs revenue and also for being inefficient, lacking flexibility, ineffective accountability as well as poor performance. Due to these criticisms, the public sector has come up with customs reforms and reorganizations so as to enhance its efficiency and performance. The customs revenue structures in many third world countries have not been as effective as desired. Many are the times when the growth in customs revenue has fallen short to match the government expenditure pressures. This has in return caused severe imbalances in demand verses supply of the country's budgetary resources. Due to such ailments these countries saw the need to reform their customs revenue structures so as to achieve the set objectives of revenue equity and fairness, adequacy and economic efficiency.

The various customs reforms are mainly undertaken so as to restore buoyancy to revenues, reduce the complexity in customs procedures and to ensure transparency in the systems used in customs procedures (Blinder, 2008). Customs reforms and modernization calls for automation of processes which inculcates technological enhancements in order to avoid risks especially those in relation to customs revenue loss. Automation of processes also has a positively impacted on the period of clearance at customs revenue collection points within the customs administration areas like the entry points. The customs reforms in general impact the entire operations of the agency so as to confirm that measure of customs revenue has rightly been administered to stop customs revenue evasions and underpayments and to curb embezzlements. The above reforms are therefore recommended for proper running of operations not only in Kenya Customs Administration but also other private and public institutions.

### **1.1.1 Customs Reforms and Modernization**

World trade has exponentially expanded over the past decade. This speedy growth in trade has increased the demand for a range of complementary policies by the customs that assure stakeholders and traders of speedy clearance of goods, transparency and predictability.

Kenya Customs Administration also has faced changes in the operating environment such as increasingly sophisticated and demanding clients. Such customers have invested heavily in modern information systems, logistics and more efficient cargo clearance platforms. Our customs border points need to play catchup in facilitating timely and efficient customs clearance environment (Dimtry, 2014). The call for increased security awareness and rapid response preparedness to the threats arising from international terrorism and transnational crimes cannot be gainsaid.

Moreover, customs administration roles have changed from the traditional checking of the physical flow of goods to that of a multi role border agency handling trade facilitation, standards conformation and identification and control of restricted and prohibited goods in addition to the obvious customs revenue collection role.

Arising from the above, many countries especially the developing countries have called for reforms and modernization in customs administrations. In addition, the WCO revised Kyoto convention of 1999, in which Kenya was a signatory advocated that customs revenue procedures be simplified so as to encourage trade, hence increased customs revenue collection (Blinder, 2008). The Kyoto convention introduced the framework and set standards for manufacturing and processing goods in international trade. It is through such global trends that Kenya Customs Administration developed the Customs Reforms and Modernization Program (Dimtry, 2014). In response to this, Kenya Customs Administration has put in place reform informed mechanisms among them: automated systems, intelligence risk management, capacity building and security.

There are integrated and comprehensive mechanisms with the aim of improving the systems involved in customs operations. The reforms were introduced by first ensuring that a solution is provided for the challenges faced in processing of both import and export cargo. The reforms also focus on infrastructure which includes a One Stop Border Post and information technology. There are also reforms to ensure adoption of best practices and compliance with the required standards. Other reforms have been set to integrate the trade facilitating agencies and all the business communities with Kenya Customs Administration. This includes a single window concept undertaken through a project referred to as Community Based System (CBS). Currently, the administration has introduced a new system that consolidates all the business processes into one. This is the Integrated Customs Systems Management (ICMS). The new system reduces the time taken in clearing the goods at the ports of entry. The new

system has been termed as the game changer in trade facilitation and thus increased customs revenue collection. Luc De Wulf and Gerald Mc Linden emphasizes on the key played by ICT in customs reforms and modernization strategies. They clearly note that ‘ automation must must be adopted as an integral part of the whole process of modernization for the institution’ (Customs Modernization Handbook, P.288) modernization also entails sufficient use of automated systems in customs operations so as to make them in line with modernized trade practices that make use of advanced notification and direct trader input devices at the same time reducing physical contact between traders and the customs officials which may lead to malpractices in customs revenue collection and the clearance procedures.

Capacity building is directed at the human capital in the organization. Systems don’t operate themselves. Improvement in systems necessarily call for training of the personnel operating the said systems. It must be continuous, relevant and focused with clear objectives. This training must result from a needs and skills audit. Such an audit will expose mis matches between skills available and skills needed. Redundant skills are retired and an effort at right sizing of personnel put in place. Such capacity building will bring the work force up to speed with relevant information and technology skills and digital revolution being experienced. A properly capacitated staff becomes more resourceful, relevant, functional and productive.

Intelligence risk management reforms have also been put in place as a result of the increasing cross border flows of goods and people and the government priorities which keep on changing (Alouis, 2013) This gives the customs administration a wakeup call that business operations cannot continue running as previously. The customs administration is thus left with the mandate of making a serious reevaluation of its roles, mission, and methods of operations. Intelligence risk management entails the administration moving from the physical interaction like the traditional gate keeper style to risk based operating model. A modern risk

management strategy has been established based on the standards set by the Kyoto Convention.

This has led to the customs administration adopting a holistic, risk-based compliance approach which permits custom revenue to efficiently, effectively and productively distribute its resources. An example of reforms in risk management is the use of scanners instead of just the physical inspection of cargo which may lead to the customs officers being compromised if they are of questionable integrity. Scanners cannot be compromised. Incentives for both traders and travelers have also been put in place by creating a credible enforcement regime which efficiently and effectively detects noncompliance while at the same time respecting the dignity of the person.

Security is another key reform area for the Kenya Customs Administration. The reform is achieved through enforcement of laws concerning the safety of the products and people entering and exiting the country. Cargo destined for export via all the ports is subjected to scanning. Automated scanning process has replaced dependency on tedious, time wasting and ineffective physical inspection of cargo. The process has facilitated compliance by the tax payers regarding both tax and customs legislation.

Kenya customs administration has also implemented a platform for inter-agency coordination so as to help in the investigation of security and customs related crimes. Through the inter-agency coordination, serious custom related crimes like tax evasion, misdeclaration, concealment and trafficking of possible Weapons of Mass Destruction (WMDs) and prohibited and restricted goods is detected. There is also border patrols by the customs border and entry points officers so as to ensure that the goods coming into the country are safe. Reforms in border surveillance could benefit from new technologies including use of drones and CCTVS. Unlike the traditional methods drones can live stream

real time images from border points of interest. Use of CCTVS with motion sensing and night vision capabilities can simplify border management by customs administration personnel. The customs officers also make use of trained dogs known as the k9.

The k9 assist the customs and the border control department in efficiently manning the baggage halls as well as the cargo sheds at the airports so as to detect unsafe products like contraband electronics that might be hidden among other cargo so as to evade taxes (Kleinbaum et al. 2013). Use of k9s as an inspection mechanism is also used in detecting and also interdicting drug traffickers, light weapon smugglers and explosives that pose great insecurity to the country. Threats by the Trans National Organized Crimes (TOC) has called for a rise in frequent patrols in order to avoid influx of substandard or fake goods in the market. There is need to stop the contraband goods in the market as they lead to loss of customs revenue and also are a serious threat to the public safety, democratic institutions, stifle local industry, economic stability and public health. The above security reforms are effective in enhancing the customs revenue collection as they comply with World Customs Organization standards so as ensure and enhance global trade, International Ship and Port Facility Security (ISPS) code, Container Security Initiatives (CSI) as well as the recommendations stated in the Kyoto Convection.

### **1.1.2 Global Perspective of Customs Reforms and Modernization**

Globally, many countries are undertaking different reforms so as to modernize their customs operations. The nations are working towards getting well organized and competent customs services that without fail balances its multiple responsibilities so as to achieve maximum compliance with the defined regulatory requirements and the purposed customs revenue objectives not forgetting at the same time enabling legal movement of both goods and people across the border points (Ranker,2003). However, conditions differ among different countries because each custom administration is called for to tailor its reforms and modernization

efforts according to its implementation capabilities, national objectives and availability of resources. There are some core principles which are required for countries globally to achieve the reforms and modernization objectives.

They may include: use of information and communications technology, reliable and intelligence risk management programs, ensuring partnership with the private sector and increased working together with other border control agencies.

Trade liberalization need to be complemented with trade facilitation measures also if the nations aim to enhance their external competitiveness and thus become best integrated into the world economy (Kleinbaum et al. 2013). The European Community for example introduced a common external tariff in the year 1968 but the union had to streamline its customs processes through reforms and modernization so as to fully get benefits from its common market. The World Trade Organization in the same vein, in 1996, as part of the Singapore Agenda, added the trade facilitation and customs revenue collection as part of its negotiable agenda through customs reforms and modernization. The issue of the cotton export subsidy as granted by the United States and other agricultural European nations resulted to the disappointing results of the World Trade Organization Ministerial Conference in 2003. This was due to the sub-standard trade logistics environment. This led to the realization that customs services needed to be improved which has resulted to many countries devoting substantial resources and energy to modernization. As a result, both bilateral and multilateral development agencies have supported a number of customs reform initiatives (Kleinbaum et al. 2013). Other International Development Partners and monetary institutions like the Inter-American Development Bank (IDB), International Monetary Fund (IMF), Asian Development Bank (AsDB), United Nations Conference on Trade and Development (UNCTAD) and the World Bank (WB) have all played a vital role in support of reforms and modernization in customs and operations.

Another example, is observed from the Philippines. According to the World Bank (2002), the authorities encountered increased volumes of their imports in the year 1990. There was an increase in trade of over 160% between 1990 and 1996. In the same period, the authorities were working towards reducing the customs administration workforce by 15%. As a result of the above pressures, the country adopted thorough reforms that emphasized efficient use of risk management techniques, pre-arrival and post release instead of at the point of entry, automation of systems and security reform measures. Despite the high volumes of trade in the country, the reform measures led to the cargo clearance time dropping from one week to less than 48 hours for the selected shipments and fifteen minutes for shipments in super green lane. This recorded over 60% increase in revenue collection.

Indian Customs rolled out the use of Radio Frequency Identification (RFID) sealing tags in stages for the factory stuffed exports through January 2018 after a review conducted realized that many customs locations in the country lacked requisite infrastructural requirements for the digitization program, (World Bank, 2018). The agency advised the Authorized Economic Operators (AEO) to adopt the use of e sealed containers as a reform strategy and also worked towards equipping the customs locations with scanner readers as well as other equipment so as to ensure a nationwide enforcement of the RFID program in sealing containers. The technology-based program adopted ensured improved cargo velocity in the supply chain from inland points to gateways. Through the electronic self-tagging system, Indian export trade has been improved as the government works further to enhance its ease of doing business. The reform has also influenced the revenue collected.

Automation of systems is a major reform that has been adopted by different countries across the world purposing on service delivery improvement to the importers and the exporters (Maranga, 2015) in 1991, Germany rolled out a Custom Information System (OECD, 2012). The system successfully reduced trade barriers and in return increasing on their customs

revenue collected. Country like China has adopted reforms and modernization strategies in its Custom Revenue Service and it has since reported efficiency and effectiveness in areas such as transport and distribution, simplification of customs procedures as well as ensuring the customs regulations are followed (Cajala, 2015)

### **1.1.3 Local Perspective of Customs Reforms and Modernization**

For Africa to rise to the challenge of improved economic growth and better living standards for her people, reforms and modernization especially geared towards improved resource mobilization are of extreme importance. Therefore, a number of African countries that work together with international bodies such as the United Nations Conference on Trade and Development (UNCTAD), the World Bank, World Customs Organizations (WCO), and World Trade Organization (WTO) have currently implemented initiatives that have led to increased trade volumes and thus increasing revenue collection. Customs reforms and initiatives in Africa have been greatly relied on as a strategy of improving the revenue collection. The revenue administration structures for most of the developing countries have failed to meet the set revenue objectives and have also not been as productive as desired. This has called for the need to reform the revenue structures for most of the developing countries. This has been done with the aim of achieving economic efficiency, revenue adequacy, simplification of customs procedures and equity and fairness among the traders.

Some policy advice has been directed towards such countries in the process of redesigning their tax policies through various reforms (Blinder, 2008). This has led to introduction of new customs reforms, more efficient administrative tools to block the loopholes that lead to tax evasion as well as the call to widen tax bases and cut on exemptions. South Africa for example, through the reform and modernization strategies has recorded a significant benefit in clearing time of the cargo by the customs administration. Also, there has been an

increasing transparency within the customs administration staff and also with other trading countries (Wondemagegne, 2014) Locally, countries have faced a number of challenges that called for enhancement of professionalism in revenue administration. In regards to this, Kenya Revenue Authority has introduced an ongoing change strategy in running of its activities. This has led to introduction of the Revenue Administration Reform and Modernization Program (RARMP).

The program began in 2004 with the intention of changing KRA into a modern, client focused and fully consolidated organization.

The revenue administrations of Kenya, Uganda, Tanzania and Rwanda through the reforms have made taxpayer consultation as a crucial part in order to achieve compliance. There are also annual events on trade held by Kenya, Tanzania and Rwanda referred to as the Taxpayers Day which entails discussing the importance of tax compliance as well as recognizing companies that have been compliant. The meetings are held monthly in Uganda. Another form of reform adopted by the East African countries is the use of Information and communication technology in customs operations among the states. For instance, Kenya adopted the Simba system 2005 system in its operations. The system differs from ASYCUDA which is the most widely used IT System in Africa. Kenya also phased out the pre-shipment inspection of cargo for purposes of customs in 2005 while Tanzania subcontracted the destination inspection to be done by a pre-shipment company.

#### **1.1.4 Customs Reforms and Modernization and Revenue Collection**

Customs reforms and modernization play a crucial duty in the economy of a nation by enhancing the country's tax and revenue systems. Kenya has undergone significant changes through embracing of the reforms in its economy. This has been incentivized by the governments need to add on its revenues so as to meet social and development obligations.

Despite all the efforts made by the KRA, Kenya has not yet shown the anticipated increase in revenue collection in the past financial years (Martins, 2009) The tax revenue has been greatly enhanced by the reforms and modernization practices that have been put in place. Customs reform is aimed at creating an environment that enables collection of adequate revenue so as to cater for the country's economic expenditure and development. The reforms have necessitated sound fiscal responsibility as the key to ensuring macroeconomic stability and achieving without doubt the desired economic growth.

Regarding revenue collection, the government should put more efforts to increase the tax base by application of customs reforms and modernization in custom administration. Its noted that in many developing countries, success in customs administration governance is shown by their ability to efficiently and effectively collected targeted revenues without hindering economic activities and trade (Martins, 2009). For instance, in Ghana, the customs reforms are relied on so as to accelerate economic growth and poverty reduction. Through the reforms and modernization policies, the country has been able to improve on its overall fiscal health. Some of the prime reforms applied that have led to increase in revenue collection in Ghana include: expansion of tax base, changing the structure of taxation and use of information technology in its operations.

In Uganda, an important reform that has been undertaken to improve on revenue collection is the administrative reform that involved moving the existing department for revenue out of the finance ministry so as to make it a semi-autonomous revenue authority under its own Board of Directors. The initiative is aimed at availing incentives for the custom staff so as to put more effort on their performance and therefore increased revenue collection. The reform was a success for the Uganda Revenue Administration as it recorded a sharp increase in its domestic revenues. Though the customs reforms and modernization in Kenya, the customs administration has continuously been enhanced and the challenges that are faced in the

customs systems today are not as serious as those in the pre-reform period. However, there are some shortcomings that have come with the introduction of policies regarding customs reforms and modernization. For example, in Kenya Revenue Authority, the automation of the processes has faced some challenges like poor system integration, resistance to change by the staff and the capacity gaps. Business firms in Kenya also complain that a big percentage of their gains are absolved as revenue and term the country as classical example of countries which are marked as revenue unfriendly in the globe.

## **1.2 Statement of the Problem**

Due to the recurrent fiscal deficits experienced by the Kenya Customs Administration from the set targets, there has been need to advocate for reforms in areas of customs administration like the intelligence risk management, automation of systems, capacity building, security and integrity among the employees. The failure by the Administration to hit its yearly customs revenue targets has called for the need to adopt reforms that can result to increased customs revenue collection. The call for the customs reforms and modernization practices by the Kenya Customs Administration has been geared by the fact that the administration has in some years failed to meet its revenue targets set by the agency. For example, during the financial year 2015/2016 the revenue target was 1,212.6 billion but the administration managed to collect 1,200.2 billion recording a shortfall of 12.5 billion. In the financial year 2016/2017 the revenue target was 1,431. 8 billion but the administration collected a total of 1,365. 3 billion Kenya shillings again not meeting the set target(KRA 7<sup>th</sup> Corporate Plan for the years 2018 to 2021) This clearly indicates that there has been a problem of the customs administration not meeting the set revenue targets which calls for the agency to come up with measures that will help attain higher customs revenue collection therefore the call for reforms and modernization in the administration. Kenya has previously adopted different reforms in

its customs administration department so as to spur tremendous growth in customs revenue collection (Moyi and Ronge, 2016).

However, there are still loop holes that need to be checked in so as to ensure maximum collection of customs revenues with minimal or zero customs revenue loss. As much as there has been improvement in customs revenue collection since the implementation of customs reforms and modernization, the amount collected isn't proportional to the increasing volume of trade. As a result, Kenya Customs Administration finds it impossible hitting the revenue targets by the treasury in the past years. This has led to carrying out investigation on the effects of customs reforms and modernization on Kenya Customs Administration through research works.

### **1.3 Objectives of the Study**

#### **1.3.1 The General Objective**

The fundamental aim of this research work is to explore the effects of customs reforms and modernization on revenue collection in Kenya Customs Administration.

#### **1.3.2 The Specific Objectives**

- i.** To determine the effect of automated systems on revenue collection in Kenya Customs Administration.
- ii.** To establish the effect of capacity building on revenue collection in Kenya Customs Administration
- iii.** To find out the effects of intelligence risk management strategies on revenue collection in Kenya Customs Administration
- iv.** To explore the effects of enforcement strategies on custom revenue collection in Kenya Customs Administration

#### **1.4 Research Questions**

- i.** How does automation of systems influence revenue collection in Kenya Customs Administration?
- ii.** How does capacity building among the customs officers at JKIA influence revenue collection in Kenya Customs Administration?
- iii.** How does intelligence risk management impact on revenue collection in Kenya Customs Administration?
- iv.** How does security reforms transform revenue collection within Kenya Customs Administration?

#### **1.5 Justification of the Study**

A number of stakeholders find this research significant and valuable. First the government of Kenya especially the Ministry of Finance as it will find it useful in making decisions on the revenue allocations to Kenya Revenue Authority specifically the Customs Administration. Also, the government, through the theories discussed in the study will make crucial decisions on the way it spends the revenue collected so as to reduce on spending too much thus borrowing a lot from other countries. The Government will be better placed in managing the public debt. Policy makers will also use the study as a reference material in chanting the best policies to be implemented at Kenya Customs Administration as a strategy of meeting the set customs revenue targets.

Kenya Revenue Authority will also find it useful as a point of reference in assessing the influence of customs reforms and modernization adopted by the agency in customs revenue collection.

This will help the agency put in place reform measures so as to ensure maximum collection of revenue other than spending a lot on implementing reform strategies that don't yield back

productivity in the operations of the organization especially on the customs revenue collection. The study is also beneficial to scholars and academicians as it adds value to existing literature on critical aspects on customs reforms and modernization and its effects on customs revenue collection thus increasing body of knowledge (Mugenda, 2003). The researchers also will find the study useful as it can be used to raise areas for further study. Finally, the findings of the study can also be used by importers and exporters as it will create awareness to them on changes to conform with in the clearing systems in Kenya Customs Administration.

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

The study focuses on how customs reforms and modernization have affected revenue collection in Kenya Customs Administration. The contextual scope will be the Kenya Revenue Authority specifically the Kenya Customs Administration. In the study I shall endeavor to do a comparative study of other customs administrations both regionally and globally to analyze the challenges they have faced in customs revenue collection and their attempts to reform and modernize their administrations and the outcomes achieved. This is in appreciation of the fact that Kenya Customs Administration does not exist in an island

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The chapter gives a detailed review of theoretical as well as empirical literature related to the customs reforms and modernization strategies and how the reforms affect customs revenue collection in relation to the Gross Domestic Product in Kenya. Literature review of the study also reviews critically the past literature related to customs reforms and modernization and their effect on revenue collection by the administration. Conceptual framework as adopted by the study is also illustrated.

#### **2.2 Theoretical Framework**

The study illustrates the relationship of customs reforms and modernization and revenue collected in Kenya Customs Administration. In the examination of the stated relationship, the following theories have been combined in the study; Technological Determinism Theory (Wood 2004), Rational Choice Theory (Scott, 2000), Social Determinism theory by (Mackenzie and Wajeman, 1999) as well as theory of Public Expenditure (Peacock and Wisemen, 1961)

### **2.2.1 Technological Determinism Theory**

Technological determinism (TD) theory (Wood, 2004) illustrates that technology has crucial effects on people's lives. The concept is created prominently in political rhetoric and imagination like the imagination that internet is considered as revolutionizing economy as well as the society. Considering the concepts put across in this theory from which the research basis, technology, especially the media largely dictate how people deliberate, act and feel. Also, according to the theory, technology decisively shapes the organization and operations within a given society. In other words, the theory explains that individuals shape tools and the same tools shape the people. Wood, 2004) illustrates that a computer as part of technology tools has changed the expectations within the society in terms of immediacy, accuracy, efficiency, ability to multitask and creating platforms for interactions which has made it possible for different agencies to work together and in coordination under same platform enabled by changes in technology.

Technology reforms have made it convenient and easier to undertake a number of transactions. According to Hall an anthropologist, man has created extensions for almost everything that used to be done manually using his body. For example, weapons are said to have evolved starting with the fist and the teeth and ending with evolution of an atom bomb (Whitney, 2000). Houses and clothes according to the theory are considered as evolutions of man's temperature control mechanisms. Interestingly, money is considered as an extension for storing labor. All artificial things are treated as the portrayal of all the manual works done by man (McLuhan, 1962)

TD also has controversial history regarding social sciences and organization studies particularly. The theory has been criticized as technology is seen as socially determined because social structures and technology coexisted in an emergent process. The end results of

any technology measures revolve around its implementation process thus in turn making it socially determined. TD is continually changed due to proliferation of new technologies.

### **2.2.2 Rational Choice Theory**

According to Scott (2000), Rational Choice Theory puts socialization as a way of socially exchanging. In relation to the stated view, the theory states that human beings are largely motivated by wants, goals as well as objectives that signify their choices. The theory further explains that economic practices undertaken by a nation is based on rewards and punishments with an outcome being motivated by the pursuit of the productive balance in rewards regarding costs. For example, in USA, if a citizen fails to file their revenue returns by the expected dates, there is usually a net effect of 5% penalty in their month's income and an additional 25% on the expected amount to be paid as taxes (Portfolio and Block, 2012). Revenue loss negatively influences the country and harms the country's economy adversely. In an attempt to stop the practice of tax evasion, the country should clearly state penalties to those who evade the payment. An example is the Republic of Slovenia as put across by Tijan Selin in an article 'The Penalization of Tax Violation law and Criminal Tax Offenses in Slovenian Law' as per the article it was implicated that any wrong information given to the responsible authorities or failure to honor the accurate revenues would attract a penalty of imprisonment to a maximum of three years ( Sekka, 2004)

Putting the theory into practice, many nations have settled on penalties for tax evasion but unfortunately the same countries lose lots of revenue through revenue evasion or misdeclaration. This might be due to the reason that the laws are not strictly followed and this gives a wake-up call to come up with reforms that would ensure that all loopholes for loss of revenue are blocked. For instance, in Kenya there is an online platform for filing of returns and those that don't adhere to it face a penalty but we still have cases of citizens evading taxes. Recently, there are cases reported of revenue evasion as huge as more than ten billion

which is enough amount to construct an amenity such as a hospital in the country. However, the cases of revenue evasion are fewer than those who comply.

### **2.2.2 Theory of Social Determinism**

Social determinism principle (Mackenzie & Wajeman, 1999) highly affects this study. The theory was created to give a reaction to Technological Determinism (Mackenzie and Wajeman, 1999) made a passionate critic on the impacts of economic constituents and social elements on technology. According to the theory of Social Determinism, it's the people that shape and bring about changes in technology and not vice versa. This is argued on the basis that technologies are over time re interpreted by number of users who give it new and unexpected trajectories.

This is clearly indicated as the internet that was majorly used as communication and information search engine is now widely used in different areas like marketing media, social interactive media and E business. Same change in technology is widely advocated for in customs administration to increase revenue collection. According to Mackenzie and Wajeman (1999), the central capture of this theory is based on social shaping of technology which states that technology itself should be the main image of focus but the social or economic structure it's embedded. Technology is also said to embody compromise. Technology is thus not based on inherent momentum. Any advancement in technology is brought about by the fact that the practice has been pressed into that shape Law (1992).

In conclusion, (William and Edge, 1996) advocate for the same view by illustrating that political, organizational and cultural factors are considered to influence the implementation and design of technology. Therefore, it's not only that technology affects the society instead the social factors are said to affect technology as well. In an attempt to implement

technological reforms in customs administration, the above factors illustrated in the two theories should be considered hence the call for capacity building among the KRA staff.

#### **2.2.4 The Theory of Public Expenditure**

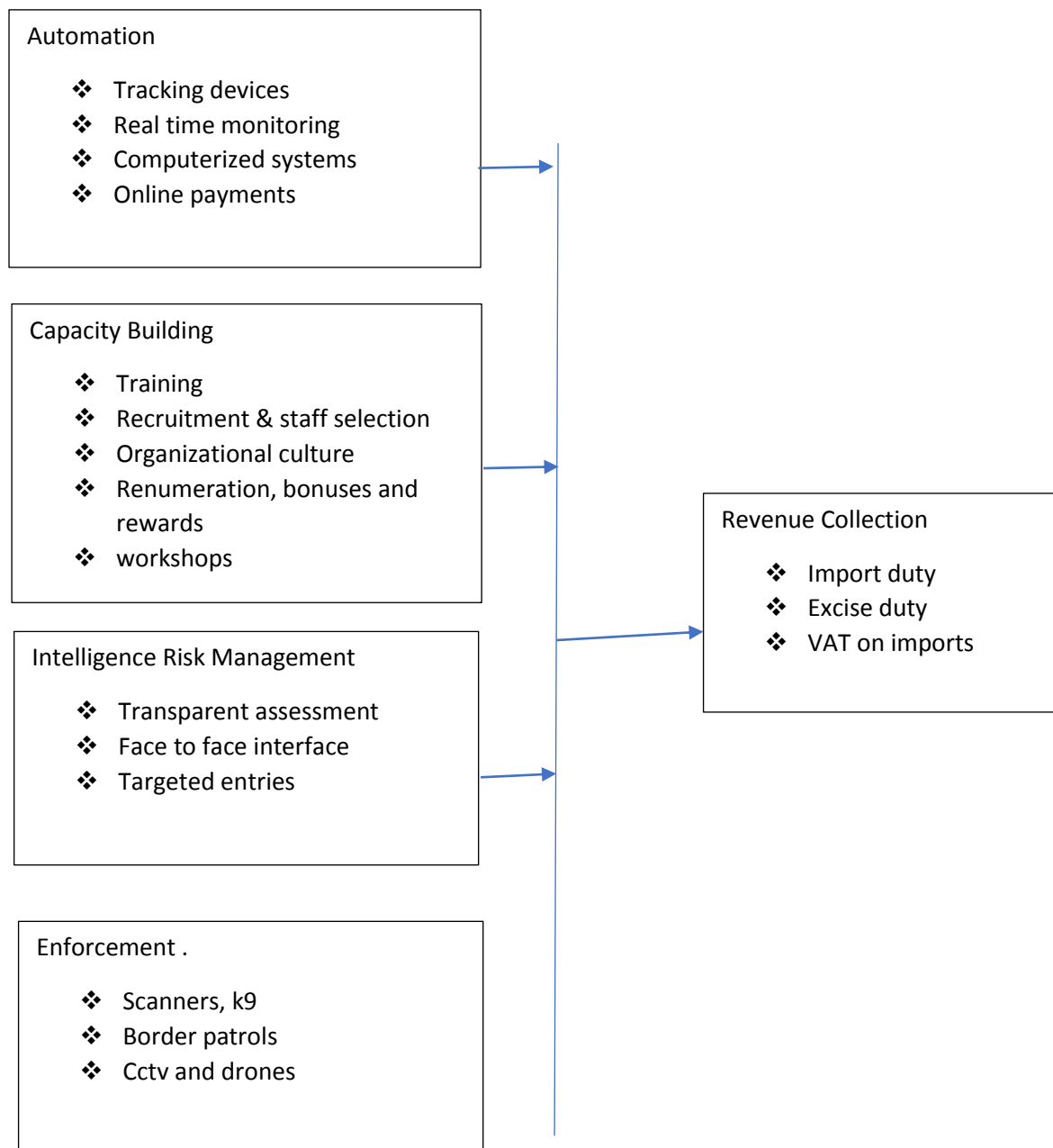
Public Expenditure theory was developed (Peacock and Wiseman,1961). The theory was majorly developed on the political theory of public expenditure determination that illustrates the concept that the government likes to spend more money, citizens hate paying taxes and the idea that the government should put into consideration the wishes and aspirations of its citizens. The theory explains in detail the circular trend of the government expenditure in its development projects which poses a constraint to the taxable capacity of the citizens (Kanyi, 2014)

The principle also illustrates that the expenses by the government are mostly influenced by the government revenue and taxation. So as both the economy and income went up, the revenue collected would also inevitably rise. This leads to a rise in government expenditure in tandem with the Gross Development Product. The taxation level acting as a compulsion is however tolerated. Discrepancies may arise between the level of taxation and the government expenditures (Baghebom, 2012). In relation to this study regarding customs reforms and modernization and its effect on revenue collection this theory can be applied to illustrate the connection between the government's desire to increase the tax collected from the citizenry so as to meet its developmental needs and the capacity to raise required revenue

#### **2.3 Conceptual Framework**

Conceptual framework gives an illustration of the variables of the study. The link between the identified the dependent variables and independent variable (customs revenue collection) is incontestable. The independent variables include intelligence risk management, automated systems, capacity building and security factors. The framework aims at giving a detailed

illustration of these variables and how they relate to collection of revenue in customs administration.





## **Figure 2.1 Conceptual Framework**

### **2.3.1 Intelligence Risk Management and Revenue Collection**

The concept of intelligence risk management in an organization is defined as the possibility of activities and events occurring that may hinder an organization or institution from meeting its set targets. A Customs authority of any nation is mandated to ensure an internationally compliant trading community that provides an efficient level of facilitation and also one that ensures compliance with the set regulatory requirements. Some of the problems facing revenue administration include the following: breach of customs regulations and laws which may include valuation provisions, licensing requirements and duty exemption regimes, rules of origin, trade restrictions and security regulations. Another risk area is that of potential failure to facilitate trade. All these risk areas lead to loss of revenue for the country.

Customs administration, just like any other institution, has the crucial duty of managing its risks. This calls for a systematic application of the procedures designed so as to reduce the chances for the potential risks occurring which ensures that the targets and objectives of the organization are met in an effective and efficient manner, Mugenda, A. (2003). Such risk process include the following: recognition, analyses, evaluation, dealing, monitoring as well

as critiquing the potential risks that might hinder the realization of targets set for Kenya Customs Administration especially those leading to loss of customs revenue.

Reforms have been established to ensure that there are minimal risks occurring in customs. Drawing on areas such as intelligence, experience and information, customs administrations have established modern ways which help them to identify illegal activities. Before the reforms, there were physical inspections of people and goods at border points but recently, increasing speed of movement of goods, volume and complexity of international trade which is fueled by advances in technology, customs authorities have little option but to adopt to reforms and modernization on areas such as risk management so as to handle the changing trends in trade discussed above. Customs administration has opted for a more structured and disciplined approach to risk management. Through the reforms, customs have enhanced the efficiency of its operations and streamlined its processes. This has also led to minimized trade interventions and reduction in regulatory burdens on commercial and industrial sectors (Mugenda, 2003). Efficient utilization of the concept of risk administration is considered crucial to getting an appropriate balance of the two main functions of customs authority which are facilitation and control. Effective risk administration is a key area to modernized customs operations as it paves the way to getting a productive balance between facilitation of trade as well as regulatory control. Compliance management should be encouraged so as to reduce revenue losses and also facilitate legitimate trade.

### **2.3.2 Automated Systems**

Kenya Customs Administration in an attempt to increase its revenue collection as well as facilitate trade, has considered integrated and comprehensive approach purposed to enhance its systems in customs operations. The transformation journey commenced by ensuring that the shortcomings related to the processing of export and import cargo were reduced so as to make the local and international trade efficient which in return would boost the economy in

the country and hence see the revenue collected rise (Bruce, 2000). A number of programs to reform customs operations and also improve trade have been implemented. An example of these automated systems includes the implementation of a Single Window Concept. This was implemented through a project referred to as Community Based System (CBS) which is an ICT system that integrates together all the agencies that facilitate trade with Kenya Customs Administration. The integration makes it efficient to carry out trade in terms of time and cost as it ensures that cargo is cleared within the shortest time possible hence enhancing trade.

Kenya Customs Administration has also currently introduced the Integrated Customs Management System (iCMS). This is a system that consolidates all customs business processes into one. The system has greatly helped to reduce the time taken in clearing goods and cargo at the points of entry. Compared to the previous Simba system, iCMS has made it possible for the Customs Administration to get declarations of cargo earlier before the ships arrive at the port. The process ensures that goods are already verified by the time they arrive significantly reducing the time taken to clear the goods. ICMS has been termed a game changer in trade facilitation due to its efficiency and productivity in trade processes leading to increased customs revenue collection. Another example of automated system is the improvement of the pre-arrival processes at the port which has ensured that transporters, importers and the clearing agents have acquired Authorized Economic Operators (AEO) certificates. This helps to ensure fast clearance of cargo. It actually aims at 70% cargo clearance as stipulated on the port charter. This is of great importance to the importers hence facilitating trade on importation. It will also ensure that the consumers get goods much faster. When trade is facilitated, revenue collection also inevitably goes higher.

Another system implemented in customs operations is the Regional Electronic Cargo Tracking System (RECTS). It ensures real time monitoring of goods as they leave the port to the final destination. This has led to reduction in number of days taken to have the goods

delivered to their destination along the Northern Corridor. The system has also assisted to minimize cases of tax evasion among traders. Improved and efficient management of transit cargo has been another deliverable of this system in the region. The safety of the transit cargo has also been enhanced due to the seamless tracking of cargo to the respective destination.

### **2.3.3 Capacity Building**

Personnel in any organization are the key implementers of change in the management programs within the organization. A motivated, appropriately skilled staff is likely to perform better and yield good returns in an organization. Staff training is therefore encouraged in any meaningful reform program and must include the provision of training opportunities, learning and development so as to enhance team, individual and organizational performance. Efficiency in performance begins with a deliberate and bold audit of the existing skill sets and leading to a clear articulation of the organization's vision regarding required staff's abilities and skills that operate within a business framework (Harrison, 1977).

Changes in staff in an organization does not just happen automatically or overnight. The process requires a targeted and intentional interventions that are clearly outlined and prepared for in each group or department. These interventions for the staff include capacity building sessions, workshops, critical assessment, seminars and joint scheming and implementation. Kenya Custos Administration has adopted such interventions as capacity building programs for its customs officers. There are organized seminars and workshops for the staff on matters related to customs operations, (Bruce, 2000). This helps to equip the customs officers with required skills so as to carry out their duties appropriately without making mistakes that may lead to loss of revenue such as giving of wrong classification codes to goods or misdeclaration. The trainings also equip customs officers with current skills regarding the use of new information and communications technology especially when it comes to working

with the automated systems. To motivate staff to voluntarily undertake these capacity building programs, the customs administration can incentivize participants through certification, promotions and improvements in their remuneration. To further encourage staff to undertake these self-improvement programs the organization can develop a creative credit allocation system similar in concept to Safaricom's Bonga Points reward system that is used as an added advantage for promotions. Staff training at the customs administration may be formal capacity building events or even on-the-job training (Bowsher 1998). Formal training is weightier as it is close to staff motivation. Before the actual training of the staff, training needs are first identified by analyzing the needs of the organization and doing some personal assessments. Training for employees ensures that they are able to carry out particular tasks assigned to them hence closing the performance gap.

#### **2.3.4 Enforcement and Revenue Collection**

Kenya customs administration is charged with the mandate of making sure that the cross-border inflow of people, goods and means of transport adhere with laws and regulations stated in customs legislation thus the function of enforcement. The administration has been carrying out duties on enforcement such as prevention and detection of restricted goods or smuggling or prohibited and strategic goods that leads to great loss of customs revenue. Custom reforms on enforcement have been put up so as to ensure minimum or no loss of customs revenue. Such reforms include intelligence and information management, patrols of ports of entry and other customs licensed premises, land and aeronautical surveillance, examination of cargo, inspection for both passengers and luggage, backtracking investigations, undercover programs and immigration and emigration processing (Bruce, 2000). Through the reforms, customs administration holds unique powers regarding the goods in global supply chain as well as ability to analyze all transactions, re assess revenue and detain and question persons all of which are key areas of customs enforcement. New

skills and procedures have also been adopted so as to share sensitive enforcement information and to detect noncompliance by the both traders and their agents. Sufficient legal powers to conduct controls and share information has been adopted in the reform strategies. Increased use of automation on matters of enforcement has also been used so as to access information from multiple choices for purposes of risk assessment. Customs administration has also put in use electronic scanning of all the cargo so as to ensure the traders adhere specially on paying the required custom revenue. The discussed enforcement reforms have been put in place as a way of ensuring minimum custom loss.

## **2.4 Empirical Review**

Empirical review entails the study of other related studies to influence of customs reforms and modernization on customs revenue. A number of studies are discussed in relation to custom reforms and modernization and how they have influenced revenue collection as per the variables of this study.

### **2.4.1 Influence of Automation on Customs Revenue**

(Janet Muthama,2003) studied the influence of system revenue reconstruction on revenue accumulation at the Kenya Revenue Authority. One of the major objectives for her study was to find the link between system automation and collection of revenue with regard to Simba at the Kenya Revenue Authority. Majoring on a number of completed transactions the study clearly compared on the performance of revenue collection before the introduction of the Simba System and after the automation of the systems (Jacobs, D,2007). from the findings, the study finds that the volume of the collected revenue is strongly related to the adoption of new systems in customs operations. Volume of transactions completed before compared to the one after the Simba system implementation, the study makes a conclusion that transactions went up after the introduction of the Simba system. There is also a direct

comparison on the number of transactions completed and the revenue raised. The higher the number of the transactions, the more the revenue collected.

#### **2.4.2 Influence of Capacity Building on Customs Revenue**

The author used tax revenue as dependent variable while GDP was independent variable in regression analysis. This could have failed to give the accurate results. The first regression had the aggregate tax revenue adjusted for changes in discretionary measures on tax as the dependent variable. In addition, disaggregation of tax revenue was handled in the second set of regression, with inclusion of dummy variables so as to capture the influence of discretionary tax policy on revenues. The results as per that study indicated that few taxes were buoyant. However, the total system of tax was not buoyant. In addition, the author found that GDP had grown rapidly than the bases of tax, and hence the individual taxes and the total system of tax were not buoyant. In addition, the total system of tax and individual taxes were inelastic to changes in GDP

In a study about Ghana's tax reforms and productivity of revenue between 1970 and 1993, Kusi (1998) found a buoyancy of 0.72 in the period before reforms and the elasticity was 0.71. The value of buoyancy after the reforms increased to 1.29 while the elasticity value increased to 1.22. Basing on these results, the author concluded that elasticity and buoyancy of the aggregate taxes as well as individual taxes had increased significantly after 1983 to 1993 reforms, implying that the reforms positively influenced revenue productivity. Specifically, the buoyancy and elasticity of aggregate taxes after the reforms was more than one, thereby suggesting positive impact of reforms on revenue productivity. For buoyancy of individual taxes, only excise duty and export duty for cocoa had values of less than one. The author also found that the buoyancy of aggregate taxes, import tax, sales tax and income tax was greater than the respective elasticity, hence suggesting that the reforms had played a

crucial role in enhancing revenue productivity. The implication for this study is that tax and customs revenues are likely to increase depending on the reform measures put in place.

### **2.4.3 Influence of Intelligence Risk Management on Custom Revenue**

(Muriithi and Moyi ,2003) studied custom changes and its performance in Kenya. In his study he included a number of objectives one of them being to ascertain that the revenue structure could be improved so as to abate the perpetual custom revenue unevenness through intelligence risk management strategies. This would be arrived at through custom and revenue policies reforms that would minimize on the risks in customs especially those leading to loss of customs revenue. This research uses the factors of buoyancy and elasticity to check if custom revenue amendment in Kenya met the set goals. The two mentioned factors are computed for the period pre and post reforms. Proof from the study indicates that custom reforms had impacted positively on the overall custom revenue structure and on the personal revenue handles. The study shows that the elasticity of indirect revenue was low and direct custom revenue was high post reforms. Even though there was a positive impact, the reforms and modernization practices didn't make VAT receptive to income reforms, although VAT was a major factor in the revenue process.

(Odundo,2007) researched on changes in administration practices used by Kenya Revenue Administration in its attempt to reconstruct and modernize its operations. The objective of the research was to ensure the Reform Management used by KRA. The study was carried out via a case study of KRA. In nutshell it was noted a number of reforms in the firm pushed the administration to administer reforms effectively. This has led to an intelligence risk management team to look into issues of customs risk. There has been creation of new departments; some merging while others splitting in an attempt to offer improved services to clients. Like any other organization, opposition to reforms was unavoidable but the administration was capable of withstanding the opposition that was in need of status quo to

rule. The above practices influence revenue collection and the intelligence risk management performance at the Kenya Customs Administration.

#### **2.4.4 Influence of Enforcement Strategies on Customs Revenue**

(Kariuki ,2009) carried a research on designed changes in administration at Kenya customs revenue authority. The research points out that the Kenya Revenue Authority gives such a great illustration of a unique establishment that has with no fail accepted reforms. It has come out as one of the most promising establishment in Kenya. This achieved goal was primarily the end off of practices and reconstruction agenda aiming at automation of all manual processes (KRA, 2009). The Kenya Revenue Authority; had adopted modernization and reforms for its procedures to do away with red tape that is rampant in public establishments. To find a unique establishment with reconstructed and changed systems is crucial studying so as to ascertain how the Kenya customs Revenue Authority administration thrived. The objective of the research was to come up with planned reformed management measures used by Kenya customs Revenue Authority in its mission to apply structured reforms and to find out the factors that culminated to the administration changing its operating structures. The preferred method here was case study. The study made a conclusion that KRA took time to effect the systemic changes it was to go through by conducting different studies, preparation of situational analysis reports and corporate plans/BSC pointing out the changes to be effected and respective time periods (Asiweh, 2012) The research as well recommended that structured reforms have been effectively taken care of at KRA and the implementation of the modernized systems have ended up creating awareness to the public of what KRA is undertaking, custom officers becoming more technological, improved accountability among staff and other stakeholders and increased enterprise image of KRA. The research conclusion was for the custom officers to entirely accept to utilize KRA reformed structures willingly

there should be more capacity building in IT skills, more participation of all partners and availability of computers.

(Fernando, 2010) did a research on the Flypaper Effects and Costly Tax Collection. This outcome leads to firm action of public expenditure to subsidies than to the revenue expansion. This study portrayed a clear evidence in line with exorbitant revenue accumulation as a determinant of the paper target which showed the realized higher compliancy of the country's government expenditure to get more subsidies than to realize increased local income. In the set up the cost difference surrounding transfers and local changes in revenue is pushed by the government's inability to check the liability of financing the operating transfer scheme. This clearly shows a promising source of incompetency in revenue devolvement procedures with wantoning highlighted at local level.

(Sigey, 2010) studied the effect of automation as a reform in customs revenue clearance structure at Kenya Customs Revenue Administration. The study is aimed at finding out the effect of computerization on customs clearance process in the customs service department of the KRA. The study aimed at establishing whether computerization has led to effective delivery of service at the Kenya customs service department, to show if mechanization had resulted to capacity building of custom officers at Kenya Customs Revenue Authority as well as other partners; what effects the advanced knowledge had impacted on service delivery at the customs revenue department, to determine if computerization has improved efficacy of customs clearance process, to find out if computerization of customs revenue clearance procedures has led in cost and time saving, to find out if automation has effected governance in the customs department.( Asiweh ,2012) This research paper recommended the implementation of the Simba system in the customs service department, positive efficiency, enhanced efficacy, improved competency, cut down in costs and enhanced administration. Reforms based on the recommendations of this research directs that the management of KRA

adopts the security of the system from mismanagement, which is a major threat. (Nkote and Luwugge, 2010) rechecked the link between computerization and customs revenue management in application of factual proof from Uganda. The findings and facts from the Uganda Revenue Authority (URA) directs that despite computerization leading to efficacy of revenue management, this was unaccepted as computerization had not yielded to desired outcomes through reduction in cost of doing business by the clients, reduction of period of clearance and effectiveness. The picture, as a result was that URA realized the modernization through automation of customs revenue management at an accelerating rate of costs due to ineffective computerization of the whole system.

## **2.5 Critique of The Related Studies**

A variety of studies related to the influence of customs reforms and modernization on customs revenue collection have been discussed under Empirical Review. A number of the studies have touched on different reforms and modernization practices that have been implemented but have failed to give clear details on how such reforms have affected the customs revenue collected either in a positive way or negative way and if the reforms have been found not yielding improvement on the revenue collected the studies have also not illustrated clear ways in which Kenya Customs Administration can use such reforms to improve on their performance. For example, ;(Janet Muthama, 2003) studied the influence of system revenue reconstructed customs on revenue accumulation at the Kenya Revenue Authority. One of the major objectives for her research was to establish the link between automation of systems and custom revenue accumulation at the Kenya Customs Revenue

Authority in relation to Simba. Majoring on a number of completed transactions the study clearly compared on the performance of revenue collection pre introduction of the Simba System and after the automation of the systems (Jacobs. D, 2007). from the research findings, the study recommends that the volume of the custom revenue collected is strongly related to the adoption of new systems in the customs operations. Comparing the completed volume of transactions pre and post the implementation of Simba System, the paper makes a conclusion that there were increased transactions after the introduction of the Simba system. There is also a direct comparison on the quantity of transactions completed and the custom revenue raised. The high the number of the transactions, the more the revenue collected. The study has not given more details on the influence of the automation on revenue collection and this is one of the areas the current study majors in finding out. Another example is the study by (Sigey, 2010) looked at the impacts of computerization as a reform in structure on customs revenue clearance process at Kenya Revenue Authority. The aim of this study was to determine the effect of computerization on custom revenue clearance process. The research aimed at finding out whether computerization has led to improved service delivery at the customs department, to find out whether automation had improved competency Kenya Customs Revenue Authority staff as well as other partners; what results the advanced skills have had on service delivery at the customs department, to check if automation has led to enhancement in efficacy of customs clearance operations leading to higher customs revenue collection, to determine whether automation of customs clearance procedures has led to saving cost, to establish whether automation has effected governance in the customs department ( Asiweh, 2012). The research noted that with introduction of the Simba system in the customs revenue department, there has been reformed efficiency, efficacy, advanced staff competencies, cost reduction and effective governance. Conclusions as per the research recommendations suggest that the KRA management put into consideration the safety of the

operating system from manipulation, which is a major setback. (Nkote and Luwugge ,2010) rechecked the link between automation and customs revenue administration by use of empirical facts from Uganda. The findings and evidence from the Uganda Revenue Authority (URA) showed that despite automation leading to improved revenue administration, it was rejected as it had not led to improvement regarding cost of business operations, shortening of clearance period and effectiveness. The study failed to look at the effects of the automation on the revenue collected after implementation of automation in operations at the customs administration post studied hence giving an area for the current study to pursue.

## **2.6 Summary**

This chapter reviews studies and research works by other scholars and researchers on the subject matter affecting customs reforms and modernization and collection of custom revenue. Different objectives of their studies have also been discussed and the recommendations which have clearly been outlined depending on the findings of their studies. All the studies related well to this study and the four variables studied which are, automation, intelligence risk management, capacity building and enforcement. Different reforms and modernization practices on the variables stated above have been discussed and their effects on customs revenue collected illustrated. (Çakmak et al, 2011) revisited the Acceptance of Tax Office Automation System (VEDOP) by custom administration employees using factorial validation of Turkish adapted Technology Acceptance Model (TAM). (Fernando, 2010) did a study on the Flypaper impacts and Costly revenue accumulation. This effect points to. the better response of public expenditure to subsidy than to the revenue base expansion. (Odundo ,2007) the paper dealt with reform administration practices assumed by Kenya Revenue Authority in its changes and modernization of the process. (Sigey ,2010) researched on the effects of automation as a structural reform plans on procedures of revenue clearance at Kenya Revenue Authority. (Lukorito, 2011) wrote a

research paper on cyber security threats in regards with information and E-government initiatives at the Kenya Revenue Authority (KRA). (Kariuki ,2009) studied on structured administration reforms at Kenya revenue authority. (Muriithi and Moyi ,2003) did a paper on custom reforms and mobilization of revenue in Kenya. As per the above, most of the research works have revolved around the management of modernized revenue system leaving out other reform practices like enforcement and security. This study has concentrated on different reform practices and modernization and their effects on customs revenue not only the modernization of system and revenue collection. This work therefore intends to bridge the research gap.

## **2.7 Research Gaps**

Although different related studies have been discussed under empirical review, there has been insufficient information obtained from the above related studies that have limited the ability to make decisions on collection of customs revenue by the policy makers and other stakeholders thus leading to the current study so as to study in detail the influence of custom changes and modernization on custom revenue collected by the Kenya Revenue Administration .When studying reforms on customs revenue agenda and revenue mobilization in East and West African countries,( Kefela ,2009) noted that any successful administration changes should have simplicity and enforceable laws. Debate has it that is important to breakdown protocols for taxpayers, for example, by getting rid of undeserved data on revenue plough backs and payment invoices. The researcher further notes that, once the customs revenue structure is broken-down, the customs officers can manage to aim on the crucial tasks which involves enabling compliance, evaluating compliance and working on non-conformity. It is said that customs enforcement is hard particularly in third world

countries due to the presence of diverse informal sector. Illiteracy, low public morality, poor salary structure for civil servants, distorted communication infrastructure, crippled judicial systems and great opposition against radical reforms (Auriol & Warlters, 2002). A study was carried out on responses by Kenya Revenue Authority to the shortcomings encountered in the implementation of the customs' changes and modernization – CRM (Ondiek, 2013). In particular the paper sought to find out how KRA adopted the CRM program, the difficulties in the process of adopting the same, and the manner in which the Authority handled those shortcomings. The study noted that the greatest hurdles encountered by KRA were resistance to reforms, lack of adequate skills, lack of resources, and also lack of a supportive telecommunication infrastructure. The Authority reacted to the mentioned challenges through capacity building and sensitization of the officers and stakeholders. More so, the challenges were solved by hiring new officers with the requisite skills. Political support and management style were also key to the implementation of CRM initiatives. (Nada and Jack, 2009) examined revenue reforms in Kenya specifically in regard to policy and issues of administration. The study agrees that Kenyan customs revenue system has realized perpetual changes over the twenty years. For instance, from the perspective of the policy there has been simplification and rationalization rate schedules, a new value-added tax introduced, and external tariffs brought on board in order to tally with those of East African countries. It is observed that it is imperative to have continued reform of both policy instruments and both administrative and enforcement capacity of the custom revenue system. This is against the backdrop of the KRA's revelation that, there are certain entrepreneurs and members of certain professional bodies who are required to register their annual turnover independently; however, this requirement is hardly enforced. In addition, it is in the public knowledge that the KRA's major focus is tax collection and as such seeks to maximize revenue on behalf of the national government. Moreover, it is noted that refund payment is low on its list of

priorities. Nevertheless, the authors argued that this policy may be self-defeating in the event that compliance falls or is not enforced. There is need therefore to look deeper into the influence of specific custom reforms and modernization on custom revenue collected by the Kenya Customs Administration.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter shows the research design and the methodological approaches that were used by the researcher in gathering information on influence of customs changes and modernization on custom revenue collection. The chapter is broken down into sections and sub sections which include; research design, both accessible and target population, sample size and sampling techniques, data accumulation techniques and procedures, data analyses techniques, pilot testing of the instruments used and data validity and reliability.

### **3.2 Research Design**

Research design has been defined by different researchers but all these definitions collectively tend to move to the same heading. As per (Lavrakas, 2008), research design can be termed as the general arrangement in trying to get responses to the problem being investigated as well as putting into considerations the challenges experienced in the entire research process. Due to the need to collect data so as to test the hypothesis or come up with answers, the study used descriptive research design was used in the study (Feld, 2002). A descriptive research design refers to a method whereby the perceptions and views of the accessible population is sought through set objectives that are illustrated in a questionnaire by the researcher.

Descriptive survey research design is related to deductive approach which is majorly used to give responses to research questions or even prove or disprove given hypotheses.

The design was considered accurate for the study as it permitted a collection of information from a variety of respondents. Some of the research questions answered by the design include Who, What, How many and How much. This research design stands to be productive in bringing out the understanding of the independent variables which are customs reforms and modernization strategies and extending the manipulation to the dependent variable which is revenue collection.

### **3.3 Target Population**

Target population refers to a large number of subjects, individuals or objects over a wide geographical area that portrays common observable characteristics (Mugenda, 2009). This is basically the population the researcher intends to base on so as to generalize the outcomes of a given study (Asiweh, 2012). The target population in this study is composed of customs

officers at JKIA divided into the senior management, middle management and the operational staff. The records above were gathered from the KRA muster roll for employees. mentioned groups above were regarded to give reliable information regarding the influence of customs reforms and modernization on custom revenue collection. The respondents for the study were the customs officers at JKIA since the study tries to answer questions on customs revenue collection which is the major function of the Kenya Customs Administration. The target population is illustrated on the table below.

**Table 3.1 Target Population**

<b>Target Group</b>	<b>Target Population</b>
Customs officers (senior management)	10
Customs officers (middle management)	30
Operational staff	100
<b>Total</b>	<b>140</b>

### **3.4 Sample and Sampling Technique**

As per (Kothari ,2009) sampling is the process by which a relatively small number of individuals, objects or events is highlighted in order to find out something about the entire population from which it was selected. According to (Kothari,2009) a perfect sample is the one that meets the requirements of competency, representativeness, dependability and flexibility.

The research used census since the targeted population is considerably small with the number of participants being 140.

### **3.4.1 Sample Size**

Sample size is the number of individual samples measured or observations that have been used in an experiment or study. The sample size in the study was selected from three different categories of the customs officers at JKIA, the senior management, the middle management and the operational staff. (Mugenda and Mugenda ,2009) recommends at least 30% of the target population be used as the sample size. This study will use census technique to come up with the sample size. Census technique involves use of the entire target population as the sample size since the number is considerably small wit the participants being 140.

### **3.5 Research Instrument**

The research was based on both primary and secondary data. Primary data as described by Louis et al. (2007), refers to the original items considered in solving the problem of the study. The study used a questionnaire as an audit instrument to collect information from respondents who are the Kenya customs officials. As outlined by Kothari (2012), a questionnaire is comprised of a number of questions that are typed and printed in a definite order and form. It is a preformulated set of written questions whose responses are given within carefully outlined options to choose the best from. The questionnaire is considered very crucial especially when the researcher is fascinated by opinions of the respondents, facts,

respondent's motivation and the extend of the respondent's familiarity with the topic at hand (Nachmias & Nachmias, 2008)

A questionnaire is a reliable instrument of collection of data as it collects a substantial and quantitative data which assists the study to have an extensive coverage of different areas of study at reasonably low cost in terms of money, time and effort (Cohen & Manion, 2007). The questionnaire was objective based and the questions regarding the study. The questionnaire was comprised of different parts that focused on personal background details as well as questions on the attitude and extent of satisfaction by respondents on various customs reforms and modernization strategies. Sub titles were included to ensure that the questionnaire was clearly written. A large number of respondents was considered in gathering information.

The research instrument targeted the Customs Officers at JKIA at the following three levels: the senior management, the middle management and the operational staff. The responses of the questionnaire were based on a Likert scale of five; strongly disagree, disagree, neutral, agree, strongly agree. The scale is used in measuring the attitudes, motivation and the behaviors of the respondents ranging from one extreme to the other (Zikmund, 2010) An interview manual was also created so as to source information from four selected customs managers in charge of customs administration departments. The interview guide was structured based on the stated objectives and questions of the study. Opinion of the managers on reforms and modernization in running customs operations especially those on customs revenue collection was also put into consideration. (Feld, 2002) The questionnaire was administered to the customs officers at JKIA in stations that are inline to the research. Secondary information collected used in the research was acquired from the following areas, official websites, KESRA library records and other crucial reports by Kenya Customs

Administration and the World Bank. Data from previous related research projects was also considered in the study.

### **3.6 Pilot Testing of the Instruments**

Pilot testing is mainly carried out to test the reliability and the validity of the data collection instrument used in the study. Pilot study is usually carried out to provide an opportunity so as to detect potential problems on the research instrument and thus provide a remedy to the identified problem. The pilot study was done at the Kenya Customs Administration at JKIA station in Nairobi. The work station mentioned is concerned with the major activities of customs administration including collection of data for trade statistics and also keeping of data on how revenue collection targets has been met in the past years. Pilot was done on 10% of the total sample size of 70 customs officers which was 7 officers in number. According to the responses given by the 7 customs officers the instruments were found reliable and valid to collect data on customs reforms and customs revenue accumulation.

#### **3.6.1 Validity of Research Instrument**

As defined by (Sarantakos,2005), validity refers to the accuracy and meaningfulness of the data collected for the study or of the deductions made based on the findings of the research. Validity can also be explained as the extent to which a study tool gives definite results or outcome in the study. It shows the relationship between the data collected and the problem being investigated. To assess on the validity of the instruments used, the study will seek expert advice and comments from supervisors and other lecturers from Kenya School of Revenue Administration. Considering the comments from the experts, the data collection instruments were considered effective in terms of validity.

### **3.6.2 Reliability of Research Instrument**

According to Cohen and Manion (2007), reliability is where the tests of the instruments yield consistent results after measurement. The instruments of data collection give analogous results after they have been tried or measured repeatedly. In testing the reliability of the instruments in this study, five respondents from Kenya Customs Administration were involved.

According to the responses given, the research questionnaire was thus found reliable as the responses were consistent from the five respondents.

### **3.7 Data Presentation and Analysis**

Data analysis involves the processing of raw data collected so as to come up with meaningful information that can be used in solving the problem of the study (Thornbill, 2009). Data in this study will be analyzed using quantitative methods. The quantitative analysis was based on the Likert scale of five responses as illustrated in the questionnaire and the results are illustrated by use of measures of central tendencies as well as measures of dispersion. Further data analyses were done to bring out the impacts of customs changes and modernization on revenue collection in a given time frame by use of tables, charts and graphs.

The model to be used in a regression analysis will be,

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where, Y is revenue collection

X1 is the automation

X2 is capacity building

X3 is the intelligence risk management

X4 is the enforcement strategy

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$  are the coefficients

$e$  is the error term

## **Conclusion**

The study endeavors to find out the influence of customs reforms and modernization on customs revenue. This study is based on the effects of customs reforms and modernization on customs revenue collection. Global and local perspectives on how the reforms have influenced the customs revenue collected has also been put into consideration so as to make a comparison to the performance of the same at the Kenya Customs Administration. The objectives of the study include the following: influence of automated systems on customs revenue collected, influence of capacity building on customs revenue, determine the effect of intelligence risk management on customs revenue and lastly, to explore how enforcement strategies affect customs collected. Various theories related to the variables have also been discussed in the study. The statistical data used in the research includes that collected in the past five years on the following customs revenue: import duty excise duty, and the Value Added Tax. The study used descriptive design clearly showing the relationship between the independent variable which is customs revenue collection and the dependent variables which are automated systems, capacity building, intelligence risk management and enforcement strategies. Both primary and secondary data will be used in the study so as to collect the data required so as to come up with a quality study.

Empirical review has also been emphasized in the paper through putting into consideration other related studies, for example study (Akala Jackson Ukiru ,2013) on impacts of reforms and modernization on performance of customs services department, Kelvin Gitaru (2017) on impact of system automation on customs revenue collected and Janet Muthama( 2013) on the effects of revenue system modernization on revenue collection. A critique of these related studies is also illustrated which led to the above related studies termed inadequate in determining the influence of customs reforms and modernization on customs revenue hence creating an area for further study. The sample size was established according to the percentage recommended by (Mugenda and Mugenda) of at least 30%. in this study 50% of the total population was used the sample size which totaled to 70 customs officers. Piloting was carried out on 10% of the 70 customs officers identified. Finally, different ways of data presentation and analyses are outlined. For data presentation, the following items will be used pie charts, bar graphs and tables. In order to analyze the data collected, the following methods shall be used, descriptive analyses such as mean and standard deviation, inferential statistics as well as multiple regression table by the Kenya customs administration.

## **CHAPTER FOUR**

### **RESEARCH FINDINGS AND DISCUSSION**

#### **4.1 Introduction**

This chapter delves on the interpretation and presentation of the results obtained from the field. Descriptive and Inferential statistics have been used in this study.

#### **4.2 Response Rate**

The study targeted 140 customs officer at JKIA divided into the senior management, middle management and the operational staff. Out of 140 questionnaires distributed to respondents, 20 questionnaires were either partially filled or not returned while 120 were filled and returned making a response rate of 85.71%, which was satisfactory enough to complete this study. According to Mugenda & Mugenda (2008), a response rate of 50% is adequate for

analysis and reporting, 60% is good while that of 70% and above is excellent. This is summarized below:

**Table 4.1: Response Rate**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
Returned	120	85.71%
Unreturned	20	14.29%
<b>Total</b>	<b>140</b>	<b>100%</b>

#### **4.2 Reliability Results**

The Cronbach test results of the research instrument are shown in table 4.2

**Table 4.2 Reliability Statistics**

<b>Cronbach's Alpha</b>	<b>N of Items</b>
.757	24

From the analysis Cronbach's Alpha was greater than 0.7 ( $\alpha > .7$ ) for all the variables. This was an indication that the research instrument was reliable.

#### **4.3 Descriptive Statistics**

The study sought to establish the effect of customs reforms and modernization on customs revenue collection in Kenya customs administration. The respondents were asked to rate how they feel about the different variables related to Customs revenue collection in a 5 point likert

scale. The range was from Strongly Agree (5), to strongly disagree (1) with 1 representing strongly disagree, 2 representing disagree, 3 representing neutral, 4 as agree and 5 as strongly agree.

#### **4.3.1 Automation**

The first objective of the study was to determine the influence of automated systems on revenue collection in Kenya Customs Administration. The respondents were asked to respond to specific statements formulated based on the input variable automated system. The results of the descriptive statistics on automation are shown in Table 4.3

**Table 4.3 Descriptive Statistics-Automation**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Use of tracking devices has positively influenced the customs revenue collected.	120	1	5	3.15	1.313
Real time monitoring of cargo has fully been implemented by the Kenya customs administration at JKIA.	120	1	5	3.16	1.467
Computerizing of systems has been fully established as a customs reform strategy.	120	1	5	3.04	1.286
Online payment of duties has reduced noncompliance by traders and thus reduced revenue loss.	120	1	5	3.15	1.364
Data sharing among the customs administration offices and the relevant stakeholders has fully been implemented.	120	1	5	3.07	1.413

**Mean = 3.114**

**Std =1.368**

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The findings, as illustrated in table 4.3 indicate a mean of 3.114 with a standard deviation of 1.368. This implies that majority of the respondents agreed with the statements that suggest the influence of automation on customs revenue collection.

#### **4.3.2 Capacity Building**

The second objective of the study was to establish the influence of capacity building on revenue collection in Kenya Customs Administration. The respondents were requested to respond to specific statements formulated based on the variable Capacity Building. The results of the descriptive statistics on capacity building are shown in Table 4.4.

**Table 4.4 Descriptive Statistics-Capacity Building**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Recruitment and staff selection of the customs officers has been carried out based on the ability and competency of the officers	120	1	5	3.33	1.279
Training of customs officers has been of positive impact on their performance at Kenya Customs Administration	120	1	5	2.98	1.243
Remuneration, bonuses and rewards have been used as a reform to motivate the customs officers in their duties	120	1	5	2.94	1.204
Organizational culture has been transformed to one that uplifts the morale of the customs officers	120	1	5	3.15	1.442

Customs officers should have organized workshops to equip them wholly with changing customs roles	120	1	5	2.98	1.296
				<b>Mean =3.076</b>	<b>Std =1.292</b>

The findings, as illustrated in table 4.4 indicate a mean of 3.076 with a standard deviation of 1.292. This implies that majority of the respondents agreed with the statements that suggest the influence of capacity building on customs revenue collection.

### 4.3.3 Intelligent Risk Management

The third objective of the study was to find out the effects of intelligence risk management strategies on revenue collection in Kenya Customs Administration. The respondents were requested to respond to specific statements formulated based on Intelligent Risk Management. The results of the descriptive statistics on intelligent Risk Management are shown in Table 4.5.

### 4.3.4 Table 4.5 Descriptive Statistics- Intelligent Risk Management

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Face to face interface between the customs officers and the relevant stakeholders has been implemented	120	1	5	3.02	1.390

Transparent assessment of transactions leads to increased compliance by the traders.	120	1	5	2.97	1.229
Audit investigation has been highly practiced since the introduction of the customs reforms and modernization	120	1	5	3.20	1.464
Sharing information by the customs officers and the stakeholders has reduced customs revenue loss and non-compliance	120	1	5	3.15	1.313
Transparency and monitoring of targeted entries has reduced noncompliance by traders and thus reduced revenue loss	120	1	5	3.08	1.394

**Mean = 3.084**

**Std = 1.358**

The findings, as illustrated in table 4.5 indicate a mean of 3.084 with a standard deviation of 1.358. This implies that majority of the respondents agreed with the statements that suggest the influence of intelligent Risk Management on customs revenue collection.

### 4.3.5 Enforcement

The fourth objective of the study was to explore the effects of enforcement strategies on revenue collection in Kenya Customs Administration. The respondents were asked to respond to specific statements formulated based on Enforcement. The results of the descriptive statistics on Enforcement are shown in Table 4.6

**Table 4.6 Descriptive Statistics- Enforcement**

	N	Minimum	Maximum	Mean	Std. Deviation
Investigation of audit reports has been highly practised since the introduction of customs reforms	120	1	5	3.25	1.386
Effective border patrols by the customs border officers has minimized cases of customs revenue loss	120	1	5	3.02	1.390
Transparent audit investigation has led to reduced cases of non-compliance by traders	120	1	5	2.97	1.229

Use of electronic scanners  
by the customs officers  
has reduced cases of  
custom revenue evasion.

120            1            5            3.28            1.355

**Mean = 3.13**

**Std =1.34**

The findings, as illustrated in table 4.6 indicate a mean of 3.13 with a standard deviation of 1.34. This implies that majority of the respondents agreed with the statements that suggest the influence of Enforcement on customs revenue collection.

#### **4.4 Inferential Statistics.**

##### **4.4.1 Correlation Analysis.**

Table 4.7 presents the Pearson correlations for the relationships between the independent variables and the dependent variable.

**Table 4.7 Correlation Analysis**

		<b>Intelligence</b>		
		<b>Customs</b>	<b>Capacity risk</b>	<b>Enforcement</b>
		<b>Revenue</b>	<b>Automation building</b>	<b>management strategy</b>
Customs	Pearson	1		
Revenue	Correlation			

		Sig. (2-tailed)				
	N	120				
Automation	Pearson Correlation	.345**	1			
	Sig. (2-tailed)	.000				
	N	120	120			
Capacity building	Pearson Correlation	.708**	.019	1		
	Sig. (2-tailed)	.000	.838			
	N	120	120	120		
Intelligence risk management	Pearson Correlation	.322**	.452**	-.145	1	
	Sig. (2-tailed)	.000	.000	.113		
	N	120	120	120	120	
Enforcement strategy	Pearson Correlation	.347**	.224*	-.085	.453**	1
	Sig. (2-tailed)	.000	.014	.358	.000	
	N	120	120	120	120	120

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

\* . Correlation is significant at the 0.05 level (2-tailed).

Table 4.5 presents the Pearson correlations between the independent variables Automation, Capacity building, Intelligence risk management, Enforcement strategy and customs revenue collection. From the findings, a positive and statistically significant correlation is observed between each pair of the independent variables and between the independent and the dependent variables. The strongest positive and significant correlation to Customs revenue collection was established between Capacity Building ( $r = 0.708$ ,  $p = 0.000$ ) followed by Automation ( $r = 0.345$ ,  $p = 0.000$ ), Enforcement Strategy ( $r = 0.347$ ,  $p = 0.000$ ) and Intelligence risk management ( $r = 0.322$ ,  $p = 0.000$ ). The finding indicates a statistically significant linear dependence of Customs revenue collection on all the four independent variables. This implies that a unit worth of increase in any of the four independent variables will have an effect on Customs revenue collection based on the strength of the correlation coefficient.

#### 4.5 Regression Analysis

Multiple regression analysis was carried out to determine the link between the independent variables and the dependent variable.

**Table 4.8 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.875 <sup>a</sup>	.765	.757	.32619

a. Predictors: (Constant), Enforcement strategy, Capacity building, Automation, Intelligence risk management

From the results in Table 4.8, R squared was 0.765 that was adjusted to 0.757. This was an indication that Automation, Capacity building, Intelligence risk management, Enforcement

strategy explained 75.7 % of all changes on customs revenue collection. This implies that the remaining 24.3 % of the change was caused by other factors.

**Table 4.9 Analysis of Variance (ANOVA)**

		<b>Sum</b>	<b>of</b>			
<b>Model</b>		<b>Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	39.788	4	9.947	93.486	.000 <sup>b</sup>
	Residual	12.236	115	.106		
	Total	52.024	119			

a. Dependent Variable: Customs Revenue

b. Predictors: (Constant), Enforcement strategy, Capacity building, Automation, Intelligence risk management

From the ANOVA statistics in table 4.9, the, F-Calculated value (f-value=93.486, p=0.000) was noted to be higher than F-Critical value implying the model was statistically significant.

**Table 4.10 Coefficients**

		<b>Unstandardized</b>		<b>Standardized</b>		
		<b>Coefficients</b>		<b>Coefficients</b>		
<b>Model</b>		<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>
1	(Constant)	-.816	.222		-3.673	.000
	Automation	.177	.055	.164	3.217	.002
	Capacity building	.612	.037	.762	16.584	.000
	Intelligence risk management	.197	.047	.237	4.227	.000

Enforcement strategy	.253	.048	.267	5.270	.000
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a. Dependent Variable: Customs Revenue

**Source: Research, 2020**

The findings on Table 4.10 reveal that that Automation and customs revenue collection are positively and significantly related ( $\beta_1=0.164$ ,  $p=0.002$ ). This implies that an increase in 1 unit of Automation will lead to an increase in customs revenue collection by 0.164 units holding all other factor constant.

The findings revealed that Capacity building and customs revenue collection are positively and significantly related ( $\beta_2 =0.762$ ,  $p=0.000$ ). This implies that an increase in 1 unit of Capacity Building will lead to an increase in customs revenue collection by 0.762 units holding all other factor constant.

The findings revealed that Intelligence risk management and customs revenue collection are positively and significantly related ( $\beta_2=0.237$ ,  $p=0.000$ ). This implies that an increase in 1 unit of Intelligence risk management will lead to an increase in customs revenue collection by 0.237 units holding all other factor constant.

The findings revealed that Enforcement and customs revenue collection are positively and significantly related ( $\beta_2=0.267$ ,  $p=0.000$ ). This implies that an increase in 1 unit of Enforcement will lead to an increase in customs revenue collection by 0.267 units holding all other factor constant.

The Model specification is as follows:

$$Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \varepsilon, \text{ where}$$

$$Y = -0.816 + 0.164X_1 + 0.762X_2 + 0.237X_3 + 0.267 X_4 + \varepsilon$$

Y= customs revenue collection

$\beta_0$ = constant term

$\beta_1$ = Automation

$\beta_2$ = Capacity building

$\beta_3$ = Intelligence risk management

$\beta_4$ = Enforcement strategy

$\varepsilon$  = error term

#### **4.6 Discussion of the findings**

This section presents a per objective discussion of the findings and collaborates them to other studies

##### **4.6.1 Automation and customs revenue collection**

The study pointed out that Automation and customs revenue accumulation are positively and significantly related ( $\beta_1=0.164$ ,  $p=0.002$ ). This implies that an increase in 1 unit of Automation will lead to an increase in customs revenue collection by 0.164 units holding all other factor constant. (Janet Muthama,2003) studied the influence of system revenue reconstruction on revenue accumulation at the Kenya Revenue Authority. One of the major objectives for her study was to find the link between system automation and collection of revenue with regard to Simba at the Kenya Revenue Authority. Majoring on a number of completed transactions the study clearly compared on the performance of revenue collection before the introduction of the Simba System and after the automation of the systems (Jacobs, D,2007). from the findings, the study finds that the volume of the collected revenue is strongly related to the adoption of new systems in customs operations. Volume of transactions completed before compared to the one after the Simba system implementation, the study makes a conclusion that transactions went up after the introduction of the Simba system. There is also a direct comparison on the number of transactions completed and the revenue raised. The higher the number of the transactions, the more the revenue collected.

#### **4.6.2 Capacity building and customs revenue collection.**

The study established that Capacity building and customs revenue collection are positively and significantly related ( $\beta_2 = 0.762$ ,  $p=0.000$ ). This implies that an increase in 1 unit of Capacity Building will lead to an increase in customs revenue collection by 0.762 units holding all other factor constant. In a study about Ghana's tax reforms and productivity of revenue between 1970 and 1993, Kusi (1998) found a buoyancy of 0.72 in the period before reforms and the elasticity was 0.71. The value of buoyancy after the reforms increased to 1.29 while the elasticity value increased to 1.22. Basing on these results, the author concluded that elasticity and buoyancy of the aggregate taxes as well as individual revenue had increased significantly after 1983 to 1993 reforms, implying that the reforms positively influenced revenue productivity. Specifically, the buoyancy and elasticity of aggregate revenue after the reforms was more than one, thereby suggesting positive impact of reforms on revenue productivity. For buoyancy of individual taxes, only excise duty and export duty for cocoa had values of less than one. The author also found that the buoyancy of aggregate revenues, import duty, sales tax and income tax was greater than the respective elasticity, hence suggesting that the reforms had played a crucial role in enhancing revenue productivity. The implication for this study is that tax and customs revenues are likely to increase depending on the reform measures put in place.

#### **4.6.3 Intelligence risk management and customs revenue collection.**

The study established that Intelligence risk management and customs revenue collection are positively and significantly related ( $\beta_2=0.237$ ,  $p=0.000$ ). This implies that an increase in 1 unit of Intelligence risk management will lead to an increase in customs revenue collection by

0.237 units holding all other factor constant. (Muriithi and Moyi ,2003) studied custom changes and its performance in Kenya. In his study he included a number of objectives one of them being to ascertain that the revenue structure could be improved so as to abate the perpetual custom revenue unevenness through intelligence risk management strategies. This would be arrived at through custom and revenue policies reforms that would minimize on the risks in customs especially those leading to loss of customs revenue. This research uses the factors of buoyancy and elasticity to check if custom revenue amendment in Kenya met the set goals. The two mentioned factors are computed for the period pre and post reforms. Proof from the study indicates that custom reforms had impacted positively on the overall custom revenue structure and on the personal revenue handles. The study shows that the elasticity of indirect revenue was low and direct custom revenue was high post reforms. Even though there was a positive impact, the reforms and modernization practices didn't make VAT receptive to income reforms, although VAT was a major factor in the revenue process.

(Odundo,2007) researched on changes in administration practices used by Kenya Revenue Administration in its attempt to reconstruct and modernize its operations. The objective of the research was to ensure the Reform Management used by KRA. The study was carried out via a case study of KRA. In nutshell it was noted a number of reforms in the firm pushed the administration to administer reforms effectively. This has led to an intelligence risk management team to look into issues of customs risk. There has been creation of new departments; some merging while others splitting in an attempt to offer improved services to clients. Like any other organization, opposition to reforms was unavoidable but the administration was capable of withstanding the opposition that was in need of status quo to rule. The above practices influence revenue collection and the intelligence risk management performance at the Kenya Customs Administration.

#### **4.6.4 Enforcement and customs revenue collection.**

The study established that that Enforcement and customs revenue collection are positively and significantly related ( $\beta_2=0.267$ ,  $p=0.000$ ). This implies that an increase in 1 unit of Enforcement will lead to an increase in customs revenue collection by 0.267 units holding all other factors constant. (Kariuki ,2009) carried a research on designed changes in administration regarding enforcement at Kenya customs revenue authority. The research points out that the Kenya Revenue Authority gives such a great illustration of a unique establishment that has with no fail accepted reforms. It has come out as one of the most promising establishment in Kenya. This achieved goal was primarily the end off of practices and reconstruction agenda aiming at enhancing enforcement practices so as to curb revenue loss (KRA, 2009). The Kenya Revenue Authority; had adopted modernization and reforms for its procedures to do away with red tape that is rampant in public establishments. To find a unique establishment with reconstructed and changed systems is crucial studying so as to ascertain how the Kenya customs Revenue Authority administration thrived. The objective of the research was to come up with planned reformed management measures used by Kenya customs Revenue Authority in its mission to apply structured reforms and to find out the factors that culminated to the administration changing its operating structures. The preferred method here was case study. The study made a conclusion that KRA took time to effect the systemic changes it was to go through by conducting different studies, preparation of situational analysis reports and corporate plans/BSC pointing out the changes to be effected and respective time periods (Asiweh, 2012) The research as well recommended that structured reforms have been effectively taken care of at KRA and the implementation of the modernized systems have ended up creating awareness to the public of what KRA is undertaking, custom officers becoming more technosurvy, improved accountability among staff and other stakeholders and increased enterprise image of KRA. The research conclusion

was for the custom officers to entirely accept to utilize KRA reformed structures willingly there should be more capacity building in IT skills, more participation of all partners and availability of computers.( Asiweh ,2012) This research paper recommended the implementation of the Simba system in the customs service department, positive efficiency, enhanced efficacy, improved competency, cut down in costs and enhanced administration. Reforms based on the recommendations of this research directs that the management of KRA adopts the security of the system from mismanagement, which is a major threat. (Nkote and Luwugge, 2010) rechecked the link between computerization and customs revenue management in application of factual proof from Uganda. The findings and facts from the Uganda Revenue Authority (URA) directs that despite computerization leading to efficacy of revenue management, this was unaccepted as computerization had not yielded to desired outcomes through reduction in cost of doing business by the clients, reduction of period of clearance and effectiveness. The picture, as a result was that URA realized the modernization through automation of customs revenue management at an accelerating rate of costs due to ineffective computerization of the whole system.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

This chapter presents a summary of key findings made by the study, conclusion drawn from the findings, and recommendations proposed by the researcher. The chapter also suggest areas for future research.

#### **5.1 Summary of findings**

This section provides a summary of the findings from the analysis in line with the objectives of the study. From the data collection exercise, the study obtained a response rate of 85.71%, which was satisfactory enough to complete this study. The results indicated that Automation, Capacity building, Intelligence risk management, Enforcement strategy had a positive and significant relationship with customs revenue collection. This implies that a unit increase in any of the variables would results in an increase in the customs revenue collection.

##### **5.1.1 Automation**

The first objective of the study was to determine the influence of automated systems on revenue collection in Kenya Customs Administration. The descriptive and inferential analysis results indicated that Automated Systems /Automation had a positive and statistically

significant influence on customs revenue collection ( $\beta_1=0.164$ ,  $p=0.002$ ). therefore, it should be encouraged through the following aspects, use of tracking devices, real time monitoring, use of computerized systems such as Integrated Customs Management System as well as online payments. All the above measures will ensure minimum or no revenue loss within the agency.

### **5.1.2 Capacity Building**

The second objective of the study was to establish the influence of capacity building on revenue collection in Kenya Customs Administration. The descriptive and inferential analysis results indicated that capacity building had a positive and statistically significant influence on customs revenue collection ( $\beta_2 =0.762$ ,  $p=0.000$ ). capacity building can be encouraged through the following ways, training of staff, proper recruitment and staff selection, corporate culture change management, implementing a work improvement program, workshops and use of remuneration, bonuses and rewards.

### **5.1.3 Intelligence risk management**

The third objective of the study was to find out the effects of intelligence risk management strategies on revenue collection in Kenya Customs Administration. The descriptive and inferential analysis results indicated that intelligence risk management had a positive and statistically significant influence on customs revenue collection ( $\beta=0.237$ ,  $p=0.000$ ). The agency should therefore advocate for transparent assessment, face to face interface and promotion of ethical conduct. Putting the above measures into consideration will considerably lead to higher custom revenue collection.

#### **5.1.4 Enforcement Strategies**

The fourth objective of the study was to explore the effects of enforcement strategies on revenue collection in Kenya Customs Administration. The descriptive and inferential analysis results indicated that enforcement strategies had a positive and statistically significant influence on customs revenue collection ( $\beta=0.267$ ,  $p=0.000$ ). This can be achieved through scanning cargo at points of entry, strengthening clearance audits, putting equal emphasis on compliance, stepping up communication with stakeholders and finally working with partner agencies.

#### **5.2 Conclusions of the Study**

Based on the results, the research concluded that automated systems had a clear effect on revenue collection in Kenya Customs Administration. Through effective use of the automated systems, more customs revenue was collected.

On capacity building, the study concluded that capacity building had a significant effect on revenue collection in Kenya Customs Administration. As a result of capacity building, there was an increase in customs revenue.

On intelligence risk management, the study concluded that intelligence risk management had a significant effect on revenue collection in Kenya Customs Administration. As a result of intelligence risk management, there was an increase in customs revenue.

Lastly, the study concluded that enforcement strategies had a significant effect on revenue collection in Kenya Customs Administration. Through enforcement, more customs revenue was collected.

### **5.3 Recommendations**

The study draws the following recommendation from the findings of the study;

That in order to collect more customs revenue, the Kenya Customs Administration should explore fully automated systems, train personnel on the use of systems, employ intelligence risk management as well as enforcement strategies. Regarding automation, the following practices should be encouraged, use of tracking devices, real time monitoring, use of computerized systems such as Integrated Customs Management System as well as online payments. All the above measures will ensure minimum or no revenue loss within the agency. capacity building can be encouraged through the following ways, training of staff, proper recruitment and staff selection, corporate culture change management, implementing a work improvement program, workshops and use of remuneration, bonuses and rewards. to ensure intelligence risk management, the agency should advocate for transparent assessment, face to face interface and promotion of ethical conduct. enforcement can be achieved through scanning cargo at points of entry, strengthening clearance audits, putting equal emphasis on compliance, stepping up communication with stakeholders and finally working with partner agencies.

### **5.4 Suggestion of Areas for Further Studies**

Further studies can be conducted to explore other factors that affect customs revenue collection in Kenya Customs Administration. These factors may include political instability,

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.

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## APPENDICES

### APPENDIX 1

#### QUESTIONNAIRE

##### PART 1 AUTOMATION

**kindly rate how the following factors on automation have influenced customs revenue collection. Tick on the scale range given on the table.**

**1. Strongly disagree    2. Disagree    3. Neutral    4. Agree    5. Strongly Agree**

	1	2	3	4	5
a) Use of tracking devices has positively influenced the customs revenue collected.					

b) Real time monitoring of cargo has fully been implemented by the Kenya customs administration at JKIA.					
c) Computerizing of systems has been fully established as a customs reform strategy.					
d) Online payment of duties has reduced noncompliance by traders and thus reduced revenue loss.					
e) Data sharing among the customs administration offices and the relevant stakeholders has fully been implemented.					

**PART II CAPACITY BUILDING**

kindly rate how the following factors on capacity building have influenced customs revenue collection. Tick on the scale range given on the table.

1. Strongly disagree    2. Disagree    3. Neutral    4. Agree    5. Strongly Agree

	1	2	3	4	5
a) Recruitment and staff selection of the customs officers has been carried out based on the ability and competency of the officers					
b) training of customs officers has been of positive impact on their performance at Kenya Customs Administration					

c) Remuneration, bonuses and rewards have been used as a reform to motivate the customs officers in their duties					
d) organizational culture has been transformed to one that uplifts the morale of the customs officers					
e) Customs officers should have organized workshops to equip them wholly with changing customs roles					

**PART III INTELLIGENCE RISK MANAGEMENT**

**kindly rate how the following factors on intelligence risk management have influenced customs revenue collection. Tick on the scale range given on the table.**

**1. Strongly disagree    2. Disagree    3. Neutral    4. Agree    5. Strongly Agree**

	1	2	3	4	5
a) face to face interface between the customs officers and the relevant stakeholders has been implemented					
b) transparent assessment of transactions leads to increased compliance by the traders.					
c) audit investigation has been highly practiced since the introduction of the customs reforms and modernization					

d) sharing information by the customs officers and the stakeholders has reduced customs revenue loss and non-compliance					
e) transparency and monitoring of targeted entries has reduced noncompliance by traders and thus reduced revenue loss					

**PART IV ENFORCEMENT STRATEGIES**

kindly rate how the following factors on enforcement strategies have influenced customs revenue collection. Tick on the scale range given on the table.

**1. Strongly disagree    2. Disagree    3. Neutral    4. Agree    5. Strongly Agree**

	1	2	3	4	5
a) investigation of audit reports has been highly practiced since the introduction of customs reforms					
b) effective border patrols by the customs border officers has minimized cases of customs revenue loss					
c) transparent audit investigation has led to reduced cases of non-					

compliance by traders					
d) use of electronic scanners by the customs officers has reduced cases of custom revenue evasion.					

**PART C: REVENUE COLLECTION**

**Secondary Data Collection Sheet**

	Import duty	Excise duty	VAT	
2009/2010				
2010/2011				
2011/2012				
2012/2013				
2013/2014				
2014/2015				

2015/2016				
2016/2017				
2017/2018				
2018/2019				
2019/2020				

**APPENDIX 3**

**REVENUE COLLECTION SHEET**

