

**EFFECT OF CUSTOMS REFORMS ON PERFORMANCE OF CUSTOMS AND  
BORDER CONTROL DEPARTMENT IN MOMBASA**

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**NOVEMBER 2020**

**DECLARATION**

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

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**HDB336-C016-6459/2017**

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Date

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

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Signature

Date

## **DEDICATION**

I dedicate this research project to my parents for supporting me in my education.

## **ACKNOWLEDGEMENTS**

I am profoundly obliged to numerous individuals; without whose assistance I would not have been successful in finishing this research study. Most importantly, I wish to extend my sincere appreciation to Mr. Ben Mumia without whose guidance, I would not have possessed the capacity to do this work successfully. His understanding, direction and awesome insightfulness have been of incredible incentive in the creation of this work. I sincerely appreciate the lecturers of the Department of Economics, Finance and Accounts. Above all I thank God; without whose heavenly support this examination would not have been finished.

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## **ACRONYMS AND ABBREVIATIONS**

<b>EAC</b>	East African Community
<b>ICMS</b>	Integrated Customs Management System
<b>ICT</b>	Information and Communication Technology
<b>IS</b>	Information System
<b>IT</b>	Information Technology
<b>KPA</b>	Kenya Ports Authority
<b>KRA</b>	Kenya Revenue Authority
<b>RKC</b>	Revised Kyoto Convention
<b>RBV</b>	Resource Based View
<b>US</b>	United States
<b>WCO</b>	World Customs Organization
<b>WTO</b>	World Trade Organization

## **DEFINITION OF TERMS**

<b>Computerization</b>	Refers to the use of machines that accept instructions and process results, in carrying out operations (Zhou & Madhikeni, 2013).
<b>Performance</b>	Act of completing a given assignment or role gauged against preset standards of precision, completeness, cost and speed (Van Dooren, Bouckaert, & Halligan, 2015).
<b>Customs Reforms</b>	Customs reforms refer to changes in the administrative procedures in Customs import and export clearance (Zhou & Madhikeni, 2013).
<b>Customs Value Reforms</b>	Customs Value Reforms refers to the set of rules on determining Customs value for imported goods (World Trade Organization, 2019).
<b>Customs procedures</b>	Customs procedures is an agreement that deals with key principles of simplified and harmonized Customs procedures (World Customs Organization, 2014).

## ABSTRACT

Customs reforms have been given more attention in Customs operations to facilitate international trade, increase revenue collection and reduce time for clearing cargo. The researcher examined the effect of Customs reforms on performance of Customs and Border Control department in Mombasa. Specific objectives were to determine the effect of Automation, Customs Value Reforms and Customs procedures on performance of Customs and Border Control department in Mombasa. Technology acceptance model, resource-based view theory and contingency theory were adopted by the study. Descriptive survey research design was adopted by the researcher. 280 Customs officers based in the port of Mombasa were targeted and a sample of 165 involved in the final study. Stratified sampling was used in selection of study respondents. Self-administered structured questionnaires was employed to collect data. The letter of introduction was first obtained from Kenya School of Revenue Administration after which the pilot study was conducted. A pilot study was conducted involving 17 Customs officers in North Rift region, to ensure the reliability and validity of the research questionnaire. The supervisor was consulted and KMO and Bartlett test was conducted to ensure that the research questionnaires met the requirement of content validity. Reliability of the research questionnaire was tested using Cronbach's alpha coefficient. The researcher carried out descriptive and inferential analysis in SPSS 25 software. The researcher utilized descriptive statistics for data analysis which included frequencies, percentages, means and standard deviations. Product Moment correlation coefficient and multiple regression analysis were the inferential statistical tools that were used for analysis. The data was presented in tables. The study found out that Automation positively and significantly predicts performance of Customs and Border Control department in Mombasa. It was revealed that Customs Value Reforms positively and significantly predicts performance of Customs and Border Control department in Mombasa. The study found out that Customs procedures positively and significantly predicts performance of Customs and Border Control department in Mombasa. Firstly, the study concludes that Automation has positive significant effect on performance of Customs and Border Control department in Mombasa. Secondly, the study concludes that Customs Value Reforms positively and significantly affects performance of Customs and Border Control department in Mombasa. Thirdly, it was concluded that Customs procedures positively and significantly affects performance of Customs and Border Control department in Mombasa. The study recommends that Automation should be enhanced in order to improve performance of Customs and Border Control department in Mombasa. It is recommended that Customs Value Reforms should be enhanced in order to improve performance of Customs and Border Control department in Mombasa. It is also recommended that Customs procedures should be enhanced in order to improve performance of Customs and Border Control department in Mombasa. This study is expected to benefit various stakeholders such as KRA, policy makers and researchers.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background to the Study**

Global trade is a fundamental to economic growth and social development with an extremely fast-moving world. Economies reap many benefits with a stable trading environment which impact on society and the way people live positively. Customs administrations play an integral role in world of commerce by ensuring that global trade meets regulatory that conforms to national laws, providing prompt good clearance and compliance and meets tax and duty collection targets. Improved economic growth for countries and industries competitiveness should be attained with optimal use of IT to facilitate trade (Schware & Kimberley, 1995).

Currently, there is increase of complexity and volume of international trade, accelerated by technological advances that have changed the way Customs administration carry out their responsibilities and business operations significantly (Victoria, Leyva, Berumen, Joya, & Aranibar, 2017). Revolutionized global trading practices requires Customs to provide extensive trade facilitation as it controls the international movement by people engaged in trade across countries. Customs have been moving away from traditional control methods and adopting new technology and approaches so as to strike a balance between goals. Globalization has led Customs administrations to devise ways to increase their performance by adopting measures aimed at streamlining the Customs process (Victoria et al., 2017).

Customs performance is centered on crucial indicators like revenue collection, trade facilitation and border control. Some of the measures implemented by Customs administrations to improve on their performance include reforms of custom procedures by application of technology, adoption of approaches to manage risk and carry out audits and adopting best standards and practice as per Customs procedures and adopting agreements meant to facilitate trade (Victoria et al., 2017). This measures aid Customs administration to meet targets as per the expectations of the government of control and revenue collection and also enhance trade across the world (Keen & Mansour, 2010).

Internationally trade has expanded tremendously and this has led to more demand to Kenya Revenue Authority to facilitate legitimate trade internationally by enhancing predictable and transparent system to traders during service delivery (Keen & Mansour, 2010). Enhancing transparency in Customs clearance and encouraging traders to comply voluntarily is essential in

reforming Customs. KRA, Customs and boarder control department play a vital role in fostering economic competitiveness, revenue collection and protection of the society from illicit trade. Requirements set by internationally accepted conventional standards and best Customs practices as outlined in by provisions of the WTO and the RKC introduced by WCO which requires the Customs to be transformed to modern custom organizations (Zhou & Madhikeni, 2013).

System Automation enables procedures to be carried out efficiently and hence enable revenue authorities meet their targets (Zhou & Madhikeni, 2013). Information systems are required to facilitate trade across the borders. Trade facilitation is ensuring that custom clearance of goods at entry points and their movement across custom territories is made easier in terms of time at minimum costs. Trade facilitation main aim is the reduction of time and all cost incurred in transactions meant to enforce trade policies and regulations. To achieve this objective, Customs Automation reforms have to be established to streamline the Customs processes (Portugal-Perez & Wilson, 2012).

Act of parliament, on July 1st 1995 Cap.469 established Kenya Revenue Authority, a government body to facilitate revenue collection and harmonize the separate tax collection agencies. Kenya Revenue Authority's (KRA) principal function of the department is collection and accounting for Customs and excise taxes. Import duty, excise duty (on imports and local commodities) and Value Added Tax (VAT) on imports are some of taxes collected. Other levies collected by the Department are on an agency basis. These are Petroleum Development levy, Road Maintenance Levy, Import Declaration Form (IDF) fees, Directorate of Civil Aviation fees and fees on motor vehicle registration. Also, the department also plays a major role in the collection of trade statistics, trade facilitation and safeguarding the society from unlawful entry and exit of restricted, prohibited and dangerous goods through the land, air and sea border points.

Mombasa is a town located along the Kenyan coast; it is the second largest city in Kenya after Nairobi the capital city. Mombasa is the headquarter of KRA's Customs' operations in Southern region. Mombasa department is divided into three sections, the southern headquarters, port operations and container freight stations. Southern headquarters managed the border entry and exit points, valuation and tariff, trade facilitation. Port operations are further divided into verification and enforcement sections while Container freight stations managed CFS operations.

Performance is the act of completing a given assignment or role gauged against preset standards of precision, completeness, cost and speed (Van Dooren, Bouckaert & Halligan, 2015). In an

organization or a firm, performance is the measure of actual output measured against set goal or targets. It is the outcome of a process which requires inputs to produce results then measured against set expectations (Mutema, 2013). Customs reforms are key input in determination of Customs performance. They determine the results to be achieved by a Customs administration from the strategies applied to the process. Customs administrations have targets which are both fiscal and non-fiscal targets. The Customs achievements for a particular period are then measured against the set target to determine their performance. Customs performance is measured using key indicators like volumes of trade facilitated, time and cost incurred in Customs clearance, border security and revenue collected (Hillberry & Zhang, 2015).

Trade facilitation which is a key Customs function is measured in terms of trade costs, time taken in the Customs process and the volumes facilitated. Most Customs administration target is to facilitate both local and International trade, the results from a certain period is the compared with a set of targets or benchmarks. Trade facilitation is enhanced by simplifying, standardizing and harmonizing Customs processes. This results in low trade cost for trades with reduced Customs contact, waiting time and integrity issues (Grainger, 2011). George (2012) noted that most of the developing countries rely on revenue collected from taxation of imports and export of a country. This makes Customs departments to formulate policies which enhance collection of revenue. Each financial year, there are revenue related targets set by the government for Customs administration. Customs performance is then determined by the deviation from the set targets (George, 2012).

Various countries have reformed their Customs systems across the world. In Bangladesh, the system Automation has simplified Customs import and export processes (Hossain, Deb & Al Amin, 2009). At the port of Shanghai in China, the process of clearing cargo is automated. The electronic systems for Customs are connected and integrated with the systems of other agencies involved in facilitating trade. In India, trade has been facilitated as depicted in fast Customs clearance due to the use of Customs systems that are integrated (Kenya Association of Manufacturers [KAM, 2009]. The India Customs electronic data interchange gateway ensures that people file taxes and declarations electronically in the process of importing and exporting products. In Malaysia, the adoption of modern technologies has led to reduced inefficiency in documentation process and Automation of international trade transactions at Customs offices hence leading to reduced delays and faster Customs clearance process (KAM, 2009).

The journey towards achievement of global trade facilitation objectives as introduced by the World Trade Organization (WTO) has been embarked upon in the East and Southern Africa (ESA) region and receives high priority on the regional agenda, in the realization of economic impacts for the respective nations of the region and their Customs administrations. Most nations in the region have taken measures to move from manual systems of processing Customs declarations to electronic systems. Examples are Kenya, Rwanda, Zambia, Zimbabwe, Mozambique and South Africa (Tshuma 2016). The Customs procedures (RKC) has also been adopted by countries across the world due to the benefits associated with it as regards Customs performance. The RKC makes provisions meant to improve global trade while ensuring that Customs authorities effectively control processes (World Customs Organization [WCO], 2014).

## **1.2 Statement of the Problem**

The Customs administrations have been faced with a lot of expectation from government, public and International business community. Due to this reason they have come up with measures aimed at improving the Customs processes and procedures to enable them to meet set goals. The KRA has instituted reforms focused on ensuring compliance with standards, adopting recommended approaches to improve competitiveness of Kenyan products both locally and across the borders. In line with recommendations by Customs procedures, KRA has implemented reforms which focus on procedural improvements in Customs administration and entail embracing best technologies for enhancing Customs performance. KRA has put in place mechanisms to ensure businesses and cross-border trade thrive as recommended by Customs Value Reforms. In addition, KRA has automated its systems, as evidenced by the use of ICMS, to eliminate Customs challenges that hampered cross-border trade. Though there is progress in adoption of modernization of the Customs processes in order to improve on revenue collection and trade facilitation, the speed and extend of modernization is still inadequate, specifically in coming up with Customs control and enforcement capabilities, and improving operational resources and management (Montagnat-Rentier & Parent, 2012).

KRA Customs and Border Control department has its targets set to meet. In the recent year, there has been increasing trend in collection of revenue though they have not been meeting set revenue targets. Compliance levels have also improved but there is a great urge to minimize Customs offences. The government has realized Customs as a tool for economic prosperity allocating higher targets to Customs each year. International traders have pressurized the administration to adopt Customs reforms in the liberalization of the international trade and reduce clearance time for cargo and passengers. Even with increased modernization, there are still high costs and

delays for the traders. Mutema (2013) conducted a research focusing on customer service delivery as a strategy to improve Customs performance but the researcher didn't bring out the concept of Customs reforms in her research. Holzner & Peci (2012) also noted in their conclusion that there existed a positive relationship between Customs procedures with economic impact and trade facilitation of imported goods.

In the study, they didn't focus on the effect of Customs reforms on Customs performance. Due to this, this study will determine the effect of Automation, Customs Value Reforms and Customs procedures on performance of Customs and Border Control department in Mombasa. Therefore, the researcher sought to examine the effect Customs reforms on performance of Customs and Border Control department in Mombasa.

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

The study was guided by the following objectives;

#### **1.3.1 General Objective**

The study established the effect of Customs reforms on performance of Customs and Border Control department in Mombasa.

#### **1.3.2 Specific Objectives**

- i. To establish the effect of Automation on performance of Customs and Border Control department in Mombasa.
- ii. To establish the effect of Customs Value Reforms on performance of Customs and Border Control department in Mombasa.
- iii. To establish the effect of Customs procedures on performance of Customs and Border Control department in Mombasa.

### **1.4 Research Questions**

- i. What is the effect of Automation on performance of Customs and Border Control department in Mombasa?
- ii. What is the effect of Customs Value Reforms on performance of Customs and Border Control department in Mombasa?
- iii. What is the effect of Customs procedures on performance of Customs and Border Control department in Mombasa?

### **1.5 Significance of the Study**

The study findings will help KRA management to design and implement responsive policies on Customs reforms program to improve Customs performance. The effects that Automation, Customs Value Reforms and Customs procedures has had on Customs performance will be clarified and thus provide the basis for recommendations for improvements.

The government will also benefit from this research study findings as the importance of Customs reforms will be outlined. The government will be able to evaluate the effectiveness of activities undertaken to ensure that Customs performance improves. Hence, the decisions on whether further funds would be channeled to the government initiatives or not will be made with empirical information at hand.

The study findings will also be vital to other researchers and academicians. Other researchers and academicians may add on knowledge about Customs reforms and try to understand the gaps that exist between policy, research and practice. It will also provide a big support to the current literature on Customs operations not only for Customs but for the business community.

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

The study was conducted at Mombasa port. The study respondents were Customs officers working in Mombasa town. The study focused Automation, Customs Value Reforms and Customs procedures as the Customs reforms in KRA. The study was conducted between the months of March and November 2020.

### **1.7 Limitation of the Study**

The researcher was collecting data from Customs officers who were at times busy attending to clients. They were however allowed to respond at convenient times and questionnaires collected from them at those times.

Moreover, some of the respondents were wary about the purpose for which the research was being conducted. However, the researcher assured them about the academic purpose for which the research was being conducted and the confidentiality that would be upheld in the handling of data.

Another challenge the study encountered was Covid-19 pandemic. As the researcher was collecting data, the restrictions on adherence to Covid-19 guidelines such as social distancing and assessment of temperature of respondents as well as research assistant collecting data. Some

employees were not at work at other times even after they had received questionnaires to respond to. This delayed the data collection process. However, the researcher had to schedule with them on times they were reporting to work as provided by their organization.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents theoretical and empirical literature review, the conceptual framework, critique of existing literature relevant to the study, summary of reviewed literature and research gaps.

#### **2.2 Theoretical Review**

This chapter elaborates theories guiding the study which are; technology acceptance model, resource-based view theory and contingency theory

##### **2.2.1 Technology Acceptance Model**

Technology Acceptance Model (TAM) was developed by Fred Davis in 1989 based on the theory of reasoned Action. The theory helps in pinpointing adjustments to be introduced into to the system to make it more acceptable by users. TAM argues that technology acceptance is influenced by issues such as the perceived usefulness and perceived ease of use (Mutisya, 2016). Davis (1989) came up with the TAM to predict the cause users accepts or rejects information technology and how to expand the acceptability, presenting, this manner, a pillar to foretell and describe the acceptance.

TAM was suggested to help explain the casual relationship between external elements of user's acceptance and the real technology application while attempting to know the user's behavior about the utility facts and utilization of the facility perceived by him or her. Perceived usefulness is described as the degree to which someone trusts that the utilization of technology in a process will improve operations contributing to better results. Perceived ease of use is described as the degree to which someone considers that employment of technology in a process improves user-friendliness and the efficiency of the processes (Nasri & Charfeddine, 2012). This study applied Technology Acceptance Model to explain why Customs administrations utilize technology, that is the Automation, to improve the Customs processes to improve the performance of Customs and Border Control department in Mombasa.

##### **2.2.2 Resource Based View Theory**

Resource-based view theory was developed by Edith Penrose in 1959. The theory argues that a firm consists of a collection of productive resources which must be exploited in such a manner

that their potentially valuable services are made available to the firm in order to contribute to enhanced performance (Newbert, 2007). RBV theory assumes that firms within an industry or a strategic group may be heterogeneous with respect to the bundle of resources that they control. Secondly, it is assumed that resource heterogeneity may persist over time because the resources used to implement firms' strategies are not perfectly mobile across firms. This implies that resources cannot be traded in factor markets and are difficult to accumulate and imitate (Bridoux, 2007). According to Barney (1991, 1994, 2002, as cited in Kraaijenbrink, Spender & Groen, 2009), resource-based view theory centrally proposes that if a firm is to achieve a state of sustained competitive advantage (SCA) it must acquire and control valuable, rare, inimitable, and non-substitutable resources and capabilities, plus have the organization in place that can absorb and apply them.

According to Barney (1991, as cited in Foss & Stieglitz, 2010) a firm has a competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors. He further states that it has a SCA when it is implementing a strategy that creates value not simultaneously being implemented by any current or potential competitors and when these other firms cannot duplicate the strategy's benefits. The RBV theory is applied in this study because it implies that possession of modern technologies will eventually lead to enhanced performance. This is because technologies possessed are viewed as important resources to the entity (Santhanam & Hartono, 2003; Wade & Hulland, 2004). The theory was applied to conceptualize the effect of Automation on performance of Customs and Border Control department in Mombasa as the technology employed is viewed as critical resources to KRA.

### **2.2.3 Contingency Theory**

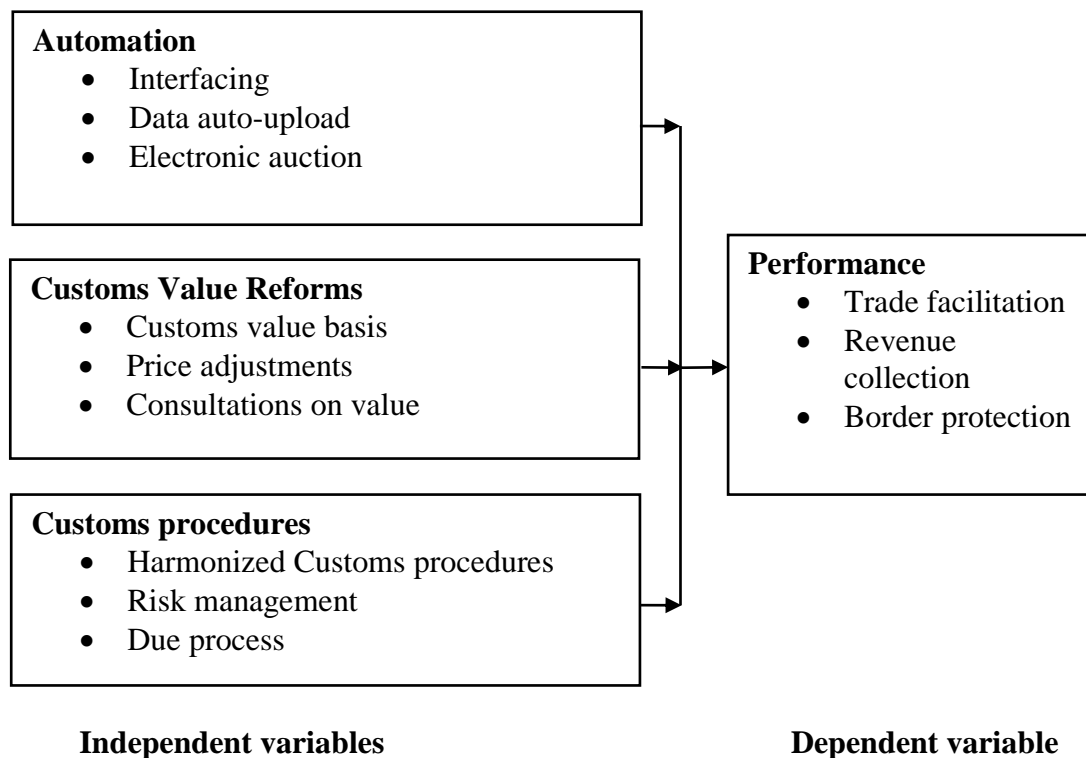
Contingency theory was initially proposed in 1950s. It argues that the organization is effective when it aligns itself appropriately depending on prevailing circumstances in its environment in order to achieve better performance (Donaldson, 2001). Contingency theory suggests that a proper alignment among internal and external organizational factors will positively affect organizational performance (Linton, 2014). According to Galbraith (1973, as cited in Linton, 2014) the basic underlying assumptions of contingency theory are that; there is no one best way to organize and any way of organizing is not equally effective.

According to contingency theory, proposed that the appropriate organizational structure and management style is dependent upon a set of contingency factors, usually the uncertainty and

instability of the environment. It implies that there is no best way of managing. Applying the theory to the current study, it implies that it is worthwhile to adopt new approaches proposed by WTO and RKC so as to enhance performance of Customs. Given that the world is changing especially on issues of international trade, the Customs processes (Tosi & Slocum, 1984). The contingency theory was the basis for conceptualizing that Customs Value Reforms and Customs procedures affects performance of Customs and Border Control department in Mombasa.

### 2.3 Conceptual Framework

The conceptual framework describes phenomena under study by graphically depicting the relationship between the predictor variables and the outcome variable (Mugenda & Mugenda, 2013). This conceptual framework has been developed taking into account the revelations of pertinent literature. The independent variables were; Automation, Customs Value Reforms and Customs procedures. The dependent variable was Performance of Customs and Border Control Department in Mombasa. The conceptual framework is shown in Figure 2.1.



**Figure 2.1: Conceptual Framework**

## **2.4 Review of Variables**

### **2.4.1 Automation and Performance**

Customs use of automation entails the application of computer-based technology for the collection, organization and processing of data then efficiently communicating the information to streamline Customs processes while ensuring proper storage and retrieval of Customs information (Setchi & Jordanov, 2010). Information technology has proved to be a success in streamlining processes and improving performance when applied by other organizations. Customs organizations all around the globe try to utilize information technology to streamline Customs processes to facilitate trade and address challenges brought about by globalization. WCO which oversees most Customs organizations around the globe recommended utilization of technology in RKC as practice to simplify and harmonize Customs processes and procedures (Essenbayev, 2016).

Information systems are required to facilitate trade across the borders (Kaibe, 2012). Trade facilitation is ensuring that custom clearance of goods at entry points and their movement across custom territories is made easier in terms of time at minimum costs (Omondi, Wawire, Manyasa, & Thuku, 2014). Trade facilitation main aim is the reduction of time and all cost incurred in enforcing legislations, regulations and trade policies. To achieve this objective, Customs Automation reforms have to be established to streamline the Customs processes (Portugal-Perez & Wilson, 2012).

In 2015, KRA sought to replace Simba system with a more complicated information system which can link with other information systems used by the other Customs administrations in East Africa Community Customs Union (KRA, 2018). The venture has led to development of integrated Customs management system (ICMS) which is still under trial to replace Simba 2014. ICMS is said to be more efficient than Simba and incorporating more modules and that it will aid Customs in curbing tax cheats hence improving Customs processes. Introduction of Customs information systems have helped in reduction of contact time with Customs, seal tax leakages and improved efficiency in clearance of goods and passengers (KRA, 2018).

The ICMS enables the KRA systems to work with systems of other organizations involved in clearance such as KPA and KEBS. The coming up with this technology was meant to ensure that Kenya aligns its procedures in Customs processes with recommended international standards which are meant to ensure efficient and effective Customs administration. The latest

technological changes by KRA in Customs operations is key in ensuring that international trade is facilitated (KRA, 2018). Traders are able to declare information about their cargo on their own even before arrival at the port of Mombasa. It is very difficult to evade taxes in the new system as non-compliance can easily be detected by Customs authorities (KRA, 2018).

#### **2.4.2 Customs Value Reforms and Performance**

Kenya has been a WTO Member since 1 January 1995, and a contracting party to GATT since 5 February 1964. It has been reviewed three times under the WTO Trade Policy Review Mechanism: first in 2000, and then twice, jointly with all the EAC WTO Members, in 2006 and 2012. Kenya has not been directly involved in any dispute at the WTO. It has been a third party in three disputes cases (WTO, 2019). Kenya participates actively in the WTO at several levels. It was the coordinator of the Africa-Caribbean-Pacific (ACP) Group in 2014. It currently leads the WTO Accession negotiations for the Greater Horn of Africa, and hosted a regional dialogue in this regard in August 2017. It ratified the WTO agreement on facilitating trade in December 2015 and notified its category A commitments (WTO, 2019).

The value of transactions is the key basis on which Customs valuation is anchored. According to the WTO agreement, in a situation where purchasers have incurred expenses which are not part of import price, these have to be factored into the price for Customs purposes. In cases where the expenses incurred by the buyer are not in monetary form, these still have to be included in the values of transactions (WTO, 2019). It is also specified that a consultative process should be encouraged between Customs and importers for value determination purposes especially when information asymmetry exists on prices of identical products necessary for determining fair values of transactions (WTO, 2019). Under appropriate circumstances, values of transactions are determined on the basis of acquisition prices in the countries of origin to buyers in those countries. The importers should also be allowed to choose whether further processing should be done after importing and thus determining the Customs value thereafter (WTO, 2019).

#### **2.4.3 Customs procedures and Performance**

The RKC outlines approaches to simplifying and harmonizing procedures involved in getting Customs clearance. It highlights that the process should be predictable, transparent, utilize efficient technologies, follow all processes required and should embrace managing risks, provision of cargo information before they arrive at the port of Mombasa and auditing after Customs clearance has been obtained. Adoption of RKC was done in 1999 and its implementation started in February, 2006. In 2010, February, parties to the RKC were not less

than 70% of trade value internationally (WCO, 2014). To reduce the Customs intervention in the international flow of goods to a minimum, modern Customs administrations must develop comprehensive and transparent Customs legislation. The objective of the RKC is not only to meet the needs of the trading community to facilitate the movements of goods but also to improve Customs control (WCO, 2010).

Rapid changes in international trade, globalization and information technology make it necessary for Customs administrations to modify procedural approaches to take account of these new developments (WCO, 2010). There are several international conventions and other instruments designed to harmonize and simplify Customs procedures. This Convention, which contains the basic principles for all Customs procedures and practices, is one among them. The RKC facilitates trade among countries of the world. Across the globe, countries while engaging in trade have been ensuring that they try to align their Customs practices with the standards recommended by the RKC (Swedish National Board of Trade, 2008; WCO, 2010).

#### **2.4.4 Performance of Customs and Border Control Department in Mombasa**

According to Nyaoke (2016) firm's performance represents the measure of standard or the prescribed indicators of effectiveness as well as efficiency and environmental responsibility. Customs performance is the result from Customs processes. It involves measuring Customs results against set targets. The achievement could be in terms of trade facilitation, revenue collection or border security. Revenue refers to amount of cash collected by government from government bodies. Taxes and duties from imports and exports of the country are collected by Kenyan government through KRA which is the state agency responsible. Revenue collected is used to measure performance of the department from set targets. Each department within Customs and border department has its' own target. To meet revenue targets, policies are set to reduce revenue leakage while identifying new sources of income (Nyaoke, 2016).

#### **2.5 Empirical Review**

Alcedo and Cajala (2015) examined the present Customs' bureau program of computerization in Philippines, focusing on import and export transactions. It was noted that there was unanimous agreement among respondents that the perceived benefits of the BOC computerization program were attained. However, corruption was fairly eliminated. It was noted that respondents unanimously agreed that the computerization of the BOC was effective. The study also found out that import/export documentation was fairly effective. However, this study was not conducted in Kenya.

Zhou and Madhikeni (2013) studied Zimbabwe's revenue collection system, process and challenges. It was established that electronic revenue systems increase business efficiency hence resulting in improvements in revenue collection. However, this study did not outline the effect of Automation of payment system on Customs performance measured by trade facilitation and border protection. Moreover, the study was not conducted in Kenya.

Mutema (2013) presented a study in Kenya on enhancing Customs performance using customer service competitive strategy. From her study, good customer service which ensured smooth flow of information was found out to be of great importance in increasing the performance of Customs administrations. A lot of bureaucracy procedures leading to slow decision making, lack of regular training of existing staff, improper supervision and communication breakdown between staff and supervisors lead to poor service delivery by Customs administrations. The study revealed that unavailability of proper hardware infrastructure to handle Customs processes and under-staffing in various stations lead to delays hence increasing clearance waiting time. Customs system downtime (Simba 2005) was revealed as a major challenge affecting Customs performance. The outage made clearing agents bribe Customs officer to clear cargo without following the proper channels lead to revenue loss for Customs and border departmen

Desiderio and Bergami (2011) studied risk management techniques and their use by Customs. It was established that risk analysis and risk management techniques are part of any decision making process in practically every kind of organization. It was determined that for Customs, risk analysis and management techniques are helpful to optimize both human and financial resources, reduce costs, expedite clearance, limit corruption-where inspection processes are automated; thereby improving their overall efficiency and performance. However, this study used secondary data. Field survey was not conducted.

Hints et al. (2011) examined CRM in 24 WCO member administrations. It was noted that quantification of crime and terrorism related risk likelihoods and consequences is an important but highly complicated CRM task especially when it comes to those low likelihood, high consequence events, such as acts of terrorism could represent. It was established that accepted levels of risk are determined by 50% of the respondents on economic operator level, and by 42% of overall level of economy. It was also determined that 1/3 of the respondents stated that they do not follow any formal risk management processes with quantified techniques. However, this study did not outline the border protection and trade facilitation aspect of performance of Customs and Border Control department in Mombasa.

## **2.6 Critique of the Existing Literature Relevant to the Study**

Desiderio and Bergami (2011) studied risk management techniques and their use by Customs. However, this study used secondary data. Field survey was not conducted. Alcedo and Cajala (2015) examined the present Customs' bureau program of computerization in Philippines, focusing on import and export transactions. However, this study was not conducted in Kenya. Zhou and Madhikeni (2013) studied Zimbabwe's revenue collection system, process and challenges. However, this study did not outline the effect of Automation of payment system on Customs performance measured by trade facilitation and border protection. Moreover, the study was not conducted in Kenya. Oduor (2018) examined the effect of cargo scanning on collecting revenue at Kenya's Mombasa port. However, this study did not outline the border protection and trade facilitation aspect of performance of Customs and Border Control department in Mombasa.

Mutema (2013) conducted a research focusing on customer service delivery as a strategy to improve Customs performance. The research used resource based view that highlighted how deployment of specific organizational resources and capabilities can result in superior performance. Case study was used as the research design and the target population was both Customs officers and clearing agents. The study found out that slow rates in processing of declarations, release of cargo, resolving public complaints and provision of focused taxpayer education were the main customer service issues affecting Customs performance. This is supported by a study conducted by Wambugu (2016) where he concluded that proper customer relationship management in an organization result in better performance. From the above studies, it is noted that a gap can be bridged by conducting a research to establish the effects of Customs reforms on performance of Customs and Border Control in Mombasa. The relevant empirical studies reviewed showed that Customs reforms have had effect on performance of Customs. Whereas most studies were not conducted in Kenya, those conducted in Kenya also had methodological limitations as the technique of analysis to determine effect was majorly descriptive analysis. Moreover, there exist conceptual differences on measurement of Customs performance.

## **2.7 Research Gaps**

Desiderio and Bergami (2011) studied risk management techniques and their use by Customs. However, this study used secondary data. Field survey was not conducted. Alcedo and Cajala (2015) also examined the present Customs' bureau program of computerization in Philippines, focusing on import and export transactions. However, this study was not conducted in Kenya.

Also in Kenya, Mutema (2013) focused on customer service delivery as a strategy for improving Customs performance. In all these studies conducted, none considered Automation, Customs Value Reforms, and Customs procedures on Customs performance, measured in terms of trade facilitation, revenue collection, border control and other measures of Customs performance.

## **2.8 Summary**

The chapter has introduced the relevant literature addressing Customs reforms affecting Customs performance. Specifically, the chapter discussed theories which premise the study which include Technology Acceptance Model theory, Resource Dependence theory and Contingency theory . The chapter further developed conceptual framework to graphically present the relationship between the study variables. The review of literature on variables is presented in the chapter and is organized as per the study variables. The chapter provides relevant empirical studies, critique of the literature and research gaps.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents discussions on step by step procedures that will be followed in addressing the research problem. The research design, population, sampling technique and sample size, data collection techniques, pre-testing of research instruments, data collection procedures and data analysis and processing are also presented.

#### **3.2 Research Design**

The study used descriptive research design. Mugenda & Mugenda (2013) highlighted that descriptive design is suitable since it involves gathering of data from subjects in a study with aim of answering queries regarding their present status. A research design is the specification of methods and procedures for obtaining the information required (Walliman, 2010). The descriptive design was used since the study gathers quantitative and qualitative data that it will describe the relationship between Customs processes and performance of Customs and Border Control department (Mugenda & Mugenda, 2013).

#### **3.3 Target Population**

Population is the total collection of elements for which the research data are to be utilized to come up with deductions (Kothari, 2011). According to Stenner & Watts (2012) target population describes those elements for which the results of the research are aimed to be generalized from. For this study, the target population was 280 Customs officers drawn from three different sections of Customs and Border Controls department in Mombasa (KRA Human Resource Department, 2020).

#### **3.4 Sampling Frame**

Bell (2014) described sampling frame is the basis material from which a record of potential subjects in a population can be sampled. For this study, a sampling frame is the list of 280 Customs officers from KRA human resource records for Customs and Border Control department Southern Region. The list is shown in Table 3.1.

**Table 3.1: Target Population**

Section	Target	Population	Percentage
Customs headquarters		100	35.7
Port operations		100	35.7
CFS's		80	28.6
TOTAL		280	100

Source: KRA Human Resource Records, Southern Region 2020

### 3.5 Sample Size and Sampling Technique

Walliman (2010) described sampling as the procedure of choosing subjects of the population of interest so that by studying the selected subjects we can make a generalized conclusion about the population. The researcher used Slovin's formula to calculate the sample size of the population as shown in Equation

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

In above equation , n is the size of the sample, N is the size of the population and e is the precision level. The sample size is shown

$$n = \frac{280}{1+280(0.05^2)} = 164.71 = 165.$$

The study sample was therefore be 165 Customs officers based in Mombasa town. The sampling technique that was used in the research is stratified random sampling. The benefit of using this sampling is that every member in the sample is given an equal chance to be interviewed so as to get appropriate feedback. When the population is grouped to strata as shown in Table 3.2, its measurement becomes more manageable and cheaper (Neuman, 2014). Stratified sampling was used to select the Customs officers who participated in the study. As depicted in Table 3.2, the number of respondents for each strata was determined using proportionate allocation, after which simple random sampling was used to pick specific respondents in each stratum (Neuman, 2014).

**Table 3.2: The Sample Size for Each Strata**

Strata	Target population	Proportionate allocation formula	Size
Customs headquarters	100	$n_1 = \frac{100}{280} \times 165$	58.93 = 59
Port operations	100	$n_2 = \frac{100}{280} \times 165$	58.93 = 59
CFS's	80	$n_3 = \frac{80}{280} \times 165$	47.14 = 47
<b>Total</b>	<b>280</b>	$n = \frac{280}{280} \times 165$	<b>165</b>

### 3.6 Data Collection Instruments

The researcher collected primary data. Data collection instruments are tools utilized to gather data in an objective and a systematic manner for the purpose of the research (Bell, 2014). Questionnaires were utilized to collect data as the key data collection instrument for primary data and was in structured form. Questionnaires enabled study participants to freely express their opinions and provide the opportunity for unbiased information to be collected (Stenner & Watts, 2012; Kothari, 2011).

### 3.7 Data Collection Procedures

The data collection procedures refer to the steps undertaken in data collection process. The data collection process was started as soon as authorization was done and piloting was complete. Authority to carry the research was sought from the Kenya school of revenue administration and southern Region headquarters in Mombasa. Data was collected by way of handing out the questionnaires to the target respondents and collecting them after they have filled them in. All participants' data was handled confidentiality and for research purposes alone.

### 3.8 Pilot Study

Pilot testing aids the researcher to have a preliminary look at the research instrument and see whether thresholds of a valid and reliable instrument had been met. A pilot study was conducted involving 17 Customs officers in North Rift region, which is approximately 10% of the study sample (Sekaran & Bougie, 2013). Piloting the research questionnaire enabled errors to be detected and therefore corrected (Sekaran & Bougie, 2013; McKenney & Reeves, 2013).

### 3.8.1 Validity

A valid research questionnaire correctly measures the concepts under study. It means that the questions asked in the questionnaire are within the domain of that specific construct. The researcher consulted supervisor and conducted the KMO and Bartlett test to ensure that the questionnaire meets the requirements for content validity (Neuman, 2014).

### 3.8.2 Reliability

A reliable research instrument gives consistent results. As a researcher evaluates a variable, the aim is to determine whether measurement results from the study are dependable and consistent outcomes (Neuman, 2014). The Cronbach's alpha coefficient was used to examine reliability, which is recommended to be 0.7 and above (Neuman, 2014).

### 3.9 Data Analysis

Data was collected, checked for varies flows and structured open-ended questions coded and responses tallied. SPSS 25 software was used to carry out descriptive and inferential analysis. Descriptive statistics included frequency tables, percentages, means and standard deviations. Inferential statistics were multiple regression analysis and Pearson Product Moment Correlation. Tables were used for data presentation. The multiple regression model that was adopted is depicted in below equation.

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

Where; **Y** represents performance of Customs and Border Control department in Mombasa

**$\beta_0$**  represents the y-intercept

**$\beta_1$ ,  $\beta_2$  and  $\beta_3$**  represent coefficients of Automation, Customs Value Reforms and Customs procedures respectively

**$X_1$ ,  $X_2$  and  $X_3$**  represent the independent variables

**$\varepsilon$**  represent error term

## **CHAPTER FOUR**

### **RESEARCH FINDINGS AND ANALYSIS**

#### **4.1 Introduction**

This chapter presents the response rate, background information of respondents, results of descriptive statistics and inferential statistical results.

#### **4.2 Response Rate**

Out of all the 165 questionnaires that were given to respondents, 126 questionnaires were duly filled and returned. 39 (23.64%) of the questionnaires were not returned. Therefore, the response rate was 76.36% which is over the 70% threshold stipulated by Kothari and Garg (2014) as excellent response rate for analysis and reporting. The results are revealed in Table 4.1.

**Table 4.1: Response Rate**

	Frequency	Percent
Questionnaires duly filled and returned	126	76.36
Questionnaires not returned	39	23.64
Total	165	100.0

#### **4.3 Pilot Results**

##### **4.3.1 Validity Results**

The researcher conducted KMO and Bartlett test to examine sampling adequacy for each study variable in order to confirm content validity. In Bartlett test, the procedure is based on the statistic whose sampling distribution is approximately a Chi-Square distribution with (k-1) degrees of freedom, where k is the number of random samples, which may vary in size and are each drawn from independent normal distributions. The findings are presented in Table 4.2.

**Table 4.2: KMO and Bartlett Test**

Constructs

<b>Automation</b>		Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.613		
		Bartlett's Test of Sphericity	Approx. Square	Chi-	23.522
			Df		6
			Sig.		.001
<b>Customs Value Reforms</b>		Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.738		
		Bartlett's Test of Sphericity	Approx. Square	Chi-	30.421
			Df		6
			Sig.		.000
<b>Customs procedures</b>		Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.506		
		Bartlett's Test of Sphericity	Approx. Square	Chi-	32.820
			Df		6
			Sig.		.000
<b>Performance of Customs and Border Control department in Mombasa</b>		Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.701		
		Bartlett's Test of Sphericity	Approx. Square	Chi-	28.776
			df		10
			Sig.		.001

The findings indicate that for Automation, the Kaiser-Meyer-Olkin has a measure of 0.613, which is above the threshold recommended by Field (2015). The Bartlett's Test of Sphericity is significant with Chi-Square = 23.522 (p-value < 0.05). Hence, this confirms that content validity was met as factor analysis was appropriate.

The findings indicate that for Customs Value Reforms, the Kaiser-Meyer-Olkin has a measure of 0.738, which is above the threshold recommended by Field (2015). The Bartlett's Test of Sphericity is significant with Chi-Square = 30.421 (p-value < 0.05). Hence, this confirms that content validity was met as factor analysis was appropriate.

The findings indicate that for Customs procedures, the Kaiser-Meyer-Olkin has a measure of 0.506, which is above the threshold recommended by Field (2015). The Bartlett's Test of Sphericity is significant with Chi-Square = 32.820 (p-value < 0.05). Hence, this confirms that content validity was met as factor analysis was appropriate.

The findings indicate that for performance of Customs and Border Control department in Mombasa, the Kaiser-Meyer-Olkin has a measure of 0.701, which is above the threshold recommended by Field (2015). The Bartlett's Test of Sphericity is significant with Chi-Square = 28.776 (p-value < 0.05). Hence, this confirms that content validity was met as factor analysis was appropriate.

#### **4.3.2 Reliability Results**

During piloting, the researcher sought to measure, data collection instrument reliability with the use of Cronbach alpha, the researcher was able to determine the instruments internal consistency as shown in Table 4.3

**Table 4.3: Reliability of the Research Questionnaire**

Constructs	Cronbach's Alpha	Test Items
<b>Customs Value Reforms</b>	0.865	4
<b>Performance of Customs and Border Control department in Mombasa</b>	0.854	4
<b>Customs procedures</b>	0.844	4
<b>Automation</b>	0.782	4

The results indicate that Customs Value Reforms had the highest Cronbach's alpha coefficient (0.865). Performance of Customs and Border Control department in Mombasa had the second highest Cronbach's alpha coefficient (0.854). Customs procedures had the second lowest Cronbach's alpha coefficient (0.844) while Automation had the lowest Cronbach's alpha coefficient (0.782). This implies that the research questionnaire was reliable as all the variables had Cronbach's alpha coefficients higher than 0.7.

#### 4.4 Demographic Analysis

The researcher sought demographic information from the respondents. These are the education levels and period of time worked in the organization.

##### 4.4.1 Distribution of Respondents by Education Level

The study also examined distribution of respondents according to levels of education. The results are depicted in Table 4.4.

**Table 4.4: Highest Academic Qualifications of Respondents**

	Frequency	Percent
Post graduate	60	47.6
Graduate	55	43.7
Secondary	10	7.9
Post Secondary	1	.8
Total	126	100.0

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The study found out that 60 (47.6%) respondents had attained post graduate education. 55 (43.7%) respondents were graduates. It was established that 10 (7.9%) respondents had attained secondary education. It was also noted that 1 (0.8%) respondents had attained post Secondary education.

##### 4.4.2 Distribution of Respondents by Period of Time Worked

The researcher ascertained the period of time respondents had worked in their organizations. Table 4.5 depicts the results of analysis.

**Table 4.5: Period of Time Worked in the Organization**

	Frequency	Percent
2 to 5 years	51	40.5
1 to 2 years	42	33.3
Less than 1 year	18	14.3
5 to 10 years	15	11.9
Total	126	100.0

---

The findings indicate that 51 (40.5%) respondents had worked in the organization for 2 to 5 years. 42 (33.3%) respondents had worked in the organization for 1 to 2 years. 18 (14.3%)

respondents had worked in the organization less than 1 year. 15 (11.9%) respondents had worked in the organization for 5 to 10 years.

#### 4.5 Descriptive Analysis

The study also analyzed the opinions of respondents was sought on Automation, Customs Value Reforms, Customs procedures and performance of Customs and Border Control department in Mombasa.

##### 4.5.1 Automation

The researcher analyzed the opinions of the respondents on Automation. Table 4.6 depicts the results.

**Table 4.6: Automation**

<b>Statements</b>	<b>Mean</b>	<b>Standard deviation</b>
The automation is working effectively with systems of other organizations involved in clearance	3.53	1.237
The automation has made it easy to automatically upload import data for cargo	3.29	1.167
It is now easy to make declarations on imported cargo in automation	3.40	1.118
automation has made it easy to access auctions of Customs cargo electronically	3.26	1.181

The study found out that the respondents were in agreement that automation is working effectively with systems of other organizations involved in clearance or not (mean = 3.53; std dev = 1.237). The respondents were undecided on whether the automation has made it easy to automatically upload import data for cargo or not (mean = 3.29; std dev = 1.167). The respondents were undecided on whether it is now easy to make declarations on imported cargo in automation or not (mean = 3.40; std dev = 1.118). The respondents were undecided on whether automation has made it easy to access auctions of Customs cargo electronically or not (mean = 3.26; std dev = 1.181). These findings tend to agree with those of Alcedo and Cajala (2015) which noted that computerization reforms in Philippines' import and export transactions is effective in enhancing performance.

### 4.5.2 Customs Value Reforms

This study also scrutinized the opinions of the respondents on Customs Value Reforms. Table 4.7 shows the results.

**Table 4.7: Customs Value Reforms**

<b>Statements</b>	<b>Mean</b>	<b>Standard deviation</b>
The value for Customs clearance purposes are based on the values of transactions	3.60	1.126
Prices to be paid or that have been paid are adjusted to include elements not paid for and should be included in prices for Customs purposes	3.59	1.090
The imported cargo transactions' values include any relevant non-monetary considerations from buyer to seller	3.56	1.106
Consultations are done between Customs authorities and importers is done to take into consideration information not captured in valuation	3.40	1.044

It was noted that the respondents agreed that the value for Customs clearance purposes are based on the values of transactions (mean = 3.60; std dev = 1.126). There was general agreement that prices to be paid or that have been paid are adjusted to include elements not paid for and should be included in prices for Customs purposes (mean = 3.59; std dev = 1.090). It was agreed that the imported cargo transactions' values include any relevant non-monetary considerations from buyer to seller (mean = 3.56; std dev = 1.106). The respondents were undecided on whether consultations are done between Customs authorities and importers is done to take into consideration information not captured in valuation or not (mean = 3.40; std dev = 1.044). These findings agree with findings of study by Desiderio and Bergami (2011) which noted that Customs risk management techniques such as valuation examination are helpful in improving overall efficiency and performance.

### 4.5.3 Customs procedures

The opinions of respondents on Customs procedures were sought. Table 4.8 shows the results.

**Table 4.8: Customs procedures**

<b>Statements</b>	<b>Mean</b>	<b>Standard deviation</b>
The Customs authority strives to achieve the highest level of efficiency and effectiveness in Customs clearance going by international standards	3.81	1.056
The likelihood and impact of risk on various performance dimensions at KRA are usually examined	3.81	1.122
Measures to counter risks are usually developed at KRA	3.73	1.120
The due process required by Customs laws is adhered to during clearance	3.84	.999

It was determined that there was general agreement that the Customs authority strives to achieve the highest level of efficiency and effectiveness in Customs clearance going by international standards (mean = 3.81; std dev = 1.056). It was agreed that the likelihood and impact of risk on various performance dimensions at KRA are usually examined (mean = 3.81; std dev = 1.122). The study found out that the respondents agreed that measures to counter risks are usually developed at KRA (mean = 3.73; std dev = 1.120). It was noted that there was general agreement that the due process required by Customs laws is adhered to during clearance (mean = 3.84; std dev = 0.999). These findings agree with findings of study by Desiderio and Bergami (2011) which noted that Customs risk management techniques such as valuation examination are helpful in improving overall efficiency and performance.

#### **4.5.4 Performance of Customs and Border Control Department in Mombasa**

The researcher examined the views of respondents on performance of Customs and Border Control department in Mombasa. The results of analysis are shown in Table 4.9.

**Table 4.9: Performance of Customs and Border Control Department in Mombasa**

<b>Statements</b>	<b>Mean</b>	<b>Standard deviation</b>
The importation process at Mombasa port is fast	3.36	1.084
The exportation process at Mombasa port is fast	3.48	1.049
The Customs revenue collected is increasing	3.42	1.007
The Customs authority ensures there is completely no breach of border regulations during cross-border crossing, cargo importation	3.48	1.049

The researcher found out that the respondents were undecided on whether the importation process at Mombasa port is fast or not (mean = 3.36; std dev = 1.084). It was noted that the respondents were undecided on whether the exportation process at Mombasa port is fast or not (mean = 3.48; std dev = 1.049). It was revealed that the respondents were undecided on whether the Customs revenue collected is increasing or not (mean = 3.42; std dev = 1.007). The respondents were undecided on whether the Customs authority ensures there is completely no breach of border regulations during cross-border crossing, cargo importation and exportation or not (mean = 3.48; std dev = 1.049).

#### 4.6 Correlation Analysis

The relationship between Automation, Customs Value Reforms and Kyoto Convention and performance of Customs and Border Control department in Mombasa was analyzed. Table 4.10 depicts the results.

**Table 4.10: Correlation Analysis Results**

Independent variables		Performance of Customs and Border Control department in Mombasa		Hypothesis testing
Automation	Pearson Correlation	.502		Null hypothesis rejected (sig. < 0.05)
	Sig. (2-tailed)	.000		
Customs Value Reforms	Pearson Correlation	.452		Null hypothesis rejected (sig. < 0.05)
	Sig. (2-tailed)	.000		
Customs procedures	Pearson Correlation	.532		Null hypothesis rejected (sig. < 0.05)
	Sig. (2-tailed)	.000		

The findings indicate that there is a positive and significant relationship between Automation and performance of Customs and Border Control department in Mombasa ( $r = 0.502$ ;  $p < 0.05$ ). It means that that increased Automation is associated with significant increase in performance of Customs and Border Control department in Mombasa and vice-versa. These findings agree with

findings of Zhou and Madhikeni (2013) which established that electronic revenue systems increase business efficiency hence resulting in improvements in revenue collection.

The study findings indicate that there is a positive and significant relationship between Customs Value Reforms and performance of Customs and Border Control department in Mombasa ( $r = 0.452$ ;  $p < 0.05$ ). It means that improving Customs Value Reforms is associated with improved performance of Customs and Border Control department in Mombasa and vice-versa. These findings agree with findings of study by Desiderio and Bergami (2011) which noted that Customs risk management techniques such as valuation examination positively relate with performance.

It was noted that there is a positive and significant relationship between Customs procedures and performance of Customs and Border Control department in Mombasa ( $r = 0.532$ ;  $p < 0.05$ ). It means that enhancing Customs procedures is associated with increased performance of Customs and Border Control department in Mombasa and vice-versa. These findings concur with findings of study by Alcedo and Cajala (2015) which noted that the adoption of various reforms recommended by the Customs procedures is positively related with performance.

#### 4.7 Regression Analysis

The researcher conducted multiple regression analysis to examine the effect of the independent variables on the dependent variable.

##### 4.7.1 Multiple Regression Model Summary

The researcher also examined the combined effect of Automation, Customs Value Reforms and Customs procedures on performance of Customs and Border Control department in Mombasa. The results of analysis are shown in Table 4.11.

**Table 4.11: Multiple Regression Model Summary**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.773	.597	.587	.52183

a. Predictors: (Constant), Automation, Customs Value Reforms, Customs procedures

b. Dependent Variable: Performance of Customs and Border Control department in Mombasa

The study found out that there is a positive and strong relationship between Automation, Customs Value Reforms and Customs procedures and performance of Customs and Border

Control department in Mombasa ( $R = 0.773$ ). It was determined that 58.7% of the variation in performance of Customs and Border Control department in Mombasa, can be explained by Automation, Customs Value Reforms and Customs procedures ( $R^2_{adj} = 0.587$ ). These findings denote that Automation, Customs Value Reforms and Customs procedures determine performance of Customs and Border Control department in Mombasa and are in agreement with findings by Zhou and Madhikeni (2013), Desiderio and Bergami (2011) and Alcedo and Cajala (2015) which noted that the implementation of Customs reforms is positively related with performance.

#### 4.7.2 Analysis of Variance

The regression analysis of variance (ANOVA) was conducted to assess the fit of the model for the data. The results of analysis are shown in Table 4.12.

**Table 4.12: Results of ANOVA**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	49.176	3	16.392	60.196	.000
Residual	33.222	122	.272		
Total	82.397	125			

a. Predictors: (Constant), Automation, Customs Value Reforms and Customs procedures

b. Dependent Variable: Performance of Customs and Border Control department in Mombasa

The findings indicate that there is a statistically significant relationship between Automation, Customs Value Reforms and Customs procedures and performance of Customs and Border Control department in Mombasa ( $F = 60.196$ ;  $p < 0.05$ ). These ANOVA results can be interpreted to mean that the model was fit for the data.

#### 4.7.3 Test of Statistical Significance of Regression Coefficients

The study also conducted the t-tests to examine the statistical significance of each independent variable's coefficient of regression. The pertinent results of analysis are shown in Table 4.13.

**Table 4.13: Evaluating Individual Regression Coefficients**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
(Constant)	-.418	.292		-1.429	.156
Automation	.386	.049	.459	7.905	.000
Customs Value Reforms	.258	.056	.276	4.609	.000
Customs procedures	.431	.056	.454	7.638	.000

a. Dependent Variable: Performance of Customs and Border Control department in Mombasa

The study found out that Automation positively and significantly predicts performance of Customs and Border Control department in Mombasa ( $t = 7.905$ ;  $p < 0.05$ ). It was revealed that Customs Value Reforms positively and significantly predicts performance of Customs and Border Control department in Mombasa ( $t = 4.609$ ;  $p < 0.05$ ). The study found out that Customs procedures positively and significantly predicts performance of Customs and Border Control department in Mombasa ( $t = 7.638$ ;  $p < 0.05$ ).

It was revealed that the predictor variables-Automation, Customs Value Reforms and Customs procedures-would be included in the multiple regression equation as they were statistically significant ( $p < 0.05$ ). It was noted that the constant in the regression model was negative implying that without Automation, Customs Value Reforms and Customs procedures being taken into account, performance of Customs and Border Control department in JMombasa would be negative. However, the constant is insignificant ( $p > 0.05$ ) (Lind, Marchal & Wathen, 2012). The multiple regression function in Equation was used to explain the results of analysis.

$$Y = 0.386X_1 + 0.258X_2 + .431X_3 .$$

The findings indicate that increasing Automation by 1 unit increases performance of Customs and Border Control department in Mombasa by 0.386 unit ( $\beta_1 = 0.386$ ). These findings agree with findings of Zhou and Madhikeni (2013) which established that electronic revenue systems leads to improved performance. The study established that enhancing Customs Value Reforms

by 1 unit enhances performance of Customs and Border Control department in Mombasa by 0.258 unit ( $\beta_2 = 0.258$ ). These findings agree with findings of study by Desiderio and Bergami (2011) which noted that Customs risk management techniques such as valuation examination positively affects performance. It was revealed that improving Customs procedures by 1 unit increases performance of Customs and Border Control department in Mombasa by 0.431 unit ( $\beta_3 = 0.397$ ). These findings concur with findings of study by Alcedo and Cajala (2015) which noted that the adoption of various reforms recommended by the Customs procedures positively affects performance.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of key research findings, the conclusions drawn from the findings, recommendations and areas for further research.

#### **5.2 Summary**

The study general objective was to investigate the effect of Customs reforms on performance of Customs and Border Control in Mombasa. The study was divided into four sub-parts which included response rate, background information of the respondents, descriptive statistics results and multiple regression results. Based on the study findings, 126 questionnaires were fully filled and returned making a response rate of 76 per cent. Majority of respondents were holders of post graduate and had served in the department for more than 2 to 5 years.

##### **5.2.1 Automation**

The study found out that the respondents were in agreement that Automation is working effectively with systems of other organizations involved in clearance or not. The respondents were undecided on whether the automation has made it easy to automatically upload import data for cargo or not. The respondents were undecided on whether it is now easy to make declarations on imported cargo in automation or not. The respondents were undecided on whether automation has made it easy to access auctions of Customs cargo electronically or not. The findings indicate that there is a positive and significant relationship between Automation and performance of Customs and Border Control department in Mombasa ( $r = 0.502$ ;  $p < 0.05$ ). The findings indicate that increasing Automation by 1 unit increases performance of Customs and Border Control department in Mombasa by 0.386 unit ( $\beta_1 = 0.386$ ).

##### **5.2.2 Customs Value Reforms**

It was noted that the respondents agreed that the value for Customs clearance purposes are based on the values of transactions. There was general agreement that prices to be paid or that have been paid are adjusted to include elements not paid for and should be included in prices for Customs purposes. It was agreed that the imported cargo transactions' values include any relevant non-monetary considerations from buyer to seller. The respondents were undecided on whether consultations are done between Customs authorities and importers is done to take into consideration information not captured in valuation or not. The study findings indicate that there

is a positive and significant relationship between Customs Value Reforms and performance of Customs and Border Control department in Mombasa ( $r = 0.452$ ;  $p < 0.05$ ). The study established that enhancing Customs Value Reforms by 1 unit enhances performance of Customs and Border Control department in Mombasa by 0.258 unit ( $\beta_2 = 0.258$ ).

### **5.2.3 Customs procedures**

It was determined that there was general agreement that the Customs authority strives to achieve the highest level of efficiency and effectiveness in Customs clearance going by international standards. It was agreed that the likelihood and impact of risk on various performance dimensions at KRA are usually examined. The study found out that the respondents agreed that measures to counter risks are usually developed at KRA. It was noted that there was general agreement that the due process required by Customs laws is adhered to during clearance. It was noted that there is a positive and significant relationship between Customs procedures and performance of Customs and Border Control department in Mombasa ( $r = 0.532$ ;  $p < 0.05$ ). It was revealed that improving Customs procedures by 1 unit increases performance of Customs and Border Control department in Mombasa by 0.431 unit ( $\beta_3 = 0.397$ ).

### **5.2.4 Performance of Customs and Border Control Department in Mombasa**

The researcher found out that the respondents were undecided on whether the importation process at Mombasa port is fast or not. It was noted that the respondents were undecided on whether the exportation process at Mombasa port is fast or not. It was revealed that the respondents were undecided on whether the Customs revenue collected is increasing or not. The respondents were undecided on whether the Customs authority ensures there is completely no breach of border regulations during cross-border crossing, cargo importation and exportation or not.

## **5.3 Conclusions**

The objective of this study was to examine the effect of Automation, Customs Value Reforms and Customs procedures on Customs performance at Customs and Border Control in Mombasa. The study concludes that;

Automation is significant in enhancing Customs performance at Customs and Border Control. It has eased communication across borders, reduced the cost of doing business and eliminated tax evasion by simplifying processing procedures hence reducing time and cost of doing business (Al-Mamary, Shamsuddin, & Aziati, 2014).

Customs Value Reforms plays a critical role in Customs performance at Customs and Border Control. It can be concluded that disparities in application of Customs values affects negatively Customs performance. It can be concluded the proper application of Customs values can significantly reduce tax evasion. This will contribute substantially to Customs performance at Customs and Border Control in Mombasa.

Customs procedures has been identified as a critical issue that management need to give it more weight by simplifying and streamlining procedures of Customs processes. The training of staff to enhance efficiency and effectiveness of tax administration can improve Customs performance at Customs and Border Control points.

#### **5.4 Recommendations**

This study makes a number of recommendations:

1. The study recommends that Automation should be enhanced in order to improve performance of Customs and Border Control department in Mombasa.
2. It is recommended that Customs Control Boarder Management should invest in Proper WTO valuation. This will root out taxes evasion and improve the economy and improve performance of Customs and Border Control department in Mombasa
3. It is also recommended that with application of Customs procedures  
The agency should establish a network with key government agencies like ministry of interior and National Intelligence Service so as to make it possible to achieve Risk management in identifying high and low risk cargo and Passengers.

#### **5.5 Areas for Further Research**

This study recommends that scholars and researchers should focus on other factors affecting performance of Customs and Border Control department in Mombasa ( $R^2 = 0.567$ ). This implies that other factors account for an average of the variation in performance of Customs and Border Control department in Mombasa. These other factors not accounted for by the model should be researched on so that other ways to improve performance of Customs and Border Control department in Mombasa can be discovered.

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## **APPENDICES**

### **APPENDIX I: INTRODUCTION LETTER**

Kenya School of Revenue Administration,  
P.O. Box 48240 -00100,  
Nairobi.

Dear Respondent,

RE: Research data collection

I am a student at Kenya School of Revenue Administration undertaking a study in a partial fulfillment for award of a Post Graduate Diploma in Customs Administration. The study aims at establishing effect of Customs reforms on performance of Customs and Border Control department. I am conducting the above research and attached herewith is a questionnaire for you to fill. You have been chosen as part of the research population that comprises Customs officers who have experience on Customs processes and reforms.

The information disclosed will purely be used in my project which constitutes part of our course objective. Your answers are very important in drawing an accurate picture of the research topic. All the information collected shall be kept confidential to safeguard the respondents or the organization in this study and shall only be used for the purpose of drawing conclusion of this study.

Your contribution will be highly appreciated.

Yours sincerely,

Domtilah kibiy Jerono,

## APPENDICES

### Appendix II: Research Questionnaire

I am a postgraduate student at Kenya School of Revenue Administration, Mombasa. As part of the requirements for the course, I am required to conduct research and develop a research report thus the questionnaire is meant to help me in data collection. Kindly assist me by participating in answering the questions. The information collected will be used for academic purposes. The topic for the proposal is THE EFFECT OF CUSTOMS REFORMS ON PERFORMANCE OF CUSTOMS AND BORDER CONTROL DEPARTMENT IN MOMBASA.

Questionnaire number

#### Section A: General information

This questionnaire consists of two parts; kindly answer all the questions by ticking in the appropriate box or filling in the spaces provided.

1. What is your highest academic qualification?

Primary [ ]      Secondary [ ]      Post secondary [ ]      Graduate [ ]

Post graduate [ ]

2. For how long have you been working in this organization?

Less than 1 year [ ]      1 to 2 years [ ]      2 to 5 years [ ]

5 to 10 years [ ]      Over 10 years [ ]

#### INSTRUCTIONS FOR SECTIONS B, C, D AND E

State the extent to which you agree with the following using the Likert scale of 1-5 by ticking the number where,

**1= Strongly agree, 2 = Agree, 3 = Not sure, 4= Disagree, 5= Strongly disagree.**

### Section B: Automation

		1	2	3	4	5
B 1	The ICMS is working effectively with systems of other organizations involved in clearance					
B 2	The ICMS has made it easy to automatically upload import data for cargo					
B 4	It is now easy to make declarations on imported cargo in ICMS					
B 5	ICMS has made it easy to access auctions of Customs cargo electronically					

### Section C: Customs Value Reforms

		1	2	3	4	5
C 1	The value for Customs clearance purposes are based on the values of transactions					
C 2	Prices to be paid or that have been paid are adjusted to include elements not paid for and should be included in prices for Customs purposes					
C 3	The imported cargo transactions' values include any relevant non-monetary considerations from buyer to seller					
C 4	Consultations are done between Customs authorities and importers is done to take into consideration information not captured in valuation					

**Section D: Customs procedures**

		1	2	3	4	5
D 1	The Customs authority strives to achieve the highest level of efficiency and effectiveness in Customs clearance going by international standards					
D 2	The likelihood and impact of risk on various performance dimensions at KRA are usually examined					
D 3	Measures to counter risks are usually developed at KRA					
D 4	The due process required by Customs laws is adhered to during clearance					

**Section E: Performance of Customs and Border Control department in Mombasa.....**

		1	2	3	4	5
E 1	The importation process at Mombasa port is fast					
E 2	The exportation process at Mombasa port is fast					
E 3	The Customs revenue collected is increasing					
E 4	The Customs authority ensures there is completely no breach of border regulations during cross-border crossing, cargo importation and exportation					