

**FACTORS AFFECTING DETECTION OF COUNTERFEIT GOODS AT THE PORT
OF MOMBASA**

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DECLARATION

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

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Signature

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

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DEDICATION

This study is dedicated to my dear family who encouraged me throughout my study.

ACKNOWLEDGMENT

I thank my family members and my supervisor Mr. Aaron Mukhongo for having supported, empowered and guided me throughout my project period. They showed a lot of interest and gave me encouragement for which I could not achieve on my own.

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May God bless you all

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ABBREVIATION OF TERMS

SARS	South Africa Revenue Service
EAC	East African Community
KRA	Kenya Revenue Authority
EAC	East African Community
KEBS	Kenya Bureau of Standards
EIM	Enterprise Information Management
ICMS	Integrated Customs Management System
KPA	Kenya Ports Authority
ICT	Information and Communication Technology
VAT	Value-Added Tax
WCO	World Customs Organization
WTO	World Trade Organization
NTM	Non-Tariff Measures
SPSS	Statistical Package for Social Science

DEFINITION OF TERMS

Customs Systems

This are systems put in place by customs administration of a country to facilitate in import and export processes at the point of a country entry so as to ensure compliance by traders (Gani, 2017)

Border Security

Security refers to all the measures that are taken to protect a place or a given territory,(Bigo, 2006)

Human Resource

Goot and Molen (2000) defines human resource capacity building as a development of knowledge, skills and attitudes in individuals and groups of people relevant in design development, management and maintenance operational infrastructures an process that are locally meaningful

Counterfeit Goods

This are goods made in imitation of the genuine with the intent to deceive or defraud. (Rapley, 2016)

ABSTRACT

In the contemporary world, globalization has influenced companies to pursue international trade deeply rooted in trade unions, partnership and merger. According to Forbes in 2018 counterfeiting is the largest criminal enterprise in the world. Africa as a region is facing a hard time fighting counterfeiting as is the case with all economics in the world. Revenue collection from the East African Community (EAC) is under threat from increased counterfeit goods. Revenue collection by Customs administrations remains a strategic priority for many developing countries. Being the largest port in East Africa, it is the port that faces many challenges when it comes to detection of the counterfeit goods This study was done at the Port of Mombasa. The study objectives are: To assess the effect of customs systems in detection of counterfeit goods at the port of Mombasa. Secondly is to determine the effect of border security in detection of counterfeit products at the port of Mombasa. And lastly is to investigate the effect of human resource in detection of counterfeit goods at the port of Mombasa. To bring this study to a success it adopted the hype circle theory, stakeholder theory and human capital theory. Descriptive research design was used to give further insight into the research problem by describing the variable of interest being studied. The target population was constituted of 180 respondents that comprise Kenya Revenue Authority Customs and Border control officers operating at the port of Mombasa The study used Slovins Formulae and cluster sampling technique to select respondents from various departments with an aim of providing equal chances. The researcher used questionnaires as the tool for data collection. The drop and pick method will be preferred since it is based on social exchange theory in which personal interactions provide a basis to stimulate norms of reciprocity and exchange that increase the chances a respondent will accept and complete the survey. The analysis was systematically presented in narrative form and data will be analysed using a recreational model and statistical package for social science (SPSS) version 26.0 for close-ended questions. The study concludes by suggesting that Custom should adopt the latest systems, technological tools. In addition, the information system used by customs have to be integrated with other agencies systems in the frontline of protection of the society against sub-standard and counterfeit goods systems as well as, incorporating those systems with counterfeit goods detection infrastructure would be of a great help. The study recommended that multi-agency approach in border security against the fight of counterfeit goods should be incorporated and regular investigation of the local market by customs has to be heightened in order to increase the detection of counterfeit goods.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The definition of counterfeit as per to Kenyan anti counterfeit act, 2008 is to comprise the production, manufacturing, labelling, packaging, re-packaging or making of protected goods on instances those goods are protected. In simple terms, it is the violation of trademarks, copyright, geographical indications, industrial designs and other rights of that kind. The sole intention of this is to deceive and confuse the consumers of the legitimacy, quality, origin or source. Counterfeiting is estimated to be a billion-dollar industry which is widely spread throughout the world and is mostly rampant in economies of low-income countries like Kenya. Counterfeit products have proved to pose a big challenge to all the stakeholders of the market supply chain which cuts across from the innovators, manufacturers, traders and consumers both in Kenya and the broad global market.

In the contemporary world, globalization has influenced companies to pursue international trade deeply rooted in trade unions, partnership and merger. The strategy is useful in ensuring that there is free flow of trade which averts boundary barriers. With this advancement in trade across the globe, mechanism has to be put in place to regulate, promote and ensure secure supply chain Scherer & Palazzo, (2011). Transportation of goods internationally often requires crossing the territory of one or more third countries. In this case, transit goods that are imported in conformity to the required regulations are guaranteed fair taxation. According to Roth (2017), the key players in the sector must conform to transit standards to avert illegal activities, tax evasion, and movement of counterfeit products in the local markets. According to Forbes in 2018 counterfeiting was the largest criminal enterprise in the world. Sales of counterfeit and pirated goods total \$1.7 trillion per year, which is more than drugs and human trafficking. Counterfeiting It is expected to grow to \$2.8 trillion and cost 5.4 million jobs by 2022 Novokmet, Piketty, & Zucman, (2018).

Africa as a region is facing a hard time fighting counterfeiting as is the case with all economies in the world. As it is specifically in our region, counterfeit goods find ready market as consumers are always looking for a bargain and is worsened by the fact that the consumers have little information about these products and their disastrous effects Dégardin et al., (2014). The main issue which any

manufacturer should always take into account is that they should educate the consumers the general knowledge. For example, the pharmaceutical companies should inform the consumers about the health hazards caused by counterfeit medicines. The manufacturer loses revenue in turn, employees are reduced who now have lost their basic income. The Government also loses a lot of revenue, thus means, it does not have sufficient monies in the official coffers to offer services to its citizens. Everyone loses in the counterfeit trade; the only one person who wins is the counterfeiter who has no right to benefit in the first place especially at the expense of consumers, The Government and the rightful owner. The level of counterfeiting also worsens when some industry players and manufacturers take a soft approach against counterfeiters and/or have weak anti-counterfeiting strategies Tehranipour, Guin, & Forte, (2015). Lack of proper monitoring services is a cause

According to Tofa & Paterson, (2018) In South Africa, South African Customs Administration is a key department in South Africa Revenue Service (SARS) that ensures movement of goods and persons in and out of its borders is done smoothly, safely and efficiently. Its vision is to be a world-class Customs administration organization in administration conveyance which adds to the steadiness, wellbeing and success of the nation, region and world (www.sars.gov.za). In its targets, the administration has consolidated border control supervision, community and industry protection among others (Hall and Jacobs, 2016).

Revenue collection from the East African Community (EAC) is under threat from increased counterfeit goods. The fraudulent practices witnessed across the region differ from country to country. These malpractices take various forms and changes depending on the mitigations set up Ayuma, (2018). In Tanzania, the common fraudulent practices for counterfeit, according to Mary Maganga, the director for planning, policy and research at Tanzania Revenue Authority, include smuggling of goods into the country with the aim of tax evasion. In Uganda smuggling is the biggest threat to collection of revenue.

In Kenya, the rampant case of counterfeit goods is misdeclaration of imports as well as concealment of goods and container cargo with the aim of tax evasion. The most counterfeited products according to the anti-counterfeit agency in Kenya include, assorted electronics worth 275.3, drugs and other pharmaceutical products the most common being postinor-2 (where 3100

pairs valued at 7m were seized), motor vehicle most common being Toyota spare parts, alcoholic beverages among other products Kabiru, (2013).

The Port of Mombasa is a critical regional port that serves Kenya and other East African countries. Being the largest port in East Africa, it is the port that faces many challenges when it comes to detection of counterfeit goods. KRA gives more attention to facilitation of legitimate trade but substandard goods is the biggest challenge that is faced by customs officers while enforcing trade facilitation mechanisms across the border Kombo, (2018). Most customs operations are done at the port of Mombasa and the customs and border control department is in the move to improve performance and maximize customs revenue collection at any rate conceivable expense for the financial prosperity of Kenyans. It is on this ground that this study will attempt to answer the question 'what are the factors affecting detection of counterfeit goods at the port of Mombasa?'

1.2 Statement of the Problem

Revenue collection by Customs administrations remains a strategic priority for many developing countries. However, Customs division is currently succumbing to the contemporary tax challenge of declining revenues from import duties mainly due to fraud by traders Mundia, (2014). The core function of Customs administration besides other contemporary functions like trade facilitation and securing the supply chain. Other roles include facilitation of legitimate trade, enforcement of exports proceeds, collection of international trade statistics and protecting the society. While the qualitative impact of counterfeiting is very clear and unambiguous for the producers of the original products, such as loss of potential sales revenue and the erosion of the product trademark value, whether gradually or rapidly, the qualitative impact of counterfeiting for consumers may involve more debatable and often, conflicting arguments Buttice, (2018).

Counterfeiting has got some side effect on the social, economic and political aspects. The war on counterfeit goods and counterfeiting at the port of Mombasa has proved to be a great challenge to customs despite the fact that there are sufficient laws that help in fighting of counterfeit goods from the local market which enters through the Port of Mombasa. The passed laws also have got some shortcomings because it has not kept up with technology in cases of e-commerce and that's why counterfeiting is continuing to flourish. It is also becoming a big challenge to be able to differentiate from genuine products and the counterfeited or substandard goods owed to increased innovation and creativity by those who peddle this act and the wide scope of products in the

market. This in the long run, tarnishes the image of the legitimate producers, traders and even to the authority and other agencies who work hand in hand with customs to curb this heinous act. Counterfeiting leads to loss of revenues to the government and endangers the lives of people and loss of value for money on consumer's side.

Several studies have been done relating to counterfeiting and most have majorly dwelt on counterfeiting of pharmaceutical products and cosmetically produced products which has been noted to be having a fast and steady market. The research gap that has been left by past studies on detection of counterfeit goods and the factors that might be actually undermining this fight will be filled by this study. At the end it would come up with suitable recommendations that has to be used in order to be able to fully detect counterfeiting at the port of Mombasa and enable the authority to further facilitate only legitimate trade. This study therefore, is focused on examining the factors affecting detection of counterfeit goods at the port of Mombasa using selected factors to aid in achieving this.

1.3 Objectives

1.3.1 General Objective

The main objective of this study was to examine the factors affecting detection of counterfeit goods at the port of Mombasa.

1.3.2 Specific objectives

- i. To determine the effect of customs systems in detection of counterfeit goods at the port of Mombasa.
- ii. To determine the effect of border security infrastructure in detection of counterfeit products at the port of Mombasa
- iii. To determine the effect of human resource capacity in detection of counterfeit goods at the port of Mombasa

1.4 Research questions.

In order to answer the objectives outlined above, this research will focus on answering these questions:

- i. What is the effect of customs systems on detection of counterfeit goods at the port of Mombasa?
- ii. What is the effect of border security in detection of counterfeit goods at the port of Mombasa?
- iii. How does human resource influence detection of counterfeit goods at the port of Mombasa?

1.5 Significance of the study

The Government of Kenya, through the Kenya revenue management, will benefit from this study as it aims at providing a detailed research, analysis, and findings of various selected types of counterfeit goods traders involve themselves in which affect customs revenue collection. The study will also be important to Government in policy making with respect to tax collection and other administrative necessities of protecting consumers from harmful products entering the market.

The findings will also furnish the government agencies that are responsible to tackle this issue for example; ant counterfeit agency, KEBS and other relevant stake holders, with proper and guided information on how to address detection of this goods through the objective developed in this study

Customs administrations will also benefit from this study for the reason that this study will highlight and analyze how fraud has affected the practice and conduct of legitimate trade and thus in turn affecting revenue collection at the port of Mombasa. They will, therefore, use the knowledge acquired to improve their custom performance in terms of revenue collection. For KRA and its stakeholders, this research presents an opportunity to evaluate legitimate transactions with the view to improving services and products offered and also achieving set targets.

1.6 The scope of the study

The study concentrated on identify factors making it difficult to detect counterfeit goods at the port of Mombasa. This study was conducted at the Port of Kilindini, Mombasa. The main data collection will be through questionnaires and interview. Secondary data was collected through document review.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of review is to examine the already existing literature that will give this study guidance. The literature available will provide critical analysis and help improve the methodology to be used. Transgression of legit trade is normally affect the ability of customs to be in control of fraudulent activities to minimum ranging from smuggling, corruption and misclassification which relates to the main area of study that is concerned with detection of counterfeit goods at the port of Mombasa.

2.2 Theoretical Review

A theoretical (or conceptual) definition gives the meaning of a word in terms of the theories of a specific discipline. This type of definition assumes both knowledge and acceptance of the theories that it depends on. To theoretically define is to create a hypothetical construct

2.2.1 Hype Cycle Theory

Gartner hype cycle theory is very important as it defines and builds on information that a company has this information is then processed to realize better and more efficient business outcome (Redick, 2019). Being able to prioritize the enterprise information within the company that and employ the information to realize optimum organizational outcomes and achieve the organizational goals is basic and more importantly prime goal for Enterprise Information Management (EIM) strategic management of a company has often looked to ensure that the company is always following predefined that are being pursued often given specific time frame (Howard, 2017). When looking at Enterprise information as a strategic asset, it may be important to classify different types of data as strategically relevant for short-term, midterm and long-term strategic goals

The use of information in these ways is very critical in the hype cycle for EIM. Analytics governance is an example of such concepts it can be defined as the use and the integration of predictive models and algorithms investment decision for business analytics, assignment and assurance of organizational accountability, risks and decision rights among other functions. Hype cycle has concepts that are aimed at improving data management and use of information to affirm

to improve how the company realizes its goals and how eventually will turn out (Efimenko&Khoroshevsky, 2017). For this reason, this theory will be very convenient for this study as it will help in looking at how customs systems are utilized in achieving the detection of counterfeit goods.

2.2.2 Stakeholder Theory

Stakeholder theory is an organizational management theory touches on moral values in an organization's settings (Freeman, 2013). This theory was proposed by Edward Freeman in his book, "Strategic Management; a Stakeholder Approach" he sighted different categories of people in an organization who can be referred to as stakeholders. According to Freeman (2013), he suggested that stakeholders required special attention as well as corporation for an organization to achieve its mandate. In his book he sighted shareholders as being the major stakeholders

The stakeholder theory incorporates the resource-based point of view, while it integrates other factors such as political and social factors as well. The theory outlines several types of stakeholders amongst them are customers, employees, government, trade associations (Fadun, 2014). Stakeholders have certain powers that they exact on an organization due to their various relationships with an organization. The legitimacy is the globally accepted and expected behaviors, norms and structures that an organization should follow in order to serve the interests of the stakeholders in the best possible manner (Mitchel, et al 2010). The stakeholder theory as proposed by Edward Freeman incorporates five themes to learn from. They are definition and the different stakeholders surrounding an organization and the stakeholder's responses as well.

To get to the bottom line about the importance of the stakeholders' theory, there must be an understanding of the validity of the stakeholder theory and the point to which it can be applied to an organization. Therefore, stakeholders can easily be identified primary and tertiary stakeholders (Friedman, 2012 Stakeholder theory advances that organizations should consider and address the concerns of individuals or groups that affect or may be affected by organizations in its pursue to achieve their objectives (Gibson, 2000). Aware of multifaceted relationship between stakeholders and organizations, Stakeholder theory tries to explain influence of stakeholders on organization and how the organization responds to those influences (Gray, Owen & Adams, 2014; Friedman & Miles, 2002).

The theory tries to unmask what other theorists were struggling to establish the duties and responsibilities of organization towards groups or individuals a part from suppliers, shareholders, employees and customers (Shankman, 2014). In light with the fore going discussion, organizations can have a wide range of stakeholders such as: fund providers, taxpayers, staff, investors, government agencies, media, labor unions, society and local community all with different roles to play for the survival of the organizations. However, as argued by (Mitchell, Agle& Wood, 2014) the key criteria for identifying and categorizing stakeholders should be based on: attributes of power, ability to affect or be affected by organization's actions and legitimacy and urgency.

As usual Customs border operations involve different players; that calls for redistribution of power of some government agencies. As Jain (2012) argued, conflict of interests of different stakeholders may sabotage the efforts towards offering effective service delivery to customers at Customs. Therefore, clear understanding and support by all stakeholders towards trade facilitation at Customs is very important as exemplified by Canada and USA bilateral agreement on formation and execution of Action Plan of Smart Borders. In this study therefore this theory shall be very immense as it will help in explaining the effect of cooperation between the various border patrols with the customs enforcement unit in the detection of counterfeit goods at the port of Mombasa.

2.2.3 Human Capital Theory

Human Capital theory was first proposed by Theodore (1960), to show the value of human capacities he made a conclusion that human capital was like any other type of capital, where this form of capital could be invested and increased or enhanced through education, training and of course enhanced benefits that lead to an established quality and level of production.

Human capital can be defined as a set of the following; knowledge, assets, skills and experiences that a person has which add value to the company. It tells us that not all employee has the same value, it is all in their knowledge, skills and assets. It assumes that people act in a rational way at all times, (Savannah, 2017).

Gareth (2009) defines organizational change “as the process by which organizations move from their present state to some desired future state to increase their effectiveness”. Organizations change such as KRA in response to changing business environment both internal and external

environment such as law, policies, technology, customer tests and choices that influence trade facilitations. These developments influence and attaches different aspects of human resource management. In this regard organizations have to change to keep in line with globalization trend geared towards provision of effective run of international trade which depends on skilled service providers that works effectively i.e. shipping lines, port terminal, customs official and other agencies like rail and roads schaper, 2012).

According to Becker (2010), human capital theory refers to the stock of knowledge, generation of ideas and other personal attributes that enable an individual to be productive in an organization. The theory provided a good fit for this study since it focused on knowledge, experience and education of customs officers at the Port of Mombasa as well as other stakeholders

Nuno (2014), states that for an immigration officer to work at the department, they ought to have some of the following skills that will enable them work effectively; problem solving techniques, ability to relate well with others, communication skills and an ability to observe. This is the kind of human factor was necessary at the port of Mombasa so as to enhance better surveillance and enhanced vessels profiling. Immigration department does not work in isolation, but it works hand in hand with their counter parts from the customs department (KRA, 2017).

The customs enforcement department staffs at the port of Mombasa needs to possess and be equipped with customs skills, knowledge and experience so as to enable them to be able to detect counterfeit goods at the port of Mombasa. Human capital is also very crucial for an organization's mission fulfillment as well as human capital increases through the experience and education that one has (Crook et al, 2011).

2.3 Conceptual Framework

Conceptual Framework is an approach explained either in graphical or story types of the main points of study in a research Ogula (2005). The study will be guided by a conceptual framework which will show the relationship between the variables in the study. The relationship is shown in the figure below;

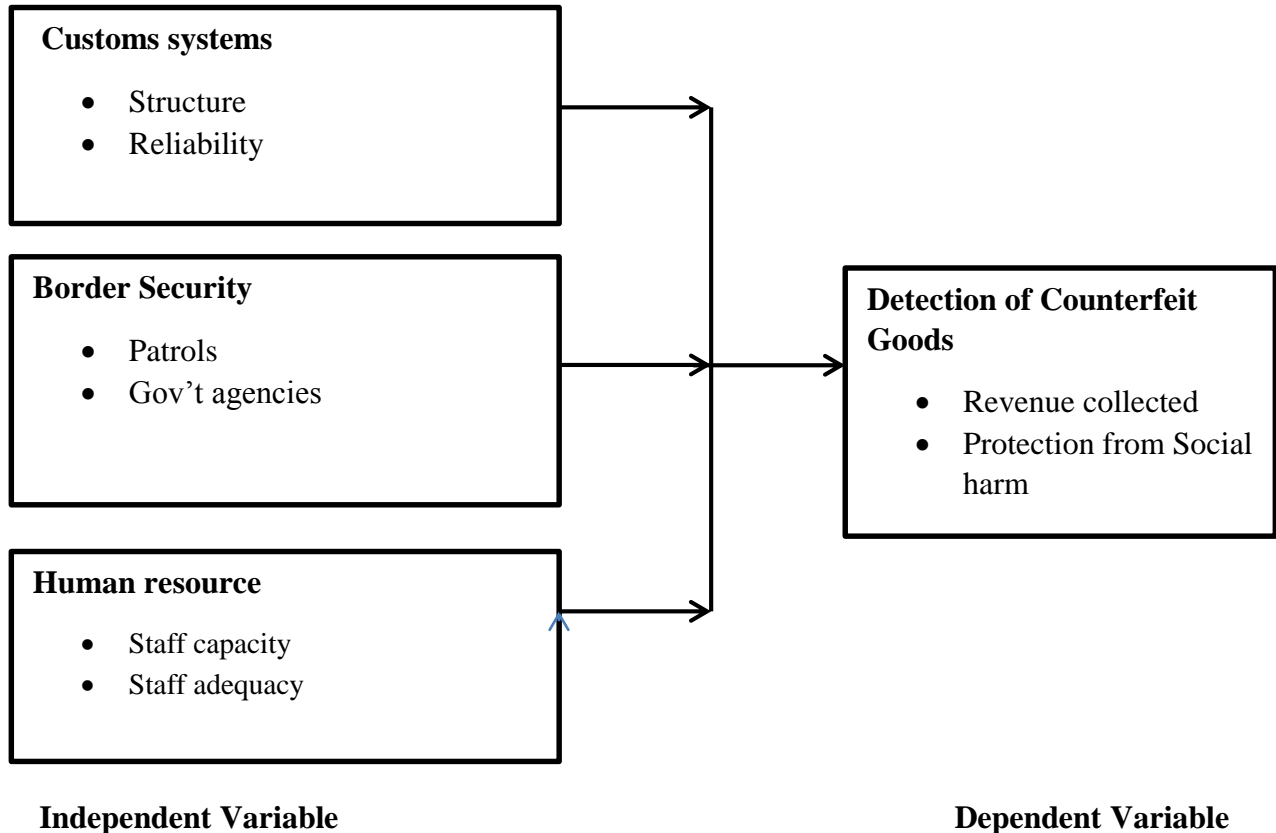


Fig 2.1 Conceptual framework

2.4 Review of Variables

2.4.1 Customs systems

Increase maximization of ecommerce as a trend in today's businesses characterized by a faster delivery of goods and a safer and secure means of payment, gross border trader is witnessing a rapid growth and expansion in terms of sales and service delivery between the trade stakeholders (Sales, 2016). Despite a greater part of most goods ordered by consumers these days consists of low- valued goods. Systems of taxation which are now organized around the traditional models

of business should have changes in order to be suit the procedures and systems which are existing so as to enable more effective prevention of revenue losses while also ensuring that bias is null within business while applying the current technology and those continuing to trade according to standards (Niemimaa et al., 2019).

Most countries have witnessed a remarkable and faster growth in low- value imports of physical goods on which custom duties and taxes are not collected. With this, there is a growing concern relating to possible custom revenue loss, fraud, and to an adverse effect of domestic retailers. Globally customs agencies are experiencing a crop up in a predicament of constant stability on need to improve trade facilitation while increasing need to fully enforce customs compliance regulations (Acemoglu et al, 2016). Customs are constantly under pressure in ensuring a delivery of a customer-motived services which are friendly while ensuring the factual revenue are collected, preventing fraud or illegal trade within the constraints of little resources with collection of trade statistics being at stake. At the long run these necessitates for customs administration to be modernized so as to ensure transparency, security, deliver agility and accuracy in using customs systems that are empowering rather than being restrictive (Rodrigues et al.,2018).

Kennya revenue authority for this reason is putting into effect an Integrated Customs Management System (ICIMS). The system integrates the custom systems which already exist and modernize it into a highly effective system set up based on current technologies which have a seamless link with additional internal together with external needs as it might arise. This system is going to be the turning point to customs processes since it aligns actions perfectly to be in line with the global operations as advocated by Kyoto Conventions and improve the ease in the way of doing cross-border trade. This is because the system properties comply with World Trade Organization (WTO) which advocates for harmonization and simplifying of the procedures of global trade

The currently existing Customs system referred to as Simba system, operates on abundance of the alternate systems and it is necessary to have abundant legitimate points for the consumers therefore at other times at other times more time is required. Even though in the new-state-of-the-art system, there is an intent to have reduction in time of clearance of imports and exports at minimum by 60%. A rise in trade facilitation through appropriate IT usage yields in a better growth of economy of countries and increased competitively of industries through harmonizing

appropriate systems and reduction in unrequired procedural requirements and also has to make sure that countries safeguard themselves against practices of which are not lawful, (Ismail &Mahyideens, 2015).

Tax compliance and enforcement issues, such as ensuring that duties and taxes are correctly assessed (administrations would need to create free databases, available in a variety of formats, detailing their duty/tax rates and exemptions) and that the assessed duties and taxes are actually remitted to the country concerned. The remaining risks of undervaluation and misdeclaration of supplies by vendors, and the risk of fraud from other forms and counterfeiting. There is a need to enhance existing working relationships between Customs and other relevant agencies at the port with the use of reliable technologies to help in detection and intersection of counterfeits so as not only be able to collect accurate taxes but in all situations be in a position to protect the end consumer of the counterfeit goods.

2.4.2 Border Security

Border security is a major concern not only to Kenya, but regionally and globally. The most prevalent type of border security concerns and its related crimes are: smuggling of illicit goods, illicit drug trafficking, illegal migration, corruption, smuggling of counterfeit goods among others. A survey by National Crime Research Center, 2017 report, pointed out that there are many border security threats ranging from smuggling of illicit goods to human trafficking. The research findings further indicated that factors such as poverty and unemployment, corruption among the state and non-state agencies, political instability, weak law and order enforcement of neighboring countries, poor coordination, lack of information sharing among border control and management agencies, lack of enforcement of relevant rules and procedures (WCO, 2012) and absence clarity and procedures (WCO/OCHA/IFRC, 2012) are major causes of border insecurity at customs borders. Manifestation of these setbacks is against Kyoto Convention core principles that seek to promote simplification, transparency, standardization and harmonization of customs procedures (WHO, 2016). The costs of this border insecurity may lead to loss of life/lives, low investment and business growth due to conflicts, high level of corruption, evasion of tax and loss of revenue. This contributes significantly to destabilization of economic, social and political activities in Kenya and across borders.

In an attempt to minimize these threats, the government have deployed and tasked regional and county commissioners to oversee boarder coordination and reinforce security matters. However, due to porosity of the border routes, makes it difficult to contain the situation. To make worse, deficient of technical aids such as scanners, detectors sniffer dogs and K9s poses a serious challenge to the authority agencies. In support of this Yasui (2010) observed that these challenges pose a threat to trade facilitation contrary to Kyoto Convention that aims to facilitate and promote trade by reducing nontariff measures (NTM) at our border checkpoints. Another factor that contributes to insecurity across borders is the absences of key institutions such as Judiciary at the border points (Helbling et al., 2015). This has contributed to insecurity due to delay to administering justice. For instance, there is court at Namanga border point, all security matters that arises in this area are heard and determined in Kajjado courts or in Nairobi courts. Other challenges that needs to be addressed are: corruption amongst security officers, shortage of police/ security officers resulting to few patrols, low inter-state cooperation and lack of participation by the local community, long borderline which is hard to monitor, lack of coordination between National and County governments among others.

In such circumstances, there is need to embrace new technology coupled with enhanced border security personnel equipped with real time modern communication gadgets. Further the government agencies need to enhance capacity building of their staff and equip them with technical skills/Knowledge. In addition, every agency need to undertake aggressive citizen sensitization campaigns on the negative effect of corruption on economic development of the country as it undermines the efforts against the fight of counterfeit goods.

2.4.3 Human Resources

The impact of globalization and need for trade facilitation has put a lot of pressure on Customs Administrations to undergo restructuring in terms of human resources development. These and other factors related to Customs Professional Development and mentioned in the PICARD 2020 strategic document (Abdullah et al.,2013) has given a high priority to Human Resource Development in Customs.

In support of this Atos (2012) adds that efficient flow of trade across the borders highly is determined by a range of skilled service providers such as customs officials who are deeply

involved controlling goods crossing borders, administering trade policies and collecting revenue (Bhatnagar, 2012). McKinnon (2012) adds that the way Customs operates can positively or negatively affect trade facilitation. These are the challenges Customs administrations are facing and human resources development is one of the actual issues in Customs given that Customs performance directly depends on human resources. Therefore, effective system of training and education will enhance the level of professionalism which is key in meeting Customs requirement as recommended by ISO International standards (ISO 9004:2009). This has been a key focus area at Kenya School of Revenue Authority (KESRA) as outlined in its 7th corporate plan to focus on training, leadership development, performance management, succession management and knowledge management to empower its work force and other stakeholders in order to improve quality of services when called upon execute state function.

2.4.4 Detection of Counterfeit Goods

It has been estimated that in some of the worst affected industries, counterfeit trade accounts for more than 70% of the trade while the rest consists of trade in legitimate (legit) or genuine products or services. Counterfeit trade costs Kenya about Kshs20 billion annually in lost revenue and employment opportunities annually. Among the counterfeit goods in the market in Kenya are drugs (about \$ 130 million), textiles (about \$ 6.5 million), tire and tubes (about \$ 4 million) and soaps and detergents (about \$260,000), (Kenya Association of Manufacturers Annual Report, 1999).

Kenya Book Publishers Association (1999) estimated their annual loss at KShs 300,000, the losses incurred in the copyright industry have increased dramatically since then. In Kenya, street vendors and exhibition stalls openly sell counterfeit or pirated goods as well as Generic medicines are marketed through counterfeit packaging of the popular legitimate brands. (Kenya Association of Manufacturers' Annual Report 1999).

For this reason the Kenya revenue authority is looking at ways and mechanisms which would deal with improving detection of counterfeit goods as the main objective in this study in order to maximise revenue collection and also safe guard or protect our domestic population for social harm that will arise as a result of using counterfeit products

2.5 Empirical Review

Deisingh (2014) studied pharmaceutical counterfeiting in developing and developed countries. His objectives were to determine the effect of counterfeit medicines. He found out that in 2009 to December 2012 Antibiotics, Hormones and steroids drugs were mostly counterfeited due to the high prices. He also found that counterfeit drugs had effect on consumers, health care providers, drug manufactures and government. He described the methods used to detect the counterfeit medicines such as near infrared spectroscopy, Raman spectroscopy, and isotopic characterization, and tension graph, 21 chromatographic and mass spectrometric approaches. He also looked at the ant counterfeiting measures that are used such as holograms, tracers and tangents and electronic tracking.

Youmans&Law (2011) studied ways of combating counterfeit medications a case of California pharmacist. The objective of the study was to examine Californians pharmacist knowledge of counterfeit medicines, impact of technology and barriers to pharmacist involvement, and also to determine the roles of undertaken by the pharmacists. He found out that 59.3% of respondents believe counterfeit drugs pose a problem to the profession, but most had little to no experience with counterfeit medications. For potential sources, 44.5% believe patient use of Internet pharmacies, 39.4% indicated professional counterfeiters, and 16.1% indicated importation. Pharmacist agreed lack of knowledge (46.8%) and resources (82.5%) were barriers to detecting the presence of counterfeits. He concluded that use of Radio Frequency Identification technology as the most effective method that should be used to detect counterfeit medicines.

Study by Cressida (2014) on measures that can be taken in fighting counterfeiting in Kenya noted that, Law policy makers have set up measures to fight counterfeiting in Kenya and have gone to an extent of setting up an organization with the sole mandate of fighting counterfeiting. The challenge seems to be there is lack of proper implementation and execution of the existing policies as well as enforcement of the law and the said policies by the authorities.

2.6 Critique of Existing Literature Relevant to the Study

The study by Deisingh (2014) relates to the case of Ukraine's risk management system. It outlines initiatives by the Ukrainian government to facilitate legitimate trade by adopting a functional risk management framework. The framework of risk management in Ukraine is aimed at ensuring efficient, transparent, and simplified procedures for customs procedures. It conforms to the provisions of WTO's TFA Article 7, sub-paragraph 4 on the need to set up a robust risk management system as well as customs control. The study encourages the use of a perfect selection criterion. The study, however, does not highlight the processes of detecting the level of consequences of risks identified.

Study by Lubano (2011) on risk management measures adopted by the Kenya Revenue Authority recommended stringent measures to address risks that are inherent to the functions of the Kenya Revenue Authority. The study supports strategic measures to identify and document all known as well as anticipated risks that might compromise efforts by the Kenya Revenue Authority to attain its goals. Although this study is useful to inform risk management, it presents a simple generalization of risk management to all departments at the Authority. It is notable that the different departments at the Authority experience different risks. Customs and border control departments' risk factors may differ from that of the Domestic Taxes Department. This necessitates measures that are responsive to the customs and border control department at the Authority.

Studies by Morrissey & Zgovu (2009) on the role of effective ports management in facilitating international trade in India was carried out in developed country. The condition and environment under which customs operates in India are quite different compared with less developed countries. In line with this study by Malchow & Kanafani (2011) was also carried out in developed countries which may not be applicable to less developed countries such as East African countries.

2.7 Research Gaps

Studies on counterfeiting have majorly dwelt on counterfeiting of pharmaceutical products and cosmetically which has been noted to be having a fast and steady market. However, lack

appropriate customs equipment, inter-state corporation, coordination and political will in the region remain a major hindrance, thus no administration appears to have comprehensive framework policy that mention about customs declaration violations that cuts across inter-states. It is through information found in the declaration through data mining that will inform the decision on how to manage cross border trade facilitation efficiently.

The research gaps observed from the literature reviewed above, were evident that the findings were not clear on the factors that undermine the fight of counterfeiting at the port of Mombasa. The studies tend to have avoided a critical issue of detection of counterfeit goods by not looking on elements that are paramount in detection of Counterfeit goods at the port of Mombasa which are custom systems, border patrols and human resource.

In line with this study by Malchow&Kanafani (2011) was also carried out in developed countries which may not be applicable to less developed countries such as East African Countries More studies were based on risk management systems, at the ports thus, the study sought to clear this knowledge gap by studying on the factors that affect detection of counterfeit goods at the port of Mombasa. From the above studies however, the emphasis seems to be skewed towards the bigger picture of improving service delivery and results thus the sections such as detection of genuine and fake products seem to lack behind.

2.8 Summary

The theories are particularly relevant to this study because of the parameters set out in its variables. This chapter started by providing a summary of the discussion on the main key theoretical approaches and findings reported earlier in relation to counterfeiting at the ports. Key theoretical approaches discussed; Hype circle theory, Stakeholder Theory and Human Capital Theory. The chapter also includes conceptualization, critique of existing literature and research gaps identified by the research.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction.

This chapter presents a detailed plan of how the research strategy was conducted. It also provides a broad view of research design, location, variables, target population, sampling techniques, sampling size, sources of data, methods of data collection and instruments, data analysis, data presentation and interpretation of findings.

3.2 Research design

According to Kothari (2008), research design is a systematic plan used to study a scientific problem. It is a created framework that seeks to answers research questions. Descriptive research design will be used so as to give further insight into the research problem by describing the variable of interest being studied. The descriptive design will also help to find out the effect of the dependent variables (customs entry administrative procedures, technical and administrative regulations, quantity restrictions) and their contribution on trade facilitation, it will also be appropriate in obtaining information concerning the current status of the phenomenon and describing what the current situation is with respect to the variable above and for this reason a descriptive design is the best method.

3.3 Population distribution

Table 3.1Population Distribution

S.n.		Population	Percentage %
1	Enforcement	62	19%
2	Mombasa Facilities Bonded	83	26%
3	Container Freight Stations	68	21%
4	Container Terminal	112	34%
TOTAL		325	100%

Source: KRA, Southern Region.

3.4 Population

Population means the total gathering of particular individual components applicable to the research study or all the individuals or units of interest (Hanlon & Larget, 2011). Mugenda and Mugenda (2012), defines population as the total set of individuals a researcher would want to use in a study. This definition will ensure that the population of interest was homogeneous or uniform throughout the study. This research adopted a cross sectional survey involving all customs officers in Southern region. According to HR's records, there are a total of 325 C&BC officers in the Port of Mombasa as at September 2019.

3.5 Sampling Frame

According to Cooper and Schindler (2006) a sampling frame is a list of all population units from which the sample of a study is drawn. The sampling frame for the study was the Mombasa facilities bonded, enforcement, container freight station the Port of Mombasa

3.6 Sample Size and Sampling Technique

Sampling is a process of choosing members of the population of interest that a study seeks to obtain information from that is both statistically and logically sound (Creswell, 2008).

The study adopted Slovin's Formulae and cluster sampling technique to select respondents from various departments with an aim of providing equal chances, to the elements in the population for selection (Amugune (2014). This included KRA officers at the Kilindini Port, Bonded Facilities, Enforcement, Container terminal and Container freight facilities;

The Slovin's formula adopted in computation of the sampling size. The formula used to determine sample size is indicated below. In this study a 95% confidence level and $P = 0.05$ was assumed.

$$n = \frac{N}{1 + Ne^2}$$

Where; n is the sample size,

N is the population size,

e - the level of precision.

95% level of confidence thereby giving $p = 0.05$ chance of deviation from the actual

Therefore; Sample size $n = 325 / (1 + 325 \times 0.05 \times 0.05)$

n = 180.

Table 3.2 Sample Size

S.n.		Population	Percentage %
1	Enforcement	34	19%
2	Mombasa Facilities Bonded	46	26%
3	Container Freight Stations	38	21%
4	Container Terminal	62	34%
TOTAL		180	100%

3.6 Data Collection Instruments

The data collection instruments that the researcher used for this study will questionnaires. The questionnaires were closed-ended semi-structured questionnaire. The closed-ended questions collect quantitative data while the open-ended questions provide qualitative data Kasim (2010). This method was adopted for the entire population or sample sectors. Follow up qualitative interviews was administered for the purpose of clarification where necessary as well as available data from the case study of the Kenya revenue Authority corporate plan and implementation.

The researcher requested for permission from the college to carry out the research study. He further requested for permission from the organization authorities to carry out the study in the organization. Also the respondent's employees will be notified and their permission sought for the intention of the study to be carried out. The researcher used a drop and pick method because it gives the respondent enough time to read and understand the question before giving their answers.

3.7 Data collection procedures

The researcher requested approval from the college then seek assistance for data collection from the respondents before administering questionnaires to them to ensure that ethical acceptability and understanding of the questionnaire by respondents. The respondents were assured of the confidentiality of information that they will provide and that under no any circumstances will they be exposed to any form of risk or discomfort by participating in this study.

The questionnaire was administered to convenience respondents to read understood the questions and fill in the space meant for the purpose in the questionnaire itself as noted by Oso&Onen (2009) that questionnaires are judged as most appropriate since they allow for simple collection of

information within a short period of time inside a constrained budgetary limit. It also involved conducting face to face interviews for further investigation to know their responses so as get the story behind a participant's experiences and results in in-depth information around the topic.

3.8 Pilot Testing

The purpose is to ensure that everyone in the sample not only understood the questionnaire, but also the objectives of the research. The questionnaires was constructed on the principle of precision, clarity, and completeness, to enable acquisition of valid and reliable information, however, the researcher will pre-test the questionnaires in advance. Using this, too, the researcher also noticed the questions that make respondents uncomfortable. The researcher was able to know how long it takes to complete the survey in real time. 10% of the population after sampling is acceptable for piloting according to Mugenda&Mugenda (2008). For this study, therefore, the researcher will conduct pilot testing to determine the responsiveness in the questionnaire to assist inadequate data collection. The research instruments was carefully structured to ensure their validity and reliability in the attainment of the study objectives.

3.8.1 Validity

Validity is the meaningfulness and accuracy of inferences, which have been established on research results according to Mugenda&Mugenda (2008). They are the results got after analysing data that represent the studied variables. The degree at which theory and evidence support the test interpretation scores that are entailed by the use of test is the validity. The content related technique measures the degree to which the questions items reflect the specific areas covered under the study. The research instrument will be validated in terms of content and face validity the study used KMO and Bartlett's test to check for the validity of the contents in the data collection instrument. The content related technique measures the degree to which the questions items reflected the specific areas covered.

3.8.2 Reliability

Reliability is concerned with consistency, dependability or stability of a test Neumann (2014). The researcher will measure the reliability of the questionnaire to determine its consistency in testing the research instruments, the study will use SPSS Version 26.0 to compute the Cronbach's alpha. The Cronbach's alpha test will be used to test reliability of the instrument. A Cronbach's alpha value of more than 0.7 is considered as data collection is reliable.

3.9 Data Analysis and Presentation

According to Shamoo&Resnik, (2003) data analysis is the process of systematically applying logical and statistical techniques to describe, illustrate, recap, condense and evaluate data. This will involve the clean-up, interpretation, and presentation of collected data. The information obtained from questionnaires and document analysis will be used to analyse the data obtained. The analysis will systematically be presented in narrative form and data will be analysed using a recreational model and statistical package for social science (SPSS) version 26.0 for close-ended questions. Descriptive statistics like frequency counts, percentage charts and graphs will be used. Linear regression model will be used for data analysis.

The linear regression model that will be adopted by the researcher is:

$$Y=\beta_0 +\beta_1X_1+\beta_2X_2+\beta_3X_3+\varepsilon$$

Where;

Y –Detection of counterfeit goods

β_0 - constant term, the intercept indicates detection of counterfeit goods when $X_1=X_2=X_3=0$

$\beta_1, \beta_2, \beta_3$ - coefficients explaining the effects of independent variable X_1, X_2 , and X_3 to dependent variable Y

X_1 - Customs systems, X_2 - Border security, X_3 -Human resource and the ε -The error term, other factors that are not included in the study but affects trade facilitation.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1. Introduction

This chapter presents the output of data analysis descriptive statistics were used to explain the results of the study which were made in form of frequencies, percentages, tables, and regression analysis using the SPSS software that was used to convert the collected data into meaningful information as shall be shown in the preceding sub-chapters below

4.2. Response Rate

For the purpose of this study, researcher distributed 180 questioners to the target population of the study and received 104 fully filled, this represented 57.8% % of the respondents which was considered satisfactory to make the conclusion for the study. Mugenda and Mugenda (2012) observed that a 50% response rate is adequate thus based on this assertion, the response rate of 57.8% in this case is therefore adequate and considered satisfactory to make conclusions for the study. The researcher sought to establish the response rate of the respondents. The results are indicated in table 4.1.

Table 4.1 Response Rate

Respondents	Frequency	Percentage
Respondents	104	57.8%
Non-respondents	76	42.2%
Total	180	100%

4.3 Pilot Results

4.3.1 Validity

The study employed KMO and Bartlett's test to check for the validity of the contents in the data collection instrument. From the analysis, The KMO sampling adequacy was 0.708. According to Neuman (2014), higher values which are closer to 1.0 shows that a factor analysis may be useful

with your data. This meant that the data was useful in factor analysis. For the Bartlett's Test of Sphericity, the significance was 0.000 which was less than $p < 0.05$, indicating that factor analysis may be useful with the available data.

Table 4:2 KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.708
Bartlett's Test of Sphericity	Approx. Chi-Square	52.182
	Df	14
	Sig.	.000

4.3.2 Reliability Analysis

The reliability of a measure is established by testing for both consistency and stability of a research instrument. The reliability of this instrument was assessed with the use of Cronbach's alpha, which consists of estimates of how much variation in scores of different items is attributable to chance or random error. Table 4.3 presents results on reliability.

Table 4.3: Pilot results

Scale	Cronbach's Alpha	Items	Comments
Customs systems	0.788	4	accepted
Border Security	0.716	4	accepted
Human Resources	0.759	4	accepted
Detection of Counterfeit Goods.	0.701	4	accepted

The overall Cronbach's alpha for the four categories is 0.75. The findings of the pilot study show that all four scales are reliable as their reliability values exceeds the prescribed threshold of 0.7 (Mugenda & Mugenda, 2012). For the purpose of determining the internal consistency of the data collection instrument (Questionnaire) using Cronbach's alpha that was tested on each variable using the SPSS version 26, Cronbach's alpha was used to view the values on how the questions related. Customs systems had a value of 0.788, border Security had a value of 0.716 while human

resources had a value of 0.759 and Detection of counterfeit goods had a value of 0.701 therefore indicating that the instrument was accepted hence, the questionnaire was ruled to be reliable.

4.4 Demographic Information

Demographic data are quantifiable characteristic of a given population. This includes level of education and respondent's number of years at the Authority. The analysed results were based on 104 participants who successfully filled and returned questionnaires. The results are presented in the tables below. The occupation of the respondents and the period the respondent has worked were the aspects of profile variables investigated in this study.

4.4.1 Category

The study sought to establish response category of the respondents. The findings are presented in table 4.4.

Table 4.4: Respondent's Level of Education

Details	Frequency	Percent
Primary	0	0.0
Secondary	0	0.0
College	32	30.8
University	72	69.2
Total	104	100.0

As per the findings in table 4.4, shows the categories of the responders, 0 % were both primary and secondary level, 30.8% from College and 69.2% were university graduates. This indicated that the respondents a good knowledge to answer the questionnaire

4.4.2 Years of Service at the Authority

The study sought to establish the work experience of the respondents. The findings are presented in table 4.5

Table 4.5: Respondents' Experience

Experience	Frequency	Percent
1 - 5 years	13	12.5
5-10 years	54	51.9
Above 15 years	37	35.6
Total	104	100.0

As per the findings in table 4.5, majority of respondents (51.9%) had a working experience of between 5 to 10 years. Further results show that 12.5 per cent of the respondents had a working experience of between 1 to 5 years and 35.6% of the respondents had a working experience of more than 10 years. The number of years that the respondents had worked in the target organizations was considered important, which means that the respondents had adequate working experience and therefore possess the necessary knowledge, information and the institutional memory which was considered useful for this study.

4.5 Descriptive Analysis of the Variables

The objective of this study was to examine the factors affecting detection of counterfeit goods at the port of Mombasa.

4.5.1 Customs Systems

The study sought to assess the effect of customs systems in detection of counterfeit goods at the port of Mombasa. A Likert scale data was collected rating the extent of agreement in a scale of 1 to 5 where 1 is the strongly disagree whereas 5 is the strongly agree indicator. The mean score for each item was calculated and the findings are shown in table 4.5.

Table 4.6 Customs Systems

	Mean	Std. Deviation
Customs information system is secure from risks such as hacking and data loss.	3.71	.952
There is an integrated management information system linking various departments and agencies involved in clearance of goods at the Port of Mombasa.	3.42	1.146
E-Customs provide transparency in collection and assessment of duties and taxes at the Port of Mombasa.	3.88	1.188
There is a reliable system and infrastructure to help in detection of counterfeit goods.	4.00	1.061

Results presented in table 4.6, the respondents agreed that customs information system is secure from risks such as hacking and data loss as indicated by a mean of 3.71 and standard deviation of 0.952. The respondents also agreed that there is an integrated management information system linking various departments and agencies involved in clearance of goods at the Port of Mombasa as indicated by a mean of 3.42 with a standard deviation of 1.146. The respondents agreed that E-Customs provide transparency in collection and assessment of duties and taxes at the Port of Mombasa as indicated by a mean of 3.88 and 1.188 respectively. Finally, respondents agreed that there is a reliable system and infrastructure to help in detection of counterfeit goods as indicated by a mean of 4.00 and a standard deviation of 1.061. The findings are supported by Gibson's (2000) stakeholder theory which states that organizations should consider and address the concerns of individuals or groups that affect or may be affected by the organizations in its pursue to achieve their objectives..

4.5.2 Border Security

Data collected through the Likert scale measured the level of agreement of the respondents with respect to the effect of border security infrastructure in detection of counterfeit products at the port of Mombasa. The results are as presented in Table 4.5.1.

Table 4.7 Border Security

	Mean	Std. Deviation
Improved inter-agency patrol has helped in napping counterfeited goods at the port of Mombasa.	3.74	1.231
Incorporating multi agencies approach on board increases the scope thus helping in detection of Counterfeit goods.	3.79	1.163
Use of up to date systems and modern technological tools affect marine operations		
Customs patrols at the local markets has helped in detection of counterfeited goods at the port of Mombasa	3.62	.938
Physical investigations and verifications done by both customs and other agencies at the port of Mombasa has helped in detection of counterfeit goods at the port of Mombasa	3.26	1.052

As indicated in table 4.7, the respondents agreed that Improved inter-agency patrol has helped in napping counterfeited goods at the port of Mombasa. as indicated by a mean of 3.74 and standard deviation of 1.231. The respondents also agreed that Incorporating multi agencies approach on board increases the scope thus helping in detection of Counterfeit goods. as shown by a mean of 3.79 and a standard deviation of 1.163. Respondents agreed Customs patrols at the local markets has helped in detection of counterfeited goods at the port of Mombasa as indicated by a mean of 3.62 and standard deviation of .938. Finally, respondents agreed that physical investigations and verifications done by both customs and other agencies at the port of Mombasa has helped in detection of counterfeit goods at the port of Mombasa as indicated by a mean of 3.26 with a standard deviation of 1.052. Barney and Clark (2007) support these findings as they posit that the dominant paradigm of a firm greatly lies on the strategic process of planning and that what differentiates the firms later on is their ability to innovate and strategies so as remain abreast in the market and industry.

4.5.3 Human Resource

The study sought to determine the effect of border security and custom marine unit operations. The results are presented in table 4.8.

Table 4.8 Human Resource

	Mean	Std. Deviation
Training of customs enforcement staffs at the port of Mombasa has greatly helped in detection of counterfeit goods.	3.72	1.202
There is regular on job training to customs officers working at the port of Mombasa to update on the changes and changing trends on trade supply chain	3.82	1.172
There is adequate number of custom officers at the port of Mombasa enough to offer services at a 24 hours basis.	3.37	1.098
The level of education determines the competence level of staff	3.79	1.163

The results in table 4.8 indicates that majority of respondents agreed that training of customs enforcement staffs at the port of Mombasa has greatly helped in detection of counterfeit goods. as indicated by a mean of 3.72 with a standard deviation of 1.202. Respondents also agreed that there is regular on job training to customs officers working at the port of Mombasa to update on the changes and changing trends on trade supply chain as indicated by a mean of 3.82 with a standard deviation of 1.172. Respondents agreed that engagements with sea users i.e. fishermen/community affects border security as shown by a mean of 3.37 and standard deviation of 1.098. There is adequate number of custom officers at the port of Mombasa enough to offer services at a 24 hours basis. (mean = 3.74). Finally, majority of the respondents agreed that the level of education determines the competence level of staff as indicated by a mean of 3.79 and standard deviation of 1.163. These findings are supported by Atos (2012) who states that organizations have to change to keep in line with globalization trend geared towards provision of effective run of international trade, which depends on skilled service providers that work effectively i.e. shipping lines, port

terminal, customs official and other agencies like rail and roads. He further adds, efficient flow of trade across the borders is determined highly by a range of skilled service providers such as customs officials who are deeply involved controlling goods crossing borders, administering trade policies and collecting revenue.

4.6 Bivariate Linear Correlation among all Variables

To establish the relationship between the independent variables and the dependent variable the study conducted correlation analysis.

Table 4.9: Bivariate Linear Correlation among all Variables

		Custom Systems	Border Security	Human Resource	Detection of Counterfeit Goods
Custom Systems	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	104			
Border Security	Pearson Correlation	.499**	1		
	Sig. (2-tailed)	.000			
	N	104	104		
Human Resource	Pearson Correlation	.456**	.694**	1	
	Sig. (2-tailed)	.000	.000		
	N	104	104	104	
Detection of Counterfeit Goods	Pearson Correlation	.555**	.510**	.606**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	104	104	104	104

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

Correlation results in table 4.6 shows that there was a moderate positive significant correlation between custom systems and detection of counterfeit goods ($r=0.555$, $P=0.00$). Correlation results

also indicate a moderate positive and significant correlation ($r=0.510$, $P=0.00$) between border security and detection of counterfeit goods at the port of Mombasa. Finally, the correlation results showed that there is a moderate positive significant correlation ($r=0.606$, $P=0.00$) between human resource and detection of counterfeit goods at the port of Mombasa.

4.7 Multiple Linear Regression

The study conducted a multiple linear regression analysis in order to investigate the factors affecting detection of counterfeit goods at the port of Mombasa. In this model, coefficients of determination explain the extent to which changes in dependent variable can be explained by the changes in the independent variables or percentage of variation in dependent variable that is explained by all four independent variables.

4.7.1 Model Summary

The results for the model summary are presented in table 4.10

Table 4.10 Overall model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.743a	.552	.539	1.87729

Predictors: (Constant), Government policies, Training, Operational costs

According to regression results in table 4.10, the regression equation between factors affecting detection of counterfeit goods had a moderate regression. In the model summary, the R^2 is 0.552. This implies that the three variables studied explain 55.2% of variance in the Customs detection of counterfeit goods at the port of Mombasa. This means that, the other factors not considered in the study contribute 44.8% of variance in the dependent variable.

4.8 ANOVA

Analysis of variance was employed to test the overall validity of the regression model. The results are presented in table 4

Table 4.11: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	434.338	3	144.779	41.081	.000b
	Residual	352.422	100	3.524		
	Total	786.760	103			

a. Dependent Variable: Detection of counterfeit goods

b. Predictors: (Constant), Custom Systems, Border Security, Human Resource.

Analysis of Variance (ANOVA) was done to establish the fitness of the model used. The ANOVA table shows that the F-ratio ($F=41.081$, $p=.000$) was statistically significant. This means that the model used was a good fit. This implies that the predictor variables (Custom Systems, Border Security, Human Resource.) explain the variation in the dependent variable which is detection of counterfeit goods.

4.7.3 Multiple Regression Coefficients

The raw and standardized regression coefficients of the predictors together with their t statistics are as shown in table 4.12

Table 4.12: Regression Weights

Model	Unstandardized		Standardized		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	2.258	1.590		3.420	.000
Custom Systems	.341	.086	.340	3.971	.000
Border Security	.472	.233	.138	2.025	.000
Human Resource	.437	.109	.415	4.028	.000

A Dependent Variable: Customs Marine performance

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

$$Y = 2.258 + 0.341 X_1 + 0.472 X_2 + 0.437 X_3 + \varepsilon$$

$$\text{Detection of Counterfeit Goods} = 2.258 + 0.341 \text{ Custom systems} + 0.472 \text{ Border Security} + 0.437 \text{ Human Resource} + \varepsilon$$

Where,

Y = Detection of counterfeit Goods

β_0 = Constant (constant coefficient of intercept) y intercept the value of customs performance when the factors under study are zero.

X_1 = Custom systems

X_2 = Border Security

X_3 = Human Resource

The estimates of the regression weights, t-statistics and the p-values for the relationship between factors affecting detection of counterfeit goods at the port of Mombasa are presented in table 4.7.2.

$Y = 2.258 + 0.341 X_1 + 0.472 X_2 + 0.437 X_3$ clearly shows a significant positive relationship between the predictor variables and Detection of counterfeit Goods. The estimated coefficients show the contribution of each independent variable to the change in the dependent variable. According to

the regression equation established, holding all independent factors a constant then Detection of counterfeit goods will be average (2.258). This constant is significant in the model as it has $p=.000$ which is less than the 5% level of significance taken for this.

Regression analysis further formed a basis for answering research questions adopted in this study. This was done by considering the p values corresponding to each variable of interest in the Table 4.7.2. The first objective of the study was to assess the effect of customs systems in detection of counterfeit goods at the port of Mombasa. This was established by determining Pearson correlations of refined data. The results showed that there was a significant positive correlation between Custom system and detection of counterfeit goods ($r = 0.555$, $P<0.01$). Regression analysis conducted proved that there was a positively significant effect of Custom systems on the detection of counterfeit goods indicated by the values $\beta_1 = 0.341$, $t = 3.971$, $p<0.01$. The study concludes that an increase in the utilization of custom systems by one unit would lead to increase in detection of counterfeit goods by 0.341 units. These findings are supported by Gibson's (2000) stakeholder theory which states that organizations should consider and address the concerns of individuals or groups that affect or may be affected by the organizations in its pursue to achieve their objectives.

The second objective was to determine the effect of border security infrastructure in detection of counterfeit products at the port of Mombasa. Pearson correlation was conducted and the findings indicated that there was a moderate significant correlation between border security and detection of counterfeit goods ($r=0.510$, $P<0.01$). Regression analysis was also conducted and the results showed a positively significant effect of border security on detection of counterfeit goods as indicated by the values $\beta_2 = 0.472$, $p<0.01$. The study concludes that an increase in border security by one unit would lead to increase in detection of counterfeit goods by 0.472 units. Barney and Clark (2007) support these findings as they posit that the dominant paradigm of a firm greatly lies on the strategic process of planning and that what differentiates the firms later on is their ability to innovate and strategies so as remain abreast in the market and industry.

The study sought to investigate the effect of human resource capacity in detection of counterfeit goods at the port of Mombasa. Pearson correlation was conducted and the findings indicated that there was a moderate positive significant correlation ($r = 0.606$, $P<0.01$). Regression analysis was also conducted and the results proved that there was positively significant effect of human resource on the detection of counterfeit goods as indicated by the values $\beta_3 = 0.437$, $t = 4.028$, $p<0.01$. The

study concludes that an increase in human resource by one unit would lead to increase in detection of counterfeit goods by 0.437 units. These findings are supported by Atos (2012) who states that organizations have to change to keep in line with globalization trend geared towards provision of effective run of international trade, which depends on skilled service providers that work effectively i.e. shipping lines, port terminal, customs official and other agencies like rail and roads. He further adds, efficient flow of trade across the borders is determined highly by a range of skilled service providers such as customs officials who are deeply involved controlling goods crossing borders, administering trade policies and collecting revenue.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMENDATIONS

5.1 Introduction

The following summary, conclusion and recommendations were made from data that was collected and analysed, based on the following objectives of the study: To assess the effect of customs systems in detection of counterfeit goods at the port of Mombasa, to determine the effect of border security infrastructure in detection of counterfeit products at the port of Mombasa, to investigate the effect of human resource capacity in detection of counterfeit goods at the port of Mombasa.

5.2 Summary of the Findings

5.2.1 Customs systems factors

What is the effect of customs systems on detection of counterfeit goods at the port of Mombasa? Custom system infrastructure proved to be strongly affecting detection of counterfeit goods at the port of Mombasa. The researcher using Karl Pearson correlation analysis found out that custom system largely affects detection of counterfeit goods as indicated by a strong positive correlation of 0.555 between detection of counterfeit goods and custom system.

Using the linear regression obtained from the obtained model, it was found out that custom systems was the most significant variable influencing detection of custom systems with a unit increase in use of custom systems resulting to .0341 unit increase in detection of counterfeit goods. The regression coefficient of customs systems and detection of counterfeit goods positive ($\beta=0.341$) and significant ($p \text{ value} = 0.000$) this means that custom systems factor is statistically significant. This is to indicate a strong relationship between custom system and detection of counterfeit goods.

5.2.2 Border Security

What is the effect of border security in detection of counterfeit goods at the port of Mombasa?

Significantly, to a great extent border security was found to be affecting detection of counterfeit goods at the port of Mombasa. Findings based on the correlation analysis indicated that border security has a strong influence on detection of counterfeit goods being. Thus, from the findings incorporation of inter-agency on board as well as increasing inter-agency patrols strongly contributes to the aspect of detection of counterfeit goods at the port of Mombasa.

The researcher found out the same results from regression analysis results whereby inter-agency cooperation on border security has an influence on detection of counterfeit goods at the port of Mombasa. This indicates a strong effect on the needy variable, thereby in the event custom border security work together with other border security agencies in the fight against counterfeit goods it would result in an increase in detection of counterfeit goods at the port of Mombasa. The study reveals that in order for detection of counterfeit goods to be a smooth exercise, both border security should be in constant contact with customs enforcement officers in order to ensure that any issues arising from the border security agencies are adequately addressed so as improve on surveillance.

5.2.3 Human Resource

How does human resource influence detection of counterfeit goods at the port of Mombasa?

The study established that human resource very strongly affects the detection of counterfeit goods. This was supported a coefficient correlation of $r=0.606$ which infers a strong positive correlation to detection of counterfeit goods.

Regression analysis further supported the findings of the correlation analysis that human resource has a positive strong influence on detection of counterfeit goods at the port of Mombasa by 43.7 % when all other factors are constant.

5.3 Conclusions

The research study has been a subject to guidance by a general objective to examine the factors affecting detection of counterfeit goods at the port of Mombasa. To conduct this study, the researcher identified custom systems, border security and human resource to be the factors affecting detection of counterfeit goods at the port of Mombasa.

To assess the effect of customs systems in detection of counterfeit goods at the port of Mombasa being the first specific objective, lead to the study identifying it to have a strong positive significance to the detection of counterfeit goods. Thus, therefore increasing utilization of custom systems and information there in increases the detection of counterfeit goods at the port of Mombasa

The second objective of this study was; to determine the effect of border security infrastructure in detection of counterfeit products at the port of Mombasa. The study through various analysis

established that border security to have a positive influence on the detection of counterfeit goods at the port of Mombasa.

Finally, the third objective of the study was to investigate the effect of human resource capacity in detection of counterfeit goods at the port of Mombasa. Human Resource was established to have a significant influence on the detection of counterfeit goods at the port of Mombasa.

5.4 Recommendations

1. The study recommends that Custom should adopt the latest systems, technological tools as it was established that use of up to date systems, and modern technological tools affect customs operationtheintegration costs as possible. In addition, the information system used by customs have to be integrated with other agencies systems in the frontline of protection of the society against sub-standard and counterfeit goods systems as well as, incorporating those systems with counterfeit goods detection infrastructure would be of a great help.
2. The study recommends that multi-agency approach in border security against the fight of counterfeit goods should be incorporated and regular investigation of the local market by customs has to be heightened in order to increase the detection of counterfeit goods.
3. new system should configure with the existing systems so as to enable ease of transformation with little
4. The study recommends that custom staffs should adequately be trained since it was established that training of staff as well as regular on jobs training of staff on the changing trends in the global supply chain geared towards detection of counterfeit goods goes a long way in the increased performance and detection of counterfeit goods.

5.5 Areas for Further Research

This research provides empirical evidence on the factors affecting detection of counterfeit goods at the port of Mombasa. However, the current study concentrated on only three factors namely; human resource, border security and custom system that accounted for 55.2% variation in detection of counterfeit goods at the port of Mombasa. This implies that these factors considered in the study are not exhaustive hence further research should be undertaken to establish how other factors affect the detection of counterfeit goods at the port of Mombasa.

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APPENDIX I: LETTER OF INTRODUCTION



ISO 9001:2015 CERTIFIED

KRA/KESRA/MSA/106

2nd September 2020

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: REQUEST TO COLLECT RESEARCH DATA

This is to certify that the following is bona fide student of the Kenya School of Revenue Administration Mombasa Campus undertaking Post Graduate Diploma in Customs Administration.

Name	Admission Number
KELVIN MAINA	HDB335-C016-2130/2018

The above mentioned student is in his final year of study at the school and currently conducting research on the **Factors affecting detection of counterfeit goods at the port of Mombasa**. The student is in the process of gathering data and thereafter, compile a report that will strictly be used for academic purposes only. The School would therefore like to seek your permission to allow him/her collect information that relates to his research from your organization. Thank you in advance for your support and cooperation.

Yours sincerely,

Mumia B.J.
Associate Head of Research KESRA, Mombasa Campus



Tulipe Ushuru Tujitegemee !



APPENDIX II: QUESTIONNAIRE

This questionnaire seeks to collect data about the ‘Factors Affecting Collection of Customs Trade Statistics at the Port of Mombasa’. The data was collected for academic purposes only. Information on your experience with the Authority was very resourceful. Please take your time to complete this questionnaire using the instructions provided for each question.

Please tick and provide your own answers where applicable.

SECTION A: PERSONAL INFORMATION

1. Level of education:

Primary education []

Secondary education []

College []

University []

2. Years of service at the Authority:

0 - 10 []

11 – 20 years []

Above 20 years []

3. Position in the organization: _____

SECTION B: CUSTOMS SYSTEMS

6. What is the effect of Customs system on the detection of counterfeit goods at the Port of Mombasa?

To what extent do you agree with the below statements (1 = Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)

	Statement	1	2	3	4	5
A	Customs information system is secure from risks such as hacking and data loss.					
B	There is an integrated management information system linking various departments and agencies involved in clearance of goods at the Port of Mombasa.					
C	E-Customs provide transparency in collection and assessment of duties and taxes at the Port of Mombasa.					
D	There is there is a reliable system and infrastructure to help in detection of counterfeit goods.					

SECTION C: BORDER SECURITY INFRASTURE

7. What is the effect of border security on detection of counterfeit goods at the Port of Mombasa?

To what extent do you agree with the below statements (1 = Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree).

	Statement	1	2	3	4	5
A	Improved inter-agency patrol has helped in napping counterfeited goods at the port of Mombasa.					
B	Incorporating multi agencies approach on board increases the scope thus helping in detection of Counterfeit goods.					
C	Customs patrols at the local markets has helped in detection of counterfeited goods at the port of Mombasa.					
D	Physical investigations and verifications done by both customs and other agencies at the port of Mombasa has helped in detection of counterfeit goods at the port of Mombasa.					

SECTION D: HUMAN RESOURCE CAPACITY

8. How does Human resource affects the detection of counterfeit goods at the Port of Mombasa?

To what extent do you agree with the below statements (1 = Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)

	Statement	1	2	3	4	5
A	Training of customs enforcement staffs at the port of Mombasa has greatly helped in detection of counterfeit goods.					
B	There is regular on job training to customs officers working at the port of Mombasa to update on the changes and changing trends on trade supply chain					
C	There is adequate number of custom officers at the port of Mombasa enough to offer services at a 24 hours basis.					
D	The level of education determines the competence level of staff					

SECTION E: DETECTION OF COUNTERFEIT GOODS

9. To what extent do you agree with the below statements (1 = Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)

	Statement	1	2	3	4	5
A	Counterfeit goods imported and exported through the port of Mombasa has led to the loss of revenues by the government					
B	Counterfeit goods that enter into the local market has posed unfair trade competition in the market and thus loss of revenues from legitimate trade.					
C	The society is exposed to risk of counterfeit goods from goods of all sectors.					
D	Genuine traders face losses as a result of existence of counterfeit goods in the market					

APPENDIX III: WORK PLAN

Activity	January -february	August 2020	September- October 2020	November2020
Proposal Writing				
Proposal Defense				
Data Collection				
Data analysis and interpretation of the research findings				
Submission of final project				

APPENDIX IV: BUDGET

S/N	ITEM	TOTAL COST(KSHS)
1	Stationery	14,000
2	Printing services	18,000
3	Transport & subsistence	15,000
4	Consultancy	12,000
5	Miscellaneous	15,000
	Grand Total (KSHS)	74,000