EFFECT OF EXCISABLE GOODS MANAGEMENT SYSTEMS ON EXCISE DUTY COLLECTION IN DOMESTIC TAXES DEPARTMENT, NAIROBI REGION, KENYA REVENUE AUTHORITY

BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTERS IN TAX ADMINISTRATION TO THE DEPARTMENT OF ACCOUNTING & FINANCE, SCHOOL OF BUSINESS AND ECONOMICS

MOI UNIVERSITY

DECLARATION

Student Declaration

This research Project is my original work and has not been presented for a degree in any other university.

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DEDICATION

I dedicate my research project to my family; Bruce, Ebe, Noury, Magi, Favour and Kukhu, who continuously encouraged me never to give up on my studies, and for the moral and financial support extended to me throughout the period of my study. I also thank the Almighty God for the sufficient grace & wisdom that He has given me throughout my entire period of study.

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I am also grateful to Moi University together with Kenya School of Revenue Administration for giving me an opportunity to pursue my master's degree. It goes without say, the effort of

Dr. Marion Nekesa and Dr. Daniel Kirui my supervisors for their professional guidance during the writing of the research project. I give credit to KESRA for according the necessary infrastructure in terms of supervisors, classes, library and online databases that has facilitated the success of this project. I am also thankful to my classmates with whom we have walked the journey together by encouraging one another.

ABSTRACT

The introduction of the new excise stamps with security features is in line with the provisions of the Excise Duty (Excisable Goods Management System) Regulations, 2017 that requires all excisable products manufactured in or imported to Kenya, with the exception of motor vehicles, be affixed with excise stamps. The new generation stamps have enhanced security features leveraging on technology which are meant to deter counterfeiting. Excisable goods management system regulation was formulated in Kenya to deter counterfeiting, facilitate tracking of goods, enable accounting and facilitate authentication of stamps affixed on excisable goods. However, despite the introduction and use of excisable goods management system, excise duty non-compliance in Kenya remains high. Therefore, this study sought to investigate the Effect of Excisable Goods Management Systems (EGMS) on Excise Duty collection in Domestic Taxes Department, Enforcement Division, Kenya Revenue Authority. The specific objectives of the study were to determine the effect of verification of stamps, application procedure and excise stamp security features on excise duty collection in Domestic Taxes Department, Enforcement Division at Kenya Revenue Authority. The study was anchored on three theories, namely; Technology Acceptance Model, Unified Theory of Acceptance & Theory of Reasoned Action**.** The study employed explanatory research design. The target population of the study was 214 registered importers and manufacturers of excisable goods in Kenya as well as staff working in Domestic Taxes Departments-Enforcement Division and a sample size of 139 respondents. This study used stratified and simple random sampling in the selection of the 214 respondents from the target population. This study used of both primary and secondary data. Secondary data to be obtain from the annual reports of Kenya Revenue Authority. Close ended questionnaires were used in this study to collect the primary data. The research instrument was generated both quantitative and qualitative data. The data was analyzed using descriptive and inferential statistics to determine the association between variables, with the measurement of variables based on 5-point Likert Scale. Correlation and regression analysis provided an understanding of the relationship between the study variables. The study was analyzed by use of inferential and descriptive statistics. The study results showed that regression of coefficients showed that verification of stamps, stamps application procedures and stamps security features and excise duty collection were positively and significantly related (β=0.454, p=0.000). (β=0.257, p=0.000). and (β=0.468, p=0.000) respectively. From the study findings, verification of stamps, applications procedures and stamps security features had positive and significant relationship with excise duty revenue collection excise duty collection in Domestic Taxes Department, Enforcement division, Kenya Revenue Authority. This study therefore recommends that enforcement of the requirements of verification of stamps including adequate light for verification of stamps so as to ensure impartial verification of stamps and identification of counterfeit stamps. In addition, study recommends that the management of Kenya Revenue Authority should reduce the bureaucracies involved in the issuance and application of stamps so as to enhance compliance. Furthermore, the study therefore recommends that the management of Kenya Revenue Authority should enhance the features of excise stamps to prevent counterfeiting.

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ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
BIR	Bureau of Internal Revenue
DOI	Diffusion of Innovation
IRB	Inland Revenue Board
ISO	International Organization for Standardization
IT	Information Technology
KESRA	Kenya School of Revenue Administration
KRA	Kenya Revenue Authority
NTA	National Tax administration
GDP	Gross Domestic Product
STO	Small Tax Payers Office
KRA	Kenya Revenue Authority
EGMS	Excisable Goods Management System
EMCS	Excise Movement and Control System
KAM	Kenya Association of Manufacturers
KRA	Kenya Revenue Authority
RMCD	Royal Malaysian Customs Department
TAM	Technology Acceptance Model TRA:
TRA	Theory of Reasoned Action
TSO	Tax Service Office
UNECE	United Nations Economic Commission for Europe
VAT	Value Added Tax

OPERATIONAL DEFINITIONS OF TERMS

Excise Duty Excise Duty According to the Excise Duty Act, 2015 means a duty imposed under the Excise Duty Act, 2015 on goods and services manufactured or imported into Kenya and those listed under the 1st schedule to the Excise Duty Act, 2015.

Excise Stamps An excise stamp is a type of revenue stamp affixed to some excisable goods to indicate that the required excise tax has been paid by the manufacturer (Nyaga, 2014)

Verification of stamps Excisable Goods Verification involves authentication of goods from a manufacturer, importer, distributor, retailer or any other person involved in the supply chain of excisable goods before admitting the goods in their premises (Grant Thornton, 2017).

Application procedures The Excise Duty indicates that a manufacturer or importer of excisable goods shall apply to the Commissioner for excise stamps in the prescribed form (Excisable Goods Management System) Regulations, 2017)

Excise stamps security features The introduction of the new excise stamps is in line with the provisions of the Excise Duty that requires all excisable products manufactured in or imported to Kenya, with the exception of motor vehicles, be affixed with excise stamps. "The new generation stamps have enhanced security features leveraging on technology which are meant to deter counterfeiting," The security features that can be verified using stamp verification tools provided to enforcement officers (Excisable Goods Management System) Regulations, 2017)

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the background of the study, statement of the problem, research objectives, research hypotheses, significance and scope of the study.

1.1 Background of the study

Before the implementation of the EGMS, there was stamps counterfeiting, inadequate market surveillance – due to inadequate surveillance equipment and manpower and lack of automated excise stamps control system – leading to difficulties in tracking (KRA, 2019). Excisable goods management system was implemented to safeguard excise tax revenue through application of excise stamps which have security features. The system was further aimed to combat dumping and illicit trade by importers and manufacturers of excisable goods, account for the production and to serve as proof that duty has been paid on the item to which a stamp has been affixed (KRA, 2019).

1.1.1 Global Perspective

Excise duty has been referred to as the orphan of tax policy, because it has received relatively little attention in the tax literature. But this has changed greatly in recent years, due to growing awareness of the effects of manufactured products associated with this duty, as well as the social costs associated with the phenomenal increase in traffic (Crawford, Keen & Smith, 2012). Excise duty is an indirect tax on the sale or use of specific products (ref).

Excise system can be defined to comprise all selective duties or taxes, related charges and levies on motor vehicles, petroleum products, gambling, alcohol and other specific manufactured goods. Broadly speaking, the distinguishing features of excise

taxation is selectivity in coverage, discriminative in intent, and often some form of quantitative measurement in determining the tax liability, along with the application of specific rates and physical controls over production for enforcement purposes (OECD, 2019). Various economies globally have introduced regulations on excise stamp fees to be charged on excise stamps for different types of excisable goods. The purpose of these stamps would be to deter counterfeiting, facilitate any persons in the supply chain to authenticate the stamps and excisable goods, enable accounting for the production of excisable goods manufactured or imported and facilitate tracking of the stamps and excisable goods along the supply chain. The use of computerized systems in excise duty collection involves the use of information and communication technologies (ICT) in providing records, in real-time, the movement of tobacco, alcohol, and energy products for which excise duties have still to be paid (UNECE, 2012). In Europe, exercise duty system covers the following products: tobacco, electricity, energy products, alcohol and alcoholic drinks. However, more significant loses are from the illegal trade with these products, as they are taxed with a very high excise duty hence there is immense smuggling and illegal trade in all EU member states which impacts both VAT and excise duty gap (Blackburn, Bose & Capasso, 2012).

In 2010, the European Commission 2 introduced Excise Movement and Control System (EMCS) with the purpose of creating a paperless administration, speeding up the release of guarantees when goods arrive at their destination, simplifying procedures for traders with a standardized electronic system for the whole EU, ensuring the secure movement of excise goods for which duty has still to be paid with pre-dispatch checks on traders and combating fiscal fraud with real-time information

and checks on goods being moved under duty-suspension (European Commission, 2019).

The expansion of the illegal market to the eastern borders of the EU has been driven by an increase in excise duty on cigarettes with subsequent price rises. The total consumption of illegal excisable products in the EU is about 56.6 billion euros (KPMG, 2015). The percentage of illicit cigarette market was 29.3% of the excisable products in 2014 in Latvia ranking the country the highest in illegal excisable product consumption in the EU (KPMG, 2015). The smuggling activities of excisable products involving cigarettes have caused a great loss to tax revenues in the country. Various factors can negatively affect the amount of excise duty, for example, the tax rate, the fairness of taxes, the penalty rate, the influence of peers and tax agents (Sinnasamy, Bidin & Ismail, 2015). In Croatia, EMCS was introduced in 2013, the system enables electronic exchange of information between authorized economic operators and competent customs and tax bodies in member states, the aim being to monitor the movements of excise goods in the system of suspension of excise duties. EMCS replaces the accompanying excise document with an electronic administrative document (Council Directive, 2011). Although minimum rates and excisable products in the country are prescribed in the harmonized system of the EU, there are in fact considerable differences among the countries. The current rates in the Republic of Croatia are at a rate higher than those minimally prescribed in the EU, and as far as European regulations are concerned need not be changed (European Commission, 2013).

In Malaysia, the excise duty imposed on imports and locally manufactured goods as stated in Section 6 of Excise Act 1976. This duty is used as a mechanism to alter the trend of public consumptions or social engineering (Delipalla, 2019). Tax non-

compliance on excise duty comprising of cigarettes, liquor and imported vehicles were quite rampant compared to other commodities such as tiles, tyres and electric appliances. Despite the various transformation 3 programs introduced by the Royal Malaysian Customs Department (RMCD) to improve excise duty collection, prior statistical evidence indicates the increase of tax non-compliance among importers as taxpayers. For instance, the additional excise duty detected from illegal trade and smuggling offences cases were quite high.

In the year 2012, RM358.56 million (4,810 cases), RM374.63million (5,070 cases) in 2013 and RM360.29million (4,254 cases) in 2014 (RMCD Annual Report, 2012-2014). Due to the increase of tax non-compliance, tax revenue collected is less than the expected actual tax. Excise duty varies among Southern African countries due to differences in revenue potential (smuggling, price elasticity and size of tax base) and different degrees of concern about the externalities associated with alcohol. Different country patterns of excise taxation often reflect domestic features and do not easily lend themselves to cross-country comparisons (Beukes & Van-der-schuren, 2017). South Africa for instance applies a transparent excise duty rate structure that differentiates between excisable goods in accordance with benchmarks determined in 2002 and adjusted in 2012. The total consumption tax burden (Excise Duties plus VAT) as a percentage of the weighted average retail selling price for wine, clear beer and spirits were set at 23%, 33%, and 43% respectively in 2002. Budget 2012 increased the target tax burden for beer and spirits to 35% and 48% respectively. Excise duties were increased above inflation since 2002/03 to achieve and maintain the targeted indirect tax burdens (Bird & Wallace, 2016). In Tanzania, Excise Duty amendment in excisable items intends to protect the Tanzanian currency. The rates amended are in accordance with the prevailing inflation rate. However, changes have

been prescribed under Finance Act 2018. The buoyancy of Excise Tax in the country has been higher than elasticity, implying that discretionary changes have enhanced revenue collection. In Tanzania, excise duty ranks third (after Income Tax and VAT) in terms of revenue generation. Besides being an important source of revenue, Excise Duty has been cheap in principle to administer, and is potentially efficient, especially when applied to goods that cause negative externalities or face price inelastic demand (Osoro, Mpango & Mwinyimvua, 2013). In Uganda, excise tax system has not been broad-based as VAT. Only a few items such as alcoholic and processed soft drinks, and petroleum products are subject to excise duties.

There are two types of excise duties, namely, ad valorem excise duty which is expressed as a percentage of the retail price of a good and a flat rate excise duty also known as specific duty, which is imposed on the physical quantity of a given good. The contribution of excise duties in indirect domestic taxes has gradually declined. The composition of Domestic Excise Duties has also changed since the introduction of the tax on phone talk time in 2010/11. For instance, the share in total domestic excise duties for beers changed from 55% in 2009/10 to 47% in 2012/13; the corresponding figures for cigarettes were from 31% to 27%; and soft drinks from 12% to 10% over the same periods. The contribution of phone talk time was 12 percent in 2012/13 (Government of Uganda, 2015).

1.1.2 Local Perspective

Alcoholic beverage makers have now endorsed the new generation excise stamps for wines, spirits and beer despite a procurement row surrounding its acquirement and initial opposition by bottlers. The Excise Tax Stamp is a specially designed digital stamp with security features which will be affixed on specified excisable goods in

Kenya whether locally manufactured or imported to show that taxes and duties have been paid or will be paid on them. Excise duty according to the Excise Duty Act, 2015 means a duty imposed under the Excise Duty Act, 2015 on goods and services manufactured or imported into Kenya and those listed under the 1st schedule to the Excise Duty Act, 2015.

Use of the stamps is one way that the Treasury is counting on to seal tax leakages (Ndumia, 2015). The East African Breweries Limited (EABL) and the Kenya Wines Agencies Limited (KWAL) have now embraced the taxman's move. The Kenya Wines Agencies Limited (KWAL) is of the view that the new system would help deal a blow to counterfeiters (Irungu, 2013).

"The mobile app platform, which is part of the EGMS enables the industry to ascertain authenticity of alcoholic beverages, which helps weed out parallel importers and counterfeiters," The Alcoholic Beverage Association of Kenya (ABAK) draws its membership from Africa Spirits Ltd, Kenya

Breweries, United Distillers and Vintners (UDV) Kenya, Kenya Wines Agency, Wines of the World and Keroche Industries. In practice, there are two possibilities to solve the case of excise stamps. In the most common way, an importer sends excise stamps to an exporter who sticks them to the bottles/boxes and sends them as such to their destination country. A less popular solution is to send the bottles/items without excise stamps. If so, they might be stamped before receiving marketing authorization to the market, but at the same time when items are physically on the territory of a country. They shall wait in a customs warehouse until the exporter will come and personally attach the excise stamps. This second solution is possible only in a free

zone, duty-free warehouse or a customs warehouse and is practical when the counterparty is still not sure about what exactly to do with the sent goods.

Excise Tax Stamp seeks to achieve the following objectives: Control the importation and local production of excisable goods for revenue purposes, Check illicit trading, smuggling and counterfeiting of excisable products, check under-declaration of goods, and Protect and increase tax revenue. In general, the main objective of the excise stamps is to monitor excise duty. Over the years, the issue of counterfeiting of excise stamps has been in the limelight. Illicit trade grew with stamps easily counterfeited. Counterfeit stamps or genuine stamps affixed to counterfeit can fool consumers and endanger public health. This led to some stamps to have specialized security design features to guard against counterfeiting as most types of paper tax stamps have been counterfeited within weeks of issue.

Similarly, Kenya Revenue Authority (KRA) has introduced new generation excise stamps for all wines, tobacco, spirits, ready-to drink alcoholic drinks and beers.

1.1.3 The Excisable Goods Management System

The Excise Duty (Excisable Goods Management System) Regulations, 2017 have recently been published in the Kenya Gazette Supplement No. 44 under Legal Notice No. 48. Every package of excisable goods, except motor vehicles, manufactured in or imported into Kenya, are required to be affixed with an excise stamp. The purpose of this is to: Deter counterfeiting; Facilitate tracking of the stamps and excisable goods along the supply chain; Enable accounting for the production of excisable goods manufactured or imported; and Facilitate any persons in the supply chain to authenticate the stamps and excisable goods.

The Regulations have introduced Excise Stamp Fees to be charged on excise stamps for different types of excisable goods. The excise stamp fees shall be paid to the Commissioner of Revenue by the manufacturers and importers of excisable good based on quantity of stamps issued to them. Below is a summary table 1.1 that shows the category of goods and the excise stamp fees charged:

Table 1.1 Excise Stamp Fees

Category of Excisable Goods
Cigars, cheroots, cigarillos, containing tobacco or tobacco substitutes 2.8 per stamp
Cigarettes containing tobacco or tobacco Substitutes 2.8 per stamp Other manufactured tobacco and manufactured tobacco substitutes;"homogenous" and "reconstituted tobacco"; tobacco extracts and essences 2.8 per stamp Wines including fortified wines, and other alcoholic beverages obtained by fermentation of fruits
Compounded spirits of alcoholic strength exceeding 10% 2.8 per stamp
Spirituous beverages of alcoholic strength not exceeding 10% 1.5 per stamp
Beer, Cider, Perry, Mead, Opaque beer and mixtures of fermented beverages with non-alcoholic beverages
Mineral water and aerated water of tariff no. 2201.10.00
Fruit juices (including grape must), and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter
Sweetened or flavoured water and non-alcoholic beverages not including fruit or vegetable juices of tariff heading 2202
Cosmetics and Beauty products of tariff heading Nos. 3303, 3304, 3305 and 3307 0.6 per stamp

Source. Excisable Goods Management System Regulations

Kenya Revenue Authority (KRA) is keen on implementing the Excise Goods Management System (EGSM) on bottled water, juices, energy drinks and soda so as to capture the 78 percent of manufacturers who are not paying taxes. Kenya Revenue Authority informed all licensed manufacturers, importers, distributors, retailers and general public that further to the Public Notice dated 30th August 2019, bottled water, juices, energy drinks, soda ,alcoholic beverages and other non-alcoholic beverages manufactured in or imported into Kenya from 13th November, 2019 must be affixed with an Excise Stamp in accordance with Section 28 of Excise Duty Act 2015 and

Legal Notice 53 of 30th March, 2017 (Excisable Goods Management System Regulations).

Kenya Revenue Authority (KRA) has rolled out a new generation of excise stamps for excisable goods as part of its strategy to continuously review and improve the security features of excise stamps to deter counterfeiting. The excisable products covered include alcoholic beverages, tobacco and tobacco products, water, soft drinks and juices. KRA informed key stakeholders in the excise industry including all manufacturers, importers, distributors, wholesalers and retailers of excisable goods, of the rollout through a public notice published on 30th November 2021.

The introduction of the new excise stamps is in line with the provisions of the Excise Duty (Excisable Goods Management System) Regulations, 2017 that requires all excisable products manufactured in or imported to Kenya, with the exception of motor vehicles, be affixed with excise stamps.

The new generation stamps have enhanced security features leveraging on technology which are meant to deter counterfeiting. The security features that can be verified using stamp verification tools provided to enforcement officers. Members of the public can also verify the stamps using the Soma label mobile phone app available on Google Play Store or Apple Store. The rollout will be implemented in three (3) phases with the first one targeting wines, spirits, ready to drink beverages, beer and other tobacco products. Water, soft drinks and juices will have the new stamps from 28th December 2021, whereas tobacco products and keg beer will be covered from 1st February 2022. A user guide on this is available on the KRA website.

The process of stamp installation is 90 percent done since they have 64 automated companies to install on and out of which they have already installed 54 companies.

The 64 companies are not the only one since there are over 400 companies dealing in the products but do not have automated lines and KRA will help them companies manually fix the stamps. “Moving forward, we are anticipating to have one stamp for agencies that will be recognized by the Ministry of Health, Kenya Bureau of Standard (KEBS) and KRA so as to ease the cost of doing business in Kenya,” she added.

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Excise Tax Stamp seeks to achieve the following objectives: Control the importation and local production of excisable goods for revenue purposes, Check illicit trading, smuggling and counterfeiting of excisable products, check under-declaration of goods, and Protect and increase tax revenue. In general, the main objective of the excise stamps is to monitor excise duty. Over the years, the issue of counterfeiting of excise stamps has been in the limelight. Illicit trade grew with stamps easily counterfeited. Counterfeit stamps or genuine stamps affixed to counterfeit can fool consumers and endanger public health. This led to some stamps to have specialized security design features to guard against counterfeiting as most types of paper tax stamps have been counterfeited within weeks of issue. Similarly, Kenya Revenue Authority (KRA) has introduced new generation excise stamps for all wines, tobacco, spirits, ready-to drink alcoholic drinks and beers.

Kenya loses more than Sh153 billion tax revenue annually to illicit trade, according to the Anti-Counterfeits Authority(ACA), with tobacco and alcohol products among the most traded.

This, even as consumers in the country remain reluctant in reporting illicit trade. According to a recent survey by Stop Crime Kenya (StoCK), four out of 10 consumers in Kenya see no point in reporting illicit trade, with a third of consumers continuing to buy counterfeit goods knowingly.

This is part of its strategy to continuously review and improve the security features of excise stamps to deter counterfeiting. The excisable products covered include alcoholic beverages, tobacco and tobacco products, water, soft drinks and juices. KRA informed key stakeholders in the excise industry including all manufacturers, importers, distributors, wholesalers and retailers of excisable goods, of the rollout through a public notice published on November 30.

The introduction of the new excise stamps is in line with the provisions of the Excise Duty (Excisable Goods Management System) Regulations, 2017 that requires all excisable products manufactured in or imported to Kenya, with the exception of motor vehicles, be affixed with excise stamps. "The new generation stamps have enhanced security features leveraging on technology which are meant to deter counterfeiting," notes Rispah Simiyu, KRA Commissioner for Domestic Taxes. The security features that can be verified using stamp verification tools provided to enforcement officers.

Majority of the surveyed noted that even though there are agencies to which one can report illicit trade, there are significant barriers preventing them from doing so, with one in four people saying they fear retaliation if they report illicit trade. Kenya has one of the largest markets for fake goods and contraband in East Africa according to ACA, ranging from alcohol, electronics and pharmaceuticals to food, clothing and tobacco. To fight counterfeits, Kenya Revenue Authority has rolled out new generation of excise stamps for excisable goods. This is part of its strategy to continuously review and improve the security features of excise stamps to deter counterfeiting. The excisable products covered include alcoholic beverages, tobacco and tobacco products, water, soft drinks and juices. KRA informed key stakeholders in the excise industry including all manufacturers, importers, distributors, wholesalers and retailers of excisable goods, of the rollout through a public notice published on November 30.

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They include use of counterfeit excise stamps on excisable products, sale of excisable goods without stamps, sale of vatable goods without issuance of a proper tax invoice, manufacturing of excisable products without excise licenses and use of proxy companies to procure raw materials.

Other schemes identified include under declaration of production, failure by manufactures to account for excise stamps, production of fake delivery notes, issuance of invoices with fake Personal Identification Numbers (PIN), and conveying of illicit goods using various modes of transport to aid concealment of the source and ownership of the goods.

1.1.4 Excise Duty Collection

Excise duty is imposed on both goods and services including mobile telephony services, cars, wine, polythene bags (of a particular specification), cigars and cigarettes, soft drinks, beer and spirits and among others. It was previously administered under the Customs & Excise Act 2010, however, effective 1 December 2015; the tax is administered under the Excise Duty Act 2015. Pursuant to Kenya's Excise Duty Act 2015, both the Cabinet Secretary and the Commissioner General of the Kenya Revenue Authority are empowered to adjust excise duty rates. Further, the Act empowers the Commissioner General to adjust specific excise duty rates annually because of inflation. The first inflation adjustments were introduced on 1 August 2018

by the Commissioner General via Legal Notice 164 which was later annulled in September 2018 by the National Assembly due to insufficient public participation (EY, 2019). In 2017, Excisable Goods Management System (EGMS) was gazetted under Legal Notice No. 48. The system was aimed to safeguard excise tax revenue through application of excise stamps which has security features. The tax is applicable to beer, spirits, tobacco, wine and most recently soft drinks and mineral water (KAM, 2017Excise duty is a tax imposed on specific local and imported goods (Naibei, Momanyi & Oginda, 2012). Excise duty on imports is collected at the time of importation together with other import taxes like import duty and VAT (Cherogony, 2013).

Excise tax is also a trade tax applied to either production or sale, to domestic output or imported, with either ad valorem or specific rates. Unlike their developed counterparts, most developing countries rely heavily on taxes to finance their budgetary expenditures.

In Kenya revenue collected from taxation remains the single largest source of government budgetary resources (Nyaga, 2014). For the last one decade tax revenue is made up 80 % of total government revenue (including grants). In the last five years, the contribution of tax to total government recurrent revenue (excluding grants) has averaged 93% (Ndumia, 2015). Kenya's excisable commodities at the moment are alcoholic beverages, soft drinks, mobile air time, bottled water, tobacco, fuel, cosmetics, jewelry and motor vehicles. Excise tax rates are particularly high in cases where a negative impact results from consuming harmful goods or services, or in cases of luxury goods that have a lesser substitution effect even with higher tax rates. On the other hand, local excise duty is collected monthly. Some of the goods subject

to payment of excise duty include wines and spirits, beer, bottled water, soft drinks and cigarettes.

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To fight counterfeits, Kenya Revenue Authority has rolled out new generation of excise stamps for excisable goods. This is part of its strategy to continuously review and improve the security features of excise stamps to deter counterfeiting. The excisable products covered include alcoholic beverages, tobacco and tobacco products, water, soft drinks and juices. KRA informed key stakeholders in the excise industry including all manufacturers, importers, distributors, wholesalers and retailers of excisable goods, of the rollout through a public notice published on November 30. The introduction of the new excise stamps is in line with the provisions of the Excise Duty (Excisable Goods Management System) Regulations, 2017 that requires all excisable products manufactured in or imported to Kenya, with the exception of

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1.2 Statement of the Problem

Before the implementation of the EGMS, there was stamps counterfeiting, inadequate market surveillance – due to inadequate surveillance equipment and manpower and lack of automated excise stamps control system – leading to difficulties in tracking (KRA, 2022). Excisable goods management system was implemented to safeguard excise tax revenue through application of excise stamps which have security features. The system was further aimed to combat dumping and illicit trade by importers and manufacturers of excisable goods, account for the production and to serve as proof that duty has been paid on the item to which a stamp has been affixed (KRA, 2022).

The Kenyan excise duty regime at present is very low, with low revenues from excisable goods, only contributing to about 4.5% of the GDP and have income inelasticity of nearly negative one (Muthoni, 2017). According to the Seventh Corporate Plan 2020/21, Excise Duty revealed a compliance gap of 15.2 percent for the year 2021/22 The actual revenue estimated by the Seventh Corporate Plan is as follows: **2019/20 Kshs. 197,968**, **2020/21 Kshs. 218,960**, **2020/21 Kshs. 241,131 and 2021/22 Kshs. 276,305. KRA (2019**) further reported that excise stamps as a control tool was vain as unscrupulous manufacturers have sought the schemes aimed at defeating the system. Due to these schemes, KRA has lost billions of shillings. In the financial year 2018/19, the authority lost Sh. 350million as its netted Sh. 1.43 trillion in revenue.

The excise sector accounts for 6.6% of ordinary revenue collections in VAT, Excise and other taxes. This is therefore a critical sector for revenue mobilization. Kenya loses more than Sh153 billion tax revenue annually to illicit trade, according to the Anti-Counterfeits Authority(ACA), with tobacco and alcohol products among the most traded. This, even as consumers in the country remain reluctant in reporting illicit trade.

Due to these schemes, KRA has lost billions of shillings. In the financial year 2021/22, the authority lost Sh. 350million as its netted Sh. 1.43 trillion in revenue. The government's main objective of imposing excise tax is to discourage consumption of untaxed alcohol as well as raise revenue. It's important to note that there's a very high prevalence of second-generation alcohol outside of government control, example is Chang'aa, Busaa and Mnazi which has adverse effect on loss of revenue. Illicit alcohol by definition means alcohol whose taxes have not been paid or that was manufactured illegally. Illicit brew accounts for 30% of the alcohol market with legitimate companies sharing 70%. Taxes account for 50% of the cost of production for alcohol manufacturers as illicit brewers are able to save 50% of their cost of production making alcohol cheaper thus attractive to many Kenyans (Odalo, 2007). Therefore, this study sought to investigate the effect of excisable goods management systems on excise duty collection in Domestic Taxes Department, Enforcement Division, East of Nairobi, Kenya Revenue Authority

1.3 Research Objectives

1.3.1 General objective

The main objective is to investigate the effect of excisable good management system on Excise Duty collection in Domestic Taxes Department, Enforcement Division, Kenya Revenue Authority.

1.3.2 Specific Objectives

The following are the specific objectives:

i. To determine the effect of verification of stamps on excise duty collection in Domestic Taxes Department, Enforcement Division, Kenya Revenue Authority

ii. To evaluate the effect of application procedure on excise duty collection in Domestic Taxes Department, Enforcement Division, Kenya Revenue Authority

iii. To examine the effect of security features on excise duty collection in Domestic Taxes Department, Enforcement Division, Kenya Revenue Authority

1.4 Research Hypotheses

i. **H_{o1}:** Verification of stamps has no significant effect on excise duty collection in Domestic Taxes Department, Enforcement Division, Kenya Revenue Authority

ii. **H_{o2}:** Stamps application procedures has no significant effect on excise duty collection in Domestic Taxes Department, Enforcement Division, Kenya Revenue Authority

iii. **H_{o3}:** Stamps security features has no significant effect on excise duty collection in Domestic Taxes Department, Enforcement Division, Kenya Revenue Authority

1.5 Significance of the Study

1.5.1 Kenya Revenue Authority

This study is of great importance to the management of Kenya Revenue Authority, the government of Kenya and policy makers as well as other researchers and academicians.

The Kenya Revenue Authority introduced EGMS in 2013 to safeguard excise tax revenue

through application of excise stamps with covert and overt security features. Therefore, this study is therefore of great importance to the management of Kenya Revenue Authority as it provides information on how excise stamp features, stamps' application procedure and verification of stamps affects excise stamps on excise duty collection at KRA. This information can be used in the development of strategies regarding excise stamps as way of improving Excise duty at KRA.

This research is expected to be of benefit to Revenue managers who are saddled with the responsibility of ensuring that taxpayers are not negligent in paying their taxes. It will also assist in knowing why taxes are evaded. The outcome of this research will enable them to have a better understanding of why taxpayers evade taxes. Therefore, when these reasons are adequately appraised, it is expected that it will in turn translate to the provision of necessary infrastructure for the society when the resources are judiciously utilized. This research will provide a better understanding of tax compliance through revenue systems as an important concept not only for tax

purposes but also for the growth of Manufacturers and importers of excisable goods in Kenya

1.5.2 The Government of Kenya

The Excise Stamps (Excisable Goods Management System) Regulations, 2017 is instrumental in promoting accountability for excise duty, improving revenue collections and combating illicit trade. Therefore, to the government of Kenya and policy makers the study provides information on how the excise stamps affects excise stamps' application procedure on monitoring which can be used in the review and adjustment of the policy to improve tax revenue at KRA.

This study will be useful to the Kenyan Government. Despite the manufacturing sector growing at a very fast rate in Kenya, the collection of excise duty from this sector has been a great challenge and the gains have been dwindling with time. This study will provide results that will discuss this problem diagnosing the ways in which the government can enforce on manufacturers of excisable goods as well as importers so that they remain compliant

1.5.3 Future Researchers

To other researchers and academicians, the study provides information that can be used as a literature review in studies related to excisable goods management system and excise stamps on monitoring tax revenue at KRA. The study adds more information to the body of knowledge on the effect of excisable goods management system on excise stamps. The study also forms a base upon which further studies can be conducted on excise stamps (EGMS) on monitoring tax revenue at KRA

1.6 Scope of the study

The purpose of this research project is to investigate the effect of excisable good management system on excise duty collection in Enforcement Division, Kenya Revenue Authority Kenya Specifically the effect of verification of stamps, application procedures and security features at Kenya Revenue Authority.

This study focused on three components of excise stamps (excisable goods management system), which include excise stamp features, stamps' application procedure and verification of stamps. The study was limited to 214 registered importers and manufacturers of excisable goods in Kenya and staff working in Domestic Taxes Department-enforcement division. The sample size (n) was 139 respondents as per Kenya Revenue Authority data, (2023). The period of the study was determined by how fast the data was collected from the respondents within Two months).

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This section presents a review of literature. It covers concepts, theoretical framework, empirical literature review and the conceptual framework of the study.

2.1 Review of concepts

2.1.1 Excisable Goods Management System

The Excise Duty (Excisable Goods Management System) Regulations, I2017 indicates that a manufacturer, importer, distributor, retailer or any other person involved in the supply chain of excisable goods, shall verify and authenticate the stamps placed on excisable goods before admitting the goods in the manufacturer's, importer’s, distributor’s, retailer 's or other person’s premises. In addition, a person engaged in the distribution or retail of excisable goods shall keep delivery notes, invoices or such other documents from the supplier of the excisable goods; and provide in that person's premises sufficient light as may be necessary for the verification or authentication of excise stamps. Further, the Excise Duty (Excisable Goods Management System) Regulations, 2017 indicates that a person who fails to keep the documents required under paragraph (2) commits an offence and shall be liable on conviction to a penalty equal to double the open market value of the excisable goods or a fine of one hundred thousand shillings whichever is higher. In 2017, Excisable Goods Management System (EGMS) was gazetted under Legal Notice No. 48. The system was aimed to safeguard excise tax revenue through application of excise stamps which has security features.

2.1.2 Excise Duty collection

Excise duty is imposed on both goods and services including mobile telephony services, cars, wine, polythene bags (of a particular specification), cigars and cigarettes, soft drinks, beer and spirits and among others. It was previously administered under the Customs & Excise Act 2010, however, effective 1 December 2015; the tax is administered under the Excise Duty Act 2015. Pursuant to Kenya's Excise Duty Act 2015.

Tax authorities play fundamental roles in ensuring tax compliance among taxpayers by abiding by the tax rules and regulations. Despite the arrangements, the confrontation in human society still exist which causes the numerous cases of tax non-compliance. Reis, Cousinhood and Lencastre (2017) described tax non-compliance as a failure of taxpayer to accommodate tax responsibilities whether they performed unintentionally or intentionally. Tax non-compliance treated as a contrary conduct or attitude of tax compliance. Tax non-compliance examples are tax evasion and tax avoidance which carry negative impacts on tax compliance and tax collections. Sinnasamy, Bidin and Soffian (2015) anticipated tax evasion as a conduct caused to reduce the taxes owed in reality. Whereas, tax avoidance is described as taxpayers declaring their tax affairs creatively according to the rules and regulations to lower the tax liabilities and this action is legal 21 in tax administrator's point of view. The excise sector accounts for 6.6% of ordinary revenue collections in VAT, Excise and other taxes. This is therefore a critical sector for revenue mobilization.

2.1.3 Verification of stamps

Excisable Goods Verification involves authentication of goods from a manufacturer, importer, distributor, retailer or any other person involved in the supply chain of excisable goods before admitting the goods in their premises (Grant Thornton, 2017). Validation and verification of excisable goods requires importers or manufacturers of excisable goods to install production accounting systems on the production line as per Excise Duty Act of 2015 (KRA, 2019).

The new regulations provide sufficient light for verification and authentication of the excise stamps. If there is a discrepancy between the declared and verified imports or manufactured excisable goods, the unused stamps shall be returned and refunded within 90 days (Deloitte, 2017). EGMS allows for quick verification of the legality of a product at any point in distribution. Excisable goods distributors and retailers have a device that allows for verification of all excisable products before accepting them into their outlets (Dennis, 2016). Inspection and verification procedures of excisable goods describes a systematic approach to the verification of imported consignments of plants, plant products and other regulated products, identifying the key areas that must be taken into consideration when determining compliance with the excise and customs regulations of the country. Inspection and valuation are important to understand as duty under central excise is payable on different criterion. This involves authentication of goods from a manufacturer, importer, distributor, retailer or any other person involved in the supply chain of excisable goods before admitting the goods in their premises (Grant Thornton, 2017).

2.1.4 Stamps Application procedures

The Excise Duty (Excisable Goods Management System) Regulations, 2017 indicates that a manufacturer or importer of excisable goods shall apply to the Commissioner for excise stamps in the prescribed form. In addition, an application for excise stamps shall be submitted to the Commissioner at least sixty days before the manufacture or importation of the excisable goods. Further, a manufacturer or importer of excisable goods shall pay the excise stamp fees on the approval of the application by the Commissioner. The Commissioner may require proof of importation by an importer of excisable goods before issuing the importer with the excise stamps. Also, the Excise Duty (Excisable Goods Management System) Regulations, 2017 indicates that the Commissioner may, subject to any conditions as the Commissioner may impose, issue excise stamps to an importer of excisable goods before importation.

The Commissioner may require a manufacturer or importer of excisable goods to provide at least sixty days before the beginning of the month in which the manufacturer or importer will require the stamps, a forecast of the quantities of excise stamps which the manufacturers or importer intends to use in each month for the subsequent period of six months (Kenya Revenue Authority, 2017).

2.1.5 Excise stamps Security features

According to the Excise duty (Excisable Goods Management System) Regulations,2017 every excise stamp required to be affixed shall be of such specifications as to (a) deter counterfeiting; (b) facilitate tracking of the stamps and excisable goods along the supply chain; (c) enable accounting for the production of excisable goods manufactured or imported; and (d) facilitate any persons in the

supply chain to authenticate the stamps and excisable goods. Excise Duty (Excisable Goods Management System) Regulations, 2017 indicates that excise stamp fees to be charged on excise stamps for each type of excisable goods shall be as specified in the Schedule thereto. The excise stamp fees shall be paid to the Commissioner by the manufacturers and importers of excisable goods based on quantity of stamps issued to them (Kenya Revenue Authority, 2017).

This is part of its strategy to continuously review and improve the security features of excise stamps to deter counterfeiting. The excisable products covered include alcoholic beverages, tobacco and tobacco products, water, soft drinks and juices. KRA informed key stakeholders in the excise industry including all manufacturers, importers, distributors, wholesalers and retailers of excisable goods, of the rollout through a public notice published on November 30.

The introduction of the new excise stamps is in line with the provisions of the Excise Duty (Excisable Goods Management System) Regulations, 2017 that requires all excisable products manufactured in or imported to Kenya, with the exception of motor vehicles, be affixed with excise stamps. "The new generation stamps have enhanced security features leveraging on technology which are meant to deter counterfeiting," The security features that can be verified using stamp verification tools provided to enforcement officers.

2.2 Theoretical Review

This study used three theories namely: Technology Acceptance Model (TAM), the Unified Theory of Acceptance &Use of Technology (UTAUT) and Theory of Reasoned Action theory

To provide the basis on the effect of excisable goods management system on Excise Duty collection, the study relied on the following theories and models: technology acceptance model, dynamic capabilities theory and theory of reasoned action.

2.2.1 Technology Acceptance Model (TAM)

Davis (1989) presented a theoretical model aiming to predict and explain ICT usage behaviour, that is, what causes potential adopters to accept or reject the use of information technology. Theoretically, TAM is based on the Theory of Reasoned Action (TRA). In TAM, two theoretical constructs, perceived usefulness and perceived ease of use, are the fundamental determinants of system use, and predict attitudes toward the use of the system, that is, the user's willingness to use the system. Perceived usefulness refers to "the degree to which a person believes that using a particular system would enhance his or her job performance", and perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort" (Davis,1989). Chuttur and Gilbert (2013) examined why organizations apply technology in warehouse management. In their work, the authors identified factors as reliable measures to characterize attitudes towards warehouse service delivery. Factors enabling positive attitude were; less time, cost and avoiding personal interaction (categorized as relative benefits); and factors characterizing negative attitudes were experience, information quality, financial security, low stress, trust and visual appeal. This model relies on two principles in understanding tax systems, these are: perceived usefulness and perceived ease of use. It finds its

relevance in the current study in that whenever making modification to the system, ease of use and usefulness of the system should be considered to encourage adoption and consequently increase efficiency, accuracy and ultimately compliance levels.

Technology Acceptance Model (TAM) is one of the most frequently used models in research to know the factors that influence the adoption of e-filing system (Pratiwi et al., 2018).Technology Acceptance Model (TAM) was developed by Fred Davis (1989) as one of the most popular research models to predict use and acceptance of information systems and technology by individual users. TAM was developed to explain computer usage (Ilias,Norazah,Mohd &Rahida, 2008). The goal of TAM is to provide an explanation of the determinants of computer acceptance that is capable of explaining user behavior across a broad range of end user computing technologies and user populations, while at the same time being both economical and theoretically justified (Fred D. Davis, 1989b).

The TAM is utilized to disclose how people come to acknowledge and utilize new information technology (Zaidi et al., 2017). TAM proposes that when users (taxpayers) are given another innovation, two convictions, the apparent ease of use and the apparent usefulness decide perspectives to embrace new technologies by the users of the system (Venkatesh & Davis, 2000).In addition, TAM is being used and accepted in most of the past studies to explain the relationship between the usage perception and information technology (Moorthy et al., 2014). And is being verified as a useful theoretical model to understand and explain the user's behavior to implement an information system (IS) (Moorthy et al., 2014).

Technology Acceptance Model (TAM) is a theory describing the perception of technology users (Tahar et al., 2020). TAM is designed to predict and explain information technology acceptance and usage on the job (Venkatesh et al., 2003b).

Technology Acceptance Model (TAM) is an adaptation of the Theory of Reasoned Action (TRA) to the field of information system which aims to accurately model how users respond to the presentation of a new technology, addressing factors such as their initial perception, level of acceptance and use of the technology (Hwa et al., 2015).The TAM adopts the theory of reasoned act (TRA) model to explore the IT acceptance (Ilias et al., 2008). TAM and TRA, both of which have strong behavioral elements, assume that when someone forms an intention to act, they will be free to act without limitation (Davis, 1989a).

TAM is the most widely used model for identifying factors contributing to technology acceptance (Tahar et al., 2020). The theory suggests that, when users are presented with a new piece of technology, several factors influence their decision about how and when they will use the technology (Noor Ardiansah et al., 2020). Also according to TAM, individuals accept a particular system if they believe in the system (A. C. Azmi & Lee Bee, 2010). These believe are perceived usefulness (PU) and perceived ease of use (PEOU) (A. C. Azmi & Lee Bee, 2010).

In essence, TAM posits that IT adoption is affected by prior use-related beliefs (Gefen & Straub, 2000). TAM identified two such beliefs: perceived usefulness (PU) and perceived ease of use (PEOU) (Gefen & Straub, 2000). According to TAM, IT adoption is influenced by two perceptions: Perceived usefulness (PU) and Perceived ease-of-use PEoU) (Gefen & Straub, 2000). TAM is constructed on the foundations of perceived usefulness and perceived ease of use (C. Lu et al., 2010).

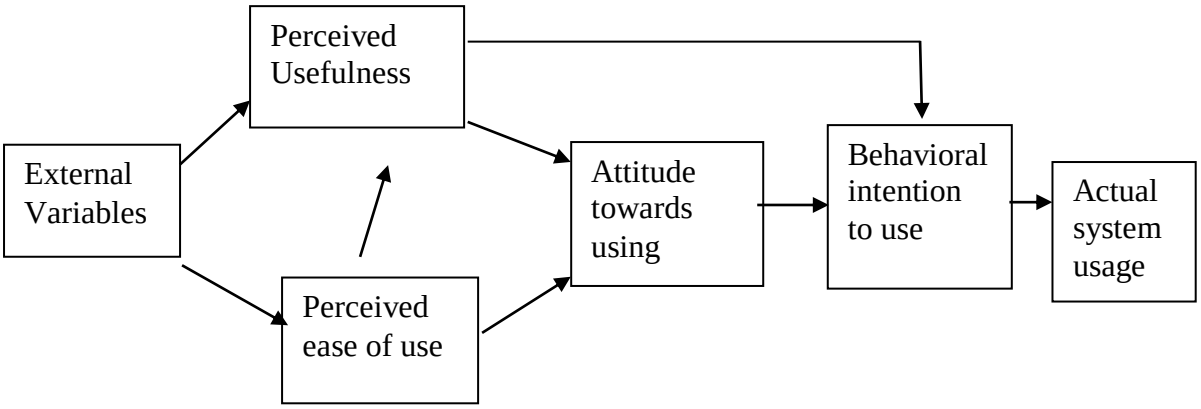

Figure 2.1: TAM representation in diagrammatic form

(Davis et al., 1989)

2.2.2 The Unified Theory of Acceptance and Use of Technology (UTAUT)

The unified theory of acceptance and use of technology (UTAUT) was created by Venkatesh et al. (2003). UTAUT model incorporates various acceptance theories to develop the unified theory of acceptance and use of technology (UTAUT) model (ANN et al., 2021).The unified theory of acceptance and use of technology (UTAUT) model was developed through the review and integration of eight dominant theories and models, namely: the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Motivational Model, the Theory of Planned Behavior (TPB), a combined TBP/TAM, the Model of PC Utilization, Innovation Diffusion Theory (IDT), and Social Cognitive Theory (SCT) (M. D. Williams et al., 2015). These contributing theories and models have all been widely and successfully utilized by a large number of previous studies of technology or innovation adoption and diffusion within a range of disciplines including information systems, marketing, social psychology, and management (M. D. Williams et al., 2015). According to the Unified Theory of Acceptance and Use of

Technology model, the degree to which a technology/system is accepted depends largely on a number of factors such as performance expectancy, effort expectancy, social influence and facilitating conditions (Hamzat & Mabawonku, 2018).

The UTAUT model combines the previous eight theoretical models and is made up of four key factors/constructs that act as determinants of behavioral intentions and use behavior (Hamzat & Mabawonku, 2018). UTAUT consists of four constructs, performance expectation, effort expectation, social influence, and facilitating conditions, which are direct determinants of usage intention and behavior (Bhuasiri et al., 2016). UTAUT model incorporates various acceptance theories to develop the unified theory of acceptance and use of technology (UTAUT) model (ANN et al., 2021). This UTAUT model consists of four constructs: performance expectancy (PE); effort expectancy (EE); social influence (SI); and facilitating conditions (FC) to predict behavioral intention and to determine user behavior (ANN et al., 2021). It is argued that by examining the presence of each of these UTAUT constructs in a "real world" environment, researchers and practitioners will be able to asses an individual's intention to use a specific system, thus allowing for the identification of the key influences on acceptance in any given context (M. D. Williams et al., 2015).

This study is however, limited to the influence of facilitating conditions (supporting facilities) on the use/adoption of e-filing (online tax filing system). Facilitating conditions/supporting facilities (FC) is one's ability to access to the various resources (human & materials) and use the system (Jankeeparsad, 2016).UTAUT model also includes these moderator variables gender, age, experience and voluntariness to check the tendency of the relationship between independent constructs and dependent construct (ANN et al., 2021).

The unified theory of acceptance and use of technology (UTAUT) is a technology acceptance model formulated by Venkatesh and others in "User acceptance of information technology: Toward a unified view" (Venkatesh & Zhang, 2010). The UTAUT aims to explain user intentions to use an information system and subsequent usage behavior (Venkatesh & Zhang, 2010). The theory holds that there are four key constructs: 1) performance expectancy, 2) effort expectancy, 3) social influence, and 4) enabling/supporting/facilitating conditions (Venkatesh & Zhang, 2010).This study is however, limited to the influence of facilitating conditions (supporting facilities) on the use of e-filing (online tax filing system).

2.2.3 Theory of Reasoned Action

The theory originates from social psychology, and it is an exceptional case of the Theory of Planned Behaviours (TPB) (Ajzen, 2010). TRA was defined to create the connections between the beliefs, attitudes, norms, intentions, and behaviors of individuals. The Theory assumes that a man's conduct is controlled by the individual's behavioral intention to perform it and the intention itself is dictated by the individual's attitudes and his or her subjective norms towards the behaviour. The subjective norm alludes to "the individual's discernment that many people who are important to him think he ought to or ought not to perform the behaviour being referred to" (Ajzen, 2010). As indicated by the theory of reasoned action the individual behaviour is motivated by behavioral objectives and these are a function of an individual's attitude toward the behaviour and subjective standards encompassing the performance of the behaviour. Technology acceptance mode (TAM) has been founded on theory of reasoned action (TRA) and has been utilized to clarify individual's acceptance behavior

In this study, TRA will be utilized to contrast it and TAM. Theoretically, the theory of Technology Acceptance Model (TAM) depends on the Theory of Reasoned Action (TRA). In TAM, two theoretical constructs, perceived usefulness and perceived ease of use are the central determinants of system implementation and use. According to TRA, a person's performance of a specific behavior is determined by his/her behavioral intention (BI) to perform the behavior and BI is jointly determined by the person's attitude (A) and subjective norm (SN) concerning the behavior in question. TRA can be applicable when studying manufacturers of excisable goods conduct in relation to EGMS in the sub-county. To encourage adoption and compliance of EGMS, KRA can take advantage of user participation and involvement of taxpayers during sensitization and whenever modifications are made to the system (Githinji & Mwaniki 2014). As indicated by (Kanungo & Bagchi, 2010) the study has inferred that TRA can be utilized for studying the use of systems in the collection of various taxes and duties and their research discoveries likewise demonstrated that the model explains user behaviour compared to other models

2.3 Empirical Literature Review of the Variables

This section presents empirical literature review on the effect of Excise Stamp Features, Excise Stamps' Application Procedure and Verification of Stamps on excise stamps on monitoring tax revenue at KRA. According to Godden and Allen (2020), regulators in approximately fifty countries use tax stamps globally in an attempt to protect alcohol tax revenues. Arguably, whatever systems of enforcement and control are put in place, governments should also remember the potential for elevated tax rates to encourage informal activity at the expense of the formal tax-paying sector, thereby undermining revenues and encouraging the range of other problems associated with illicit trade, from irresponsible drinking to the funding of other crime.

A simple tax structure will also foster compliance and transparency says (Godden and Allen ,2020).

The government lost Sh43.7 billion in taxes in the 2013-2014 financial years to illicit brews (Viva Africa Consulting 2014). Nearly, 70% of the population exists within the slums, within the 70%, 50% consume illicit brew in one way or another, which means as much as it is sold at KES 10, they still make much money due to the part of the population that exist within the slums, these means that legal alcohol is sold less in these areas or not at all. To maximize profits, many producers or distributors add certain chemicals to enhance the brew's potency (Odalo, 2007).

The Regulations have introduced Excise stamp fees to be charged on excise stamps for different types of excisable goods. The excise stamp fees shall be paid to the Commissioner of Revenue by the manufacturers and importers of excisable good based on quantity of stamps issued to them. Below is a summary table that shows the category of goods and the excise stamp fees charged: Kenya Revenue Authority (KRA) is keen on implementing the Excise Goods Management System (EGSM) on bottled water, juices, energy drinks and soda so as to capture the 78 percent of manufacturers who are not paying taxes. Kenya Revenue Authority informed all licensed manufacturers, importers, distributors, retailers and general public that further to the Public Notice dated 30th August 2019, bottled water, juices, energy drinks, soda and other non-alcoholic beverages manufactured in or imported into Kenya from 13th November, 2019 must be affixed with an Excise Stamp in accordance with Section 28 of Excise Duty Act 2015 and Legal Notice 53 of 30th March, 2017 (Excisable Goods Management System Regulations).

Speaking during a press briefing in Nairobi Friday, the KRA Domestic Taxes Commissioner Elizabeth Meyo (2017) , said that the excise stamps will help enhance

tax compliance, reduce illicit trade and will increase the revenue by approximately Sh4 billion. “For us to come up with a roll out date we have engaged the stake holders, we have conducted sensitization programmes, we have gone round the country and have addressed the issues raised by the manufacturers,” (Meyo., 2017) She added that the stamps will help monitor how business is being done and ensure everyone is paying their fair share of taxes and create a level playing ground for the stakeholders in the field.

“Our team comprising of 80 trained officers are on the ground helping tax payers to comply in paying taxes. They will be going round in supermarkets and shops to ensure that the exercise is undertaken,” she said. Meyo, (2017) further said that they have gone through an assessment meeting to check their readiness and all systems are set for the roll-out. “The main reason why we feel we should have fairness in the field, especially in the water sector is because 78 percent of the manufacturers in the field are not paying taxes leaving only 22 percent to pay the taxes which he noted is not fair,” lamented Meyo. (2017) To standardize the industry is by coming up with an approach that will enable KRA monitor everybody dealing in these products. Meyo, (2017) stated that the stamp will cost Sh50cents for water and Sh60cents for the non-alcoholic beverages and the product prices will not rise for more than Sh6.“The officers will ensure that the manufacturers will not hike the prices of the products owing to the introduction of the excise stamps,” she noted..

The process of stamp installation is 90 percent done since they have 64 automated companies to install on and out of which they have already installed 54 companies. Kenya Revenue Authority (KRA) has rolled out a new generation of excise stamps for excisable goods as part of its strategy to continuously review and improve the security features of excise stamps to deter counterfeiting. The excisable products

covered include alcoholic beverages, tobacco and tobacco products, water, soft drinks and juices. KRA informed key stakeholders in the excise industry including all manufacturers, importers, distributors, wholesalers and retailers of excisable goods, of the rollout through a public notice published on 30th November 2021.

The introduction of the new excise stamps is in line with the provisions of the Excise Duty (Excisable Goods Management System) Regulations, 2017 that requires all excisable products manufactured in or imported to Kenya, with the exception of motor vehicles, be affixed with excise stamps.

The new generation stamps have enhanced security features leveraging on technology which are meant to deter counterfeiting. The security features that can be verified using stamp verification tools provided to enforcement officers. Members of the public can also verify the stamps using the Soma label mobile phone app available on Google Play Store or Apple Store.

The rollout will be implemented in three (3) phases with the first one targeting wines, spirits, ready to drink beverages, beer and other tobacco products. Water, soft drinks and juices will have the new stamps from 28th December 2021, whereas tobacco products and keg beer will be covered from 1st February 2022. A user guide on this is available on the KRA website.

2.3.1 Verification of stamps

Excisable Goods Verification involves authentication of goods from a manufacturer, importer, distributor, retailer or any other person involved in the supply chain of excisable goods before admitting the goods in their premises (Grant Thornton, 2017). Validation and verification of excisable goods requires importers or manufacturers of excisable goods to install production accounting systems on the production line as per Excise Duty Act of 2015 (KRA, 2019). The new regulations provide sufficient light

for verification and authentication of the excise stamps. If there is a discrepancy between the declared and verified imports or manufactured excisable goods, the unused stamps shall be returned and refunded within 90 days (Deloitte, 2017). EGMS allows for quick verification of the legality of a product at any point in distribution. Excisable goods distributors and retailers have a device that allows for verification of all excisable products before accepting them into their outlets (Dennis, 2016). Inspection and verification procedures of excisable goods describes a systematic approach to the verification of imported consignments of plants, plant products and other regulated products, identifying the key areas that must be taken into consideration when determining compliance with the excise and customs regulations of the country. Inspection and valuation are important to understand as duty under central excise is payable on different criterion.

This involves authentication of goods from a manufacturer, importer, distributor, retailer or any other person involved in the supply chain of excisable goods before admitting the goods in their premises (Grant Thornton, 2017). Validation and verification of excisable goods requires importers or manufacturers of excisable goods to install production accounting systems on the production line as per Excise Duty Act of 2015 (KRA, 2019). The new regulations provide sufficient light for verification and authentication of the excise stamps. If there is a discrepancy between the declared and verified imports or manufactured excisable goods, the unused stamps shall be returned and refunded within 90 days (Deloitte, 2017). EGMS allows for quick verification of the legality of a product at any point in distribution. Excisable goods distributors and retailers have a device that allows for verification of all excisable products before accepting them into their outlets (Dennis, 2016).

The first step involves identifying the excisable goods, the next step is the correct classification of the goods and finally the computation of the duty payable on the excisable goods (HM Revenue and Customs, 2016)

Stamps embedded with a means of electronic communication may help the authorities identify legitimate product in the distribution chain and enable verification by consumers. In contrast, tax stamps are regarded by the industry as easy to counterfeit. In addition, the industry concurs with journalists' reports suggesting that a black market exists allowing smugglers and counterfeiters to get hold of genuine stamps, and that genuine original bottles, bearing genuine stamps, have been found to have been refilled. So, while consumers can check the validity of stamps by visiting a website, this is not sufficient to guarantee the legitimacy of a product (Godden & Allen, 2017).

Inspection and verification procedures of excisable goods describes a systematic approach to the verification of imported consignments of plants, plant products and other regulated products, identifying the key areas that must be taken into consideration when determining compliance with the excise and customs regulations of the country. Inspection and valuation are important to understand as duty under central excise is payable on different criterion. The first step involves identifying the excisable goods, the next step is the correct classification of the goods and finally the computation of the duty payable on the excisable goods (HM Revenue and Customs, 2016).

Stamps embedded with a means of electronic communication may help the authorities identify legitimate product in the distribution chain and enable verification by consumers. In contrast, tax stamps are regarded by the industry as easy to counterfeit.

In addition, the 16 industry concurs with journalists' reports suggesting that a black market exists allowing smugglers and counterfeiters to get hold of genuine stamps, and that genuine original bottles, bearing genuine stamps, have been found to have been refilled. So, while consumers can check the validity of stamps by visiting a website, this is not sufficient to guarantee the legitimacy of a product (Godden & Allen, 2017). Excisable Goods Verification involves authentication of goods from a manufacturer, importer, distributor, retailer or any other person involved in the supply chain of excisable goods before admitting the goods in their premises (Grant Thornton, 2017).

Validation and verification of excisable goods requires importers or manufacturers of excisable goods to install production accounting systems on the production line as per Excise Duty Act of 2015 (KRA, 2019). The new regulations provide sufficient light for verification and authentication of the excise stamps. If there is a discrepancy between the declared and verified imports or manufactured excisable goods, the unused stamps shall be returned and refunded within 90 days (Deloitte, 2017). EGMS allows for quick verification of the legality of a product at any point in distribution. Excisable goods distributors and retailers have a device that allows for verification of all excisable products before accepting them into their outlets (Dennis, 2016). Inspection and verification procedures of excisable goods describes a systematic approach to the verification of imported consignments of plants, plant products and other regulated products, identifying the key areas that must be taken into consideration when determining compliance with the excise and customs regulations of the country. Inspection and valuation are important to understand as duty under central excise is payable on different criterion.

Stamps embedded with a means of electronic communication may help the authorities identify legitimate product in the distribution chain and enable verification by consumers. In contrast, tax stamps are regarded by the industry as easy to counterfeit. In addition, the industry concurs with journalists' reports suggesting that a black market exists allowing smugglers and counterfeiters to get hold of genuine stamps, and that genuine original bottles, bearing genuine stamps, have been found to have been refilled. So, while consumers can check the validity of stamps by visiting a website, this is not sufficient to guarantee the legitimacy of a product (Godden & Allen, 2017).

The Excise Duty (Excisable Goods Management System) Regulations,2017 indicates that a manufacturer, importer, distributor, retailer or any other person involved in the supply chain of excisable goods, shall verify and authenticate the stamps placed on excisable goods before admitting the goods in the manufacturer's, importer's, distributor's, retailer 's or other person's premises. In addition, a person engaged in the distribution or retail of excisable goods shall keep delivery notes, invoices or such other documents from the supplier of the excisable goods; and provide in that person's premises sufficient light as may be necessary for the verification or authentication of excise stamps. Further, the Excise Duty (Excisable Goods Management System) Regulations, 2017 indicates that a person who fails to keep the documents required under paragraph (2) commits an offence and shall be liable on conviction to a penalty equal to double the open market value of the excisable goods or a fine of one hundred thousand shillings whichever is higher. Further, the Commissioner may recommend to the relevant authority the withdrawal, cancellation or suspension of the trading license for a person convicted of repeatedly committing an offense (Kenya Revenue Authority, 2017).

2.3.2 Stamps Application procedures

The Excise Duty (Excisable Goods Management System) Regulations, 2017 Iindicates that a manufacturer or importer of excisable goods shall apply to the Commissioner for excise stamps in the prescribed form. In addition, an application for excise stamps shall be submitted to the Commissioner at least sixty days before the manufacture or importation of the excisable goods.

Further, a manufacturer or importer of excisable goods shall pay the excise stamp fees on the approval of the application by the Commissioner. The Commissioner may require proof of importation by an importer of excisable goods before issuing the importer with the excise stamps. Also, the Excise Duty (Excisable Goods Management System) Regulations, 2017 indicates that the Commissioner may, subject to any conditions aside Commissioner may impose, issue excise stamps to an importer of excisable goods before importation. The Commissioner may require a manufacturer or importer of excisable goods to provide, at least sixty days before the beginning of the month in which the manufacturer or importer will require the stamps, a forecast of the quantities of excise stamps which the manufacturers or importer intends to use in each month for the subsequent period of six months (Kenya Revenue Authority, 2017)

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2.3.3 Excise stamps security features

According to the Excise Duty (Excisable Goods Management System) Regulations,I2017 every excise stamp required tube affixed shall be of such specifications action (a) deter counterfeiting; (b) facilitate tracking of theist amps and excisable goods along the supply chain; (c)I enable accounting for the production of excisable goods manufactured or imported; and(d) facilitate any persons in the supply chain to authenticate the stamps and excisable goods. Excise Duty (Excisable Goods Management System)I Regulations, 2017 indicates that excise stampedes to be charged on excise stamps for each type of excisable goods shall be as specified in the Schedule hereto. The excise stamp fees shall be Ip aid to the Commissioner by the manufacturers and importers of excisable goods based on quantity of stamps issued to them (Kenya Revenue Authority, 2017).

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This is part of its strategy to continuously review and improve the security features of excise stamps to deter counterfeiting. The excisable products covered include alcoholic beverages, tobacco and tobacco products, water, soft drinks and juices. KRA informed key stakeholders in the excise industry including all manufacturers, importers, distributors, wholesalers and retailers of excisable goods, of the rollout through a public notice published on November 30.

The introduction of the new excise stamps is in line with the provisions of the Excise Duty (Excisable Goods Management System) Regulations, 2017 that requires all excisable products manufactured in or imported to Kenya, with the exception of motor vehicles, be affixed with excise stamps. "The new generation stamps have enhanced security features leveraging on technology which are meant to deter counterfeiting," The security features that can be verified using stamp verification tools provided to enforcement officers.

2.3.4 Excise Duty collection

Tax authorities play fundamental roles in ensuring tax compliance among taxpayers by abiding by the tax rules and regulations. Despite the arrangements, the confrontation in human society still exist which causes the numerous cases of tax non-compliance. Reis, Coutinho and Lencastre (2017) described tax non-compliance as a failure of taxpayer to accommodate tax responsibilities whether they performed unintentionally or intentionally. Tax non-compliance treated as a contrary conduct or attitude of tax compliance. Tax non-compliance examples are tax evasion and tax avoidance which carry negative impacts on tax compliance and tax collections. Sinnasamy, Bidin and Soffian (2015) anticipated tax evasion as a conduct caused to reduce the taxes owed in reality. Whereas, tax avoidance is described as taxpayers declaring their tax affairs creatively according to the rules and regulations to lower the tax liabilities and this action is legal 21 in tax administrator's point of view. In Customs context, smuggling activities is one of the determinants causing non-compliance.

Smuggling activities consists of three types which are; incorrectly declaring the amount, for instance declaring less quantity and price, incorrectly declaring the descriptions of goods and state at lesser than legally practiced (Ross,I2017). The popular smuggling methods and Customs frauds involves fake invoicing, complicated transactions attempts, using two invoices, the false invoices are used for declaration and the genuine invoices are used for record purposes, tariff code mis-classification, over stated and under stated valuation and shipments. In the last financial year, KRA collected KSh. 62.409 Billion of Domestic Excise Revenue against a target of KSh. 62.148 Billion, translating to a performance of 100.42%. KRA has identified various tax evasion schemes that have been utilised by some taxpayers in this sector which

include: use of counterfeit excise stamps on excisable products, sale of excisable goods without stamps, sale of vatable goods without issuance of a proper tax invoice, manufacturing of excisable products without excise licenses and use of proxy companies to procure raw materials.

Excise taxes form part of revenue collected for government expenses. Collections of excise taxes began in the 17th century on royally owned land and tenancies; at the time, Excise tax was seeking to serve political purposes. The rationale for excise duty or taxes later revolved around safety of the public and health, national defense, public morals and environmental protection. The objective of these taxes was redressing the specific costs resulting from consumptions of the products, hence used in activities such as anti-drug usage campaigns, health care such as cancer and heart and lung diseases. In some instances, excise tax is meant to be a punitive tax aimed at ensuring that the users feel the pain of taxes as they consume the affected products. Excise tax has over time turned into a source of revenue for governments to fund their activities. Governments and public bodies in general, particularly in the provision of essential public services, have to act on behalf of society at large. Kenya loses more than Sh153 billion tax revenue annually to illicit trade, according to the Anti-Counterfeits Authority(ACA), with tobacco and alcohol products among the most traded.

2.4 Critique of Existing Literature

According to the Excise duty (Excisable Goods Management System) Regulations,2017 every excise stamp required to be affixed shall be of such specifications as to (a) deter counterfeiting; (b) facilitate tracking of the stamps and excisable goods along the supply chain; (c) enable accounting for the production of

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Chuttur and Gilbert (2013) examined why organizations apply technology in warehouse management. In their work, the authors identified factors as reliable measures to characterize attitudes towards warehouse service delivery. Factors enabling positive attitude were; less time, cost and avoiding personal interaction (categorized as relative benefits); and factors characterizing negative attitudes were experience, information quality, financial security, low stress, trust and visual appeal. 10 This model relies on two principles in understanding tax systems, these are: perceived usefulness and perceived ease of use. It finds its relevance in the current study in that whenever making modification to the system, ease of use and usefulness of the system should be considered to encourage adoption and consequently increase efficiency, accuracy and ultimately compliance levels.

Excise duty is a tax imposed on specific local and imported goods (Naibei, Momanyi & Oginda, 2012). Excise duty on imports is collected at the time of importation together with other import taxes like import duty and VAT (Cherogony, 2013). Excise tax is also a trade tax applied to either production or sale, to domestic output or imported, with either ad valorem or specific rates. Unlike their developed counterparts, most developing countries rely heavily on taxes to finance their budgetary expenditures. In Kenya, taxation is the single largest source of government

budgetary resources (Moyi & Ronge, 2006). One of the striking characteristics of Kenya is that unlike many other sub-Saharan countries today, it is a high tax-yield country with a tax-to-GDP ratio of over 20 per cent (KIPPRA, 2006).

The Kenya Revenue Authority (KRA) is the predominant government revenue collection agency accounting for over 96% of government ordinary revenue. KRA administers 17 revenue Acts, with the key ones (in terms of revenue importance) being Value Added Tax (VAT Cap 476), Income Tax Act (Cap 470),

Kenya Revenue Authority (KRA) is keen on implementing the Excise Goods Management System (EGSM) on bottled water, juices, energy drinks and soda so as to capture the 78 percent of manufacturers who are not paying taxes. Kenya Revenue Authority informed all licensed manufacturers, importers, distributors, retailers and general public that further to the Public Notice dated 30th August 2019, bottled water, juices, energy drinks, soda and other non-alcoholic beverages manufactured in or imported into Kenya from 13th November, 2019 must be affixed with an Excise Stamp in accordance with Section 28 of Excise Duty Act 2015 and Legal Notice 53 of 30th March, 2017 (Excisable Goods Management System Regulations).

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Stamp in accordance with Section 28 of Excise Duty Act 2015 and Legal Notice 53 of 30th March, 2017 (Excisable Goods Management System Regulations).

Amon (2012) conducted a study on strategic goals of secure track & trace technology to assist governments in enhancing revenue collection. The study adopted a descriptive research design. To optimize tax collection, governments need to be able to exercise effective control over the production and importation of products - Especially over products which have high tax value such as excisable goods. The strategic goals of secure Track and Trace technology to assist governments to enhance revenue collection are straightforward. They are all focused on preventing tax fraud. Track and Trace technology can be used by industry and business, an honorable application, but also, and this concerns us here today, to support government in its mission to tackle tax fraud, be that in the customs arena or in excise.

Ross (2017) examined tracking and tracing tobacco products in Kenya. The study is based on a literature review, a review of conference proceedings/materials, online searches, and analyses of data from the National Statistical Office of Kenya, ERC, and Euro monitor. The study found that in response to the presence of illicit cigarettes in the market in the early 2000s, Kenya adopted numerous measures to reduce tobacco tax evasion, with varying degrees of success. The latest solution involving a tracking and tracing system accompanied by electronic cargo monitoring of export seems to be the most effective, as it reduced the size of the illicit cigarette market and increased tax revenue. In addition, it seems to be more resistant to tampering

Sudán (2017) conducted a study on the evolution in the role of excise tax stamps for specific consumption goods. The study used a descriptive research design and found

that the key functions of any tax stamp, whatever form it takes, is to provide fiscal verification (that tax has been paid), as well as supply chain visibility and product authentication. As a result, the demands of tax stamps have become considerably more complex and one of the most striking advances is the extent to which traditional stamps are being replaced by programs combining such stamps with advanced track and trace technology, monitoring and audit systems. Because tax stamps offer these additional benefits – which are important in the fight against the growing global problem of illicit trade – the issue of tax stamp use has now become the subject of international policy. The WHO Framework Convention on Tobacco Control (FCTC)And its Protocol to Eliminate Illicit Trade on Tobacco Products is likely to have a significant impact on the shape of tax stamp programs of the future.

Mansour and Rota-Graziosi (2013) conducted a study on the effect of excise tax stamps on revenue mobilization in the West African Economic and Monetary Union. The study adopted a cross-sectional study design and found that the tax stamp had evolved over past decades, from a simple printed item without security (for tax collection purposes only), to a complex, multi-layered security device with integrated production monitoring, track and trace, and authentication capability. Several printing processes are used to produce tax stamps. Their value lies not so much in the technologies themselves, but in the design elements and security features that they can produce, as well as their scarcity and cost, both of which provide a significant barrier to counterfeiting. The three key security print processes for tax stamps are, offset, intaglio and, for numbering or encoding, inkjet print. In addition, silkscreen print processes are often used for applying security features such as color-shifting motifs.

Tule (2017) examined the effect of excise stamp features on revenue performance in Zambia. The study utilized a cross-sectional research design and established that tax

stamps and marks are considered to be effective in the face of all types of illicit trade, and are a “high potential” solution, as they allow easier product identification and authentication. However, simple stamps– as opposed to high security stamps – are considered rarely useful in addressing contraband; counterfeit versions can be created within a matter of weeks, if not days, depending on demand. Adding covert markings to tax stamps ensures that goods can be identified as counterfeit by officials, even though counterfeit brands might look authentic. Tracking and tracing is also considered a high potential solution, as it allows real-time monitoring of tobacco product manufacture and better supply chain control.

Kuloba (2016) examined the effect of procurement procedures on organizational performance of Moi Teaching and Referral Hospital. The study employed a case study research design in collecting relevant information. The total populations for this study were 3600 respondents with a sample size of 384. The study established that there is no strong correlation between tendering, supplier assessment and organizational performance, while material planning was highly correlated with performance. This meant that through tendering and material control, the organization can achieve its objectives which will lead to organizational performance. Material planning was found to be necessary in any procurement in an organization.

Upsa (2017) conducted an evaluation of the effect of information technology usage on tax compliance in Sri Lanka and established that information technology usage is obviously important in every area in taxation to enforce compliance and minimizing the number of defaulters.IT usage of the tax authority and the taxpayers is one of the reasons that may increase the tax compliance by way of providing timely information, better communication facilities and easy payment methods to tax payers. Nonetheless,

besides being limited to Sri Lanka, the study looked at the general information technology.

Qassim, Abbas and Dhyaa (2018) examined the impact of electronic taxation on reducing tax evasion methods of Iraqi Companies Listed in the Iraqi Stock Exchange and found that the adoption of the Iraqi General Commission for Taxes (GCT) led to a reduction in tax evasion. The absence of the use of the electronic taxation system in tax work reduces tax evasion. This study was conducted in Iraq and hence its findings are not generalizable to Kenya.

Gathia (2017) conducted a study on the effect of technology on excise duty performance in East of Nairobi District and found that iTax, EGMS and the Excise Stamp had a positive effect on excise stamps on monitoring tax revenue in East of Nairobi District. This study looked at the general information technology and its effect on revenue performance.

Mwongela (2016) examined the effect of effects of tax reforms on customs tax productivity in Kenya and established that the Revenue Administration Reform and Modernization Program (RARMP) was insignificant in influencing the total tax revenue. This study was limited to Revenue Administration Reform and Modernization Program, which is different from excisable goods management system.

Gathia (2017) conducted a study on the effect of technology on excise duty performance in East of Nairobi District and found that iTax, EGMS and the Excise Stamp had a positive effect on excise stamps on monitoring tax revenue in East of Nairobi District. This study looked at the general information technology and its effect on revenue performance.

Owino (2019) study on the effect of excise and custom duties on the economic growth in Kenya relied on panel data which was outdated hence could not depict the current situation 20 of the Kenyan economy. Further the accuracy of this secondary data is questionable hence the findings of this study cannot be relied on.

Chesire (2018), examined the effect of excise taxes on the profitability of cigarette and alcohol manufacturers in Kenya. The study did not delve on how effective warnings on cigarettes are discouraging cigarette consumption. There was also variations of excise tax model under the review.

2.5 Research Gaps

Previous studies failed to recommend ways in which non compliance of excise duty can be reduced. Ikechukwu and Cyril (2016), study only considered non-oil revenue sources yet oil revenue is the main contributor of the Nigerian economy. Owino (2019) study relied on secondary data on customs and excise duty up to 2010, before the implementation EGMS. Chesire (2018), the study failed to establish how excise taxes affect the consumption of excisable products and how there is a shift especially to unregulated products in the case of alcohol where it is cheaply available. It was evident that majority of the previous studies have focused on the excise duty on a specific product.

In addition, some empirical studies have been conducted to examine the effect of custom and excise duties on economic growth in both developed and developing countries, but one common feature of these empirical studies is lack of consensus among the scholars. Most studies have therefore reached substantially different conclusions on the relative impact of custom and excise duties on economic growth. This study is motivated by three developments. First, by the inconsistency in existing empirics. Secondly, lack of existence of studies on the application of ICT systems

such as EGMS on Excise Duty collection, thirdly by the wide knowledge gap occasioned by the paucity of empirical literature on Kenya.

2.6 Summary of the Literature Review

This study is anchored on the three theories: general systems theory, innovation diffusion theory and unified theory of acceptance and use of technology. The General systems theory is used to explain various components of excisable goods management system and its effect on excise stamps on monitoring tax revenue at KRA. Excisable goods management system has many stakeholders who play a great role in all the processes of implementation and these include staff in Kenya Revenue Authority, finance department, the National Treasury, the leadership/management of KRA, taxpayers among others. Innovation diffusion theory was used to explain the effect of excise stamp features, excise stamps application procedure and verification of stamps on excise stamps on monitoring tax revenue at KRA. In Kenya, the use of excisable goods management system due to its features that ensure accountability and compliance leads to an increase in revenue performance. The empirical literature shows that excise stamp features had an effect on excise stamps on monitoring tax revenue at Kenya Revenue Authority. In addition, the results show that stamps 'application procedure has an effect on excise stamps on monitoring tax revenue collection. Further, the literature shows that verification of stamps has an effect on Excise Duty collection in Domestic Taxes Department, Enforcement office, Kenya Revenue Authority.

2.7 Conceptual Framework

Conceptual framework tries to relate the relationship between independent variables and dependent variables. In this study, investigate the effect of excisable good management system on excise duty collection in Small Taxpayers Office, Kenya Revenue Authority. is being viewed as a dependent variable while monitoring excise stamps while independent variables comprises of verification of excise stamps, application procedures and excise stamps security features.

Independent Variables

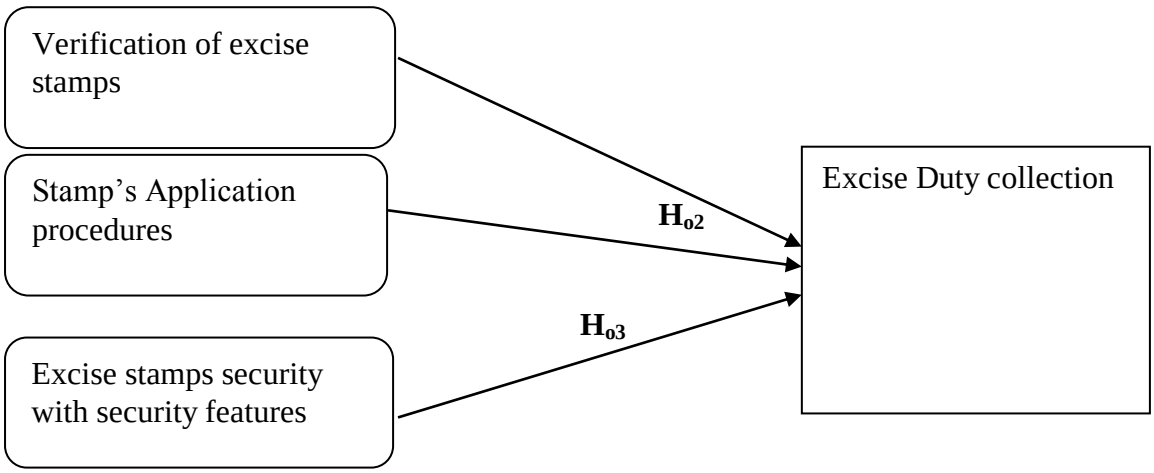

Figure 2.4: Conceptual Framework
Source (Researcher 2023)

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Overview

This chapter specifies the research methodology employed in this study. It starts with research design, target population, sampling method, procedure for data collection and data analysis.

3.1 Research design

Research design refers to the overall strategy that researcher choose to integrate the different components of the study in a coherent and logical way. It is a framework or blueprint for conducting the research. In simple words it is the plan for how the study will unfold and the various steps to take from data collection tools through data analysis (Baran ,M.L.,2022). A research design is the plan and structure of investigation so conceived as to obtain answers to study objectives (Bryman & Cramer, 2012). Research design refers to the way the study is designed, that is, the method used to carry out a research. Research design is an expression of what is expected of the research exercise in terms of results and the analytical input needed to convert data into research findings. Further, research design helps in providing direction to the computation and interpretation process to arrive at solution and recommendations (Hussain, 1976).

This study adopted explanatory research design. By using explanatory research design, the researcher established the relationship among the operational variables (verification of excise stamps, application procedures and excise stamps with security features). In order to test research hypothesis and learn more about the relationship between independent variables and dependent variable (Excise Duty collection), the

researcher designed and conducted an explanatory study. . Design helps researchers build causal relationships between the variables studied (Gray, 2013).

This study aims to investigate the causal relationship between the independent variable (EGMS) and the dependent variable (Excise Duty collection). Other scholars have previously used the design successfully, and came up with credible and reliable conclusions (Kanguru, 2021).

By using explanatory research design, the researcher was able to conduct a survey using close ended questionnaire that was used to gather insights from participants about their experiences when using EGMS. By using explanatory research design, the researcher obtained data from randomly sampled respondents who are potential users of EGMS in Domestic Taxes Department, Nairobi Region, Kenya Revenue Authority.

3.2 Target Population

Bryman (2013) described population as the entire group of individuals or items under consideration in any field of inquiry and have a common attribute. The target population of the study were KRA staff working in the Domestic Taxes Departments, Nairobi region. According to Kenya Revenue Authority (2023) annual report, there were 33 importers of excisable goods, 30 liquor manufacturers and 151 staff working in Domestic Taxes Departments (DTDs) Enforcement Division. The target population of the study were 214 respondents.

Table 3. 1: Target Population

Category	**Target Population**
Domestic Taxes Operations Office Officers	33
Domestic Taxes Market Surveillance Officers	30
Domestic Taxes Department (DTDs) (Enforcement Officers)	151
Total	**214**

Source: KRA (2023)

3.3 Sample Size Determination and Procedure

3.3.1 Sample Size

A sample size refers to the selected population for research to represent the whole population and a sampling technique describes the procedure and method of sample selection. A sample size must be large enough to be representative of the universe population (Kothari, 2012). CreswellI(2014) stresses that sample size chosen by the researcher should be capable of giving enough information about the population and one which can be analyzed with ease.

In order to determine the sample size, there was a statistical calculation which was carried out. The study used 139 respondents in order to extract the findings of the research.

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

n= the sample size

N=population size

e=acceptable sampling error

N=214

e=0.05

$n=214/[1+214(0.05)^2]$

n=139

3.3.2 The Sampling techniques

This study used stratified random sampling in the selection of the sample size from the target population. Stratified random sampling is a method of sampling that involves the division of a population into smaller groups known as strata (Kothari,2012). In stratified random sampling, the strata are formed based on members 'shared attributes or characteristics. In this study the strata comprised of Domestic Taxes Operations Office, Market Surveillance and Domestic Enforcement Officers. A random sample from each stratum is taken in a number proportional to the stratum's size when compared to the population. These subsets of the strata are then pooled to form a random sample (Sahu, 2013). Stratified random sampling was used because it helps in obtaining a sample population that best represents the entire population being studied. Its advantages include minimizing sample selection bias and ensuring certain segments of the population are not overrepresented or underrepresented.

3.4 Data collection methods

The study used secondary data. According to (Ajayi, 2017),

3.4.1 Secondary Data

Secondary data involved information not collected directly but from published materials and other sources obtained. In this study, secondary data from KRA was used.

3.5 Data Collection instrument

Creswell (2003) indicates that research instruments are the tools used in the collection of data on the phenomenon of the study. A questionnaire according to Mugenda and Mugenda (2003) is a list of standard questions prepared to fit a certain inquiry. In order to collect data for the study , questionnaires were used to get information from

the selected sample. The researcher used a five-point Likert scale since it enabled her to understand feedback in a comparatively better way because it offers various degrees of responses. Each question followed by a five-point Likert Scale, ranging from Strongly Disagree to Strongly Agree

Close ended questionnaires were used to because they are easier and quicker for the respondents to answer. Close ended questionnaires were used as an appropriate instrument for data collection and feature questions that provided quantitative data for statistical analysis. The benefits of using questionnaire is because it is an easy tool to collect data and large amount of information was collected within a shortest period of time. Questionnaire ensured protection of privacy of the respondents which lead to high response rate from respondents especially when the researcher allows the respondent to remain anonymous. Additionally, questionnaires allowed the researcher to address a large number of issues in a standardized way.
Questionnaires made it easy for the researcher to process results and provide useful insight into the subject's strengths, weaknesses and preferences.

3.5.1 Data Collection Procedure

Before data collection the I applied for a research permit from the National Council of Science and Technology Innovation (NACOSTI). The researcher also wrote a letter of transmittal of data collection instruments to individual respondents and obtained a data collection letter from Kenya School of Revenue Administration. The questionnaires were administered by the researcher by use of drop-and-pick later method. Drop and pick later method was used where the respondents were away or would not be able to fill the questionnaire immediately due to time constraints.

Follow-ups made on daily basis to monitor the progress of the respondents in filling up the questionnaires

3.5.2 Pilot Study

In order to pre-test the reliability and validity of data obtained using the questionnaire, the investigator performed a pilot study. Scholars say that a pilot test helps to find out the accuracy and suitability of the design and instrumentation of the study (Sekaran & Bougie, 2010). It also helps to find defects in data instruments and collection procedures design and execution (Cooper & Schindler, 2014). It also helps to identify faults in the configuration and execution of data instruments and processing processes (Cooper & Schindler, 2014). This helps to recognize future problems, to evaluate mistakes and to provide an idea of the time taken for practical field work. In order to ensure that the instruments are precise and reliable, this study subjected 10 percent of the respondents to data collection methods (Questionnaire), according to Connelly (2008). In Domestic Taxes Department, Enforcement office, Thika Station, the pilot test was performed and was not consistently selected for validity and reliability during testing (Cooper & Schindler, 2014).

3.6.1 Reliability of Research Instruments

Reliability is a measure of the degree to which a research instrument gives consistent results after repeated trials (Mugenda, and Mugenda, 2013). A pilot study, also known as a feasibility study, is a tiny experiment used to test logistics and gather data in advance of a bigger study in order to improve the quality and efficiency of the latter. A pilot research can uncover flaws in the proposed process or experiment's design, allowing them to be rectified before time and money are spent on the main study. Its goal is to establish the validity and reliability of research instruments (Cooper & Schindler, 2018). In this study, 10% of the sample size (14 questionnaires) were

issued to officers in Domestic Taxes Department, Enforcement office in Thika station, Kenya Revenue Authority. . According to William, Gunasekaran and Mcgaughy (2011), 5 to 10% of the population sample is adequate for pilot study. The pilot results informed changes made on the questionnaire.

3.6.2 Validity of Research Instruments

The degree to which a test measures what it claims to measure is known as validity. The questionnaire should be written in accordance with the research definition (Elstak, 2013). Both content and construct validity were examined in this study. Content validity was assured by having the research supervisor go through the questionnaire and guide on areas to improve. On the other hand, construct validity was achieved by ensuring that there are questions for every variable in the study.

3.7 Measurement of Variables

This is the process of defining variables into measurable factors and ensuring that the survey items of each construct are quantified (Steimberg et al., 2019). The variables was measured using five point Likert scale of 1 – 5 where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strong agree. The study has two variables namely; dependent and independent.

Table 3.3: Operationalization and Measurement of Variables

Types of variables	Variables	Operational Indicators (Measurements)	Data transformation process(Measurement scale)	Authors of Measurements
Independent variable	Verification of excise stamps	Risk Management Optimize performance Evidence Management	5- point Likert scale	(Grant Thornton, 2017). And Gefen & Straub (2000). And (Excisable Goods Management System) Regulations, 2017

Independent variable	Stamp's Application procedures	Application for the stamps Payment of excise stamp fees Proof of importation	5-point Likert scale	(Excisable Goods Management System) Regulations.
Independent variable	Excise stamp with security features	Deterring counterfeiting Facilitating tracking of goods Accounting for the production	5-point Likert scale	Mansour and Rota-Graziosi (2013) and (Excisable Goods Management System) Regulations,2017and Excise Act, 2001
Dependent variable	Excise Duty Revenue collection	Payment of excise duty Amount of excise duty collected Level of compliance Extra Revenue Raised	5-point Likert scale	(Excisable Goods Management System) Regulations, 2017, Meyo, 2017

3.8 Data analysis and presentations

The data collected from the questionnaires were collected and presented in the form of descriptive statistics (frequency, percentage, mean and standard deviation), while the inferential statistics (correlation and regression) helped establish the relationship between the variables studied. The data analyzed included descriptive analysis and inference analysis. This analysis is assisted by the use of the SPSS program (v.22.0). Descriptive findings are presented in the form of mean, standard deviation, numbers and percentages using (tables, charts and graphs). Inferential statistics help measure causal relationships between variables and include correlation analysis and regression analysis.

3.8.1 Regression Model

In this study, the relationship between the independent variables and dependent variables of the study expressed in multi-linear regression model stated below;

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

Where:

Y –Monitoring of excise duty

β_0- β_4 -regression coefficient of independent variables

X_1 – Verification of excise stamps

X_2 – Stamps application procedures

X_3 - Stamps Security features

E -error term, it takes into account all the possible factors that would possibly influence the dependent variable though not captured in the model

a) Test of Regression Assumptions

In order to adopt an appropriate model for the study, necessary diagnostic tests were conducted. These include Linearity test, Normality test, Multicollinearity test and Heteroscedasticity test (M. Williams et al., 2013).

b) Normality test

The assumption on Normality to hold the residuals (€) should be normally distributed/spread about the predicted dependent variable. Normality of the data was evaluated using Shapiro-Wilk test. Probability value (p value) >0.05 implies that Data is normally distributed and led to rejection of the Null hypothesis (Ho) Probability value (p value) <0.05 implies that Data is not normally distributed and led to not rejecting the Null hypothesis (Ho)

c) Multicollinearity test

Multicollinearity occurs when there is a high correlation between independent variables, which affects the significance of each variable. In this study, it was verified

by the coefficient of variation of inflation (VIF) (Ramakrishnan, 2013). A VIF value greater than 10 indicates a multicollinearity problem, while a VIF value less than 10 does not indicate a multicollinearity problem.

d) Heteroscedasticity test

.Heteroscedasticity refers to the unequal scatter of residues or error terms. Heteroscedasticity test was conducted using Breusch-Pagan Test for Heteroscedasticity. Breusch-Pagan Test is used to test for heteroscedasticity in a regression model and assume that errors / residuals terms are normally distributed. The thresh hold was probability value should be greater than > 0.05, for the null hypothesis (Ho) of no heteroscedasticity to be accepted. If the error variation is not constant, there is evidence of heteroscedasticity. Applying the regression model without considering heteroscedasticity will cause the parameter estimation to be biased.

The test of this assumption was carried out by plotting standardized residuals alongside the predicted value of Y. The results of the test demonstrated if the assumption is met by the presence of residuals scattered randomly around the X axis line which indicated a relative even distribution. On the other hand, the violation of this assumption was demonstrated by uneven scatter points such as butterfly and fans shapes. These assumptions when tested have the ability to reduce the errors and increasing the reliability and validity

e) Autocorrelation test

Using the Durbin-Watson autocorrelation test, the researchers determined whether the residues were serially associated. The Durbin Watson test produces test statistics ranging from 0 to 4, with 2 denoting no autocorrelation, 0 to 2 denoting positive

autocorrelation, and > 2 denoting negative autocorrelation. Test statistics in the 1.5-2.5 range are generally considered normal. Values outside of this range should be avoided (Field, 2009).

3.9 Ethical Consideration

During the study the researcher upheld ethical standards for instance: The respondents were updated on the purpose and nature of the study prior and during the time of collecting data and an approval to participate was required from each respondent.

Before the process of data collection, the researcher obtained permission from the relevant authority (Kenya School of Revenue Administration [KESRA] and National Council for Science and Technology and Innovation [NACOSTI]). Research respondents were briefed about aims/ purposes and objectives of the study before the primary data collection process.

To ensure ethical standards is maintained in the study, consent from participants was obtained before involving them in the study. Respondents in the research study were not be subjected to coercion in any way. The data was collected in the study from the participants would only be applied for research purposes only.

CHAPTER FOUR

RESEARCH FINDINGS

4.1 Introduction

This chapter comprise of data analysis, findings that were collected, interpretation of the analysed data and findings of effect of excisable goods management systems on excise duty collection in domestic taxes department, Nairobi region, Kenya Revenue Authority.

The specific objectives informed the three null hypothesis that the study set out to test; i.Ho1: Verification of stamps has no significant effect on excise duty collection in Domestic Taxes

Department, Enforcement Division, Kenya Revenue Authority, Ho2: Stamps application procedures has no significant effect on excise duty collection in Domestic Taxes Department, Enforcement Division, Kenya Revenue Authority and Ho3: Stamps security features has no significant effect on excise duty collection in Domestic Taxes Department, Enforcement Division, Kenya Revenue Authority.

Descriptive and inferential statistics were used to analyse the datya. inferential statistics present the main project by testing the hypotheses while Descriptive statistics built the case fpor the project of study.

4.2 Response Rate

The number of questionnaires that were administered KRA operations, enforcement and market surveillance officers from Domestic Taxes Department, Nairobi region officers were 139.

Response rate results were presented in Table 4.1.

Table 4.1: Response Rate

Response	Frequency	Percentage
Returned	128	92.08%
Unreturned	11	7.92%
Total	**139**	**100%**

Source: Research Data (2023)

A total of 128 percent of the forms were completed and returned correctly. As demonstrated in Table 4.1, this equated to a 92.08 percent total successful response rate. This is in line with Babbie (2004), who stated that return rates of 50% are acceptable for analysis and publication, 60% is good, and 70% is excellent. According to these claims, the study's response rate of 92.08 percent is excellent.

4.3 Pilot Results

Pilot study was done on 14 Domestic Taxes Department, Enforcement office, Thika Station. All the 14 questionnaires administered were properly filled and returned. The data was then used to check for reliability of the instrument using Cronbach's alpha test.

4.3.1 Reliability Results

Reliability tests results were undertaken in order to assess the internal consistency of the variables as measured using the five Likert scale. The coefficients of reliability for each and every Likert scaled item were computed.

Table 4.2: Reliability Results

Variable	**Cronbach's Alpha**	**Number of items**	**Comment**
Verification of stamps	0.754	4	Reliable
Stamps application procedures	0.739	3	Reliable
Stamps with security features	0.750	3	Reliable
Excise duty collection	0.789	4	Reliable

Source: Research Data (2023)

The result in Table 4.2 indicates that all the scaled items were above value of 0.7. Hence all the variables achieved the reliability threshold of 0.7 and above and therefore were considered adequate for this study.

The results of the reliability test produced an overall Cronbach Alpha correlation coefficient of 0.758 while specific findings indicated that, Verification of excise stamps had a coefficient of 0.754, Stamps application procedures had a coefficient of 0.739, Stamps security features had a coefficient of 0.750 and Excise Duty collection had a coefficient of 0.789 Table 4.2 shows that all the study variables yielded Cronbach alpha coefficients values of more than 0.7, which is the recommended value. This indicates that the instrument was reliable.

4.3.2 Construct Validity Results

To test for construct validity, the Kaiser-Meyer-Olkin (KMO) test for construct validity was the applied. KMO measure has a range of 0-1. The KMO test is supported by Field (2005), who stated that a KMO Value/Degree of Common Variance has several ranges of 0.90 to 1.00, 0.80 to 0.89 0.70 to 0.79, 0.60 to 0.69, 0.50 to 0.59 and 0.00 to 0.49 which are termed as marvelous, meritorious, mediocre, miserable and do not factor respectively. The KMO threshold for this study was 0.5 and above.

Table 4.3: Construct Validity

		Tax payers attitude	**Tax knowledge**	**Social Norms**	**Tax compliance**
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.691**	**0.728**	**0.561**	**0.743**
Barletts Test of Sphericity	Approx. Chi-Square	56.338	30.652	26.625	47.249
	Df.	10	10	6	6
	Sig.	0.000	0.000	0.000	0.000

Source: Research Data (2021)

Results above showed that all the variables had a KMO above 0.5 and thus all the variables were valid. Further analysis can therefore be conducted

4.4 Descriptive Analysis

This section contains descriptive analysis for both the independent variables and dependent variable. Respondents were given a Likert scale with choices of strongly disagree, disagree, neutral, agree, and strongly agree. The results are demonstrated in terms of percentage, mean and standard deviation.

4.4.1 Verification of excise stamps

The participants were asked if they agreed or disagreed with the assertions about verification of excise stamps Table 4.3 displays the results.

Table 4.3: Verification of excise stamps

Statement	SD	D	N	A	SA	Mean	Std.Dev
The system allows storage and retaining of information during the verification and validation of excisable goods which can be referred at a later date	9.90%	12.30%	15.40%	**55.90%**	**6.60%**	3.37	1.08
EGMS has optimized the verification process of excisable goods at KRA	9.30%	15.60%	21.10%	**41.40%**	**12.50%**	3.51	1.15
EGMS has improved the execution time of the validation and verification of excisable goods in the organization	12.30%	11.30%	17.20%	**51.10%**	**7.00%**	3.51	1.13
The evidence stored in the system during the verification is reliable and relevant for decision making	5.80%	14.20%	8.20%	**44.90%**	**25.80%**	3.65	1.17
Aggregate Mean						**3.53**	**1.14**

Source: Research Data (2023)

The results in Table 4.3 indicate that 62.5% (55.9%+6.6%) of the respondents agreed with the statement that the system allows storage and retaining of information during the verification and validation of excisable goods which can be referred at a later date.

The results further showed that **53.9%** agreed with the statement that EGMS has optimized the verification process of excisable goods at KRA. In addition, the results further showed that **58.1%** agreed with the statement that EGMS has improved the execution time of the validation and verification of excisable goods in the organization. The results also showed that **70.7%** of the respondents agreed with the statement that the evidence stored in the system during the verification is reliable and relevant for decision making.

The overall average of **3.53** indicates that most respondents agree with most statements about verification of stamps. The standard deviation is **1.14**, which means the data is distributed around the mean. This means that the majority of respondents have the same view on most statements about verification of stamps. This finding, in line with (Deloitte, 2017) that EGMS has optimized the verification process of excisable goods at KRA

4.4.2 Stamps application procedures

The respondents were asked if they agreed or disagreed with the assertions about the stamps application procedures. Table 4.4 illustrates the results.

Table 4.4: Stamps Application Procedures

Statement	SD	D	N	A	SA	Mean	Std. Dev
Proof of importation KRA has a system that requires proof of importation	2.40%	17.40%	12.50%	**61.60%**	**5.60%**	3.50	0.93
Manufacturers are supposed to specify the quantities of goods they are intending to import	1.60%	32.00%	10.90%	**53.70%**	**0.80%**	3.21	0.97
. The excise stamp fees paid by the manufacturers or importers of excisable good are based Ion quantity of stamps issued to them	0.40%	11.70%	11.70%	**71.70%**	**5.60%**	3.69	0.76
A manufacturer applying for stamps must have a fully installed Excisable Goods Management System	2.60%	3.10%	7.00%	**65.60%**	**21.50%**	4.00	0.81
Aggregate mean						**3.50**	**0.85**

Source: Research Data (2023

The results showed that **67.2% (61.6%+5.6%)** of the respondents agreed with the statement that Proof of importation KRA has a system that requires proof of importation. The results also showed that **54.5%** of the respondents agreed that manufacturers are supposed to specify the quantities of goods they are intending to imports. In addition, result also showed that **77.3**% of the respondents agreed the excise stamp fees paid by the manufacturers or importers of excisable good are based Ion quantity of stamps issued to them. The results also showed that **87.1%** of the respondents agreed that the manufacturer applying for stamps must have a fully installed Excisable Goods Management System.

The total average is **3.50**, indicating that the majority of respondents agree with the statement about the stamps application procedures. The standard deviation is **0.85,** indicating that the data is evenly distributed. This suggests that most claims about stamps application procedures are shared by the majority of respondents. This finding is consistent with (Kenya Revenue Authority, 2017).

4.4.3 Stamps security features

The respondents were asked if they agreed or disagreed with the assertions about the stamps security features **Table 4.5** displays the results.

Table 4.5: Stamps security features

Statements	SD	D	N	A	SA	Mean	Std.Dev
The system facilitate any persons in the supply chain to authenticate the excisable goods	1.90%	2.00%	12.10%	**81.40%**	**3.60%**	3.72	0.61
Facilitating tracking of goods There is a system that facilitate tracking of good along the supply chain	1.20%	8.60%	22.30%	**66.60%**	**0.40%**	3.57	0.70
KRA has competent counterfeiting task force	0.40%	8.20%	23.00%	**57.00%**	**11.30%**	3.71	0.79
KRA use of devices to aid authentication of genuine goods	0.80%	45.30%	33.20%	**17.20%**	**3.50%**	2.77	0.87
Aggregate Mean						**3.47**	**0.73**

Source: Research Data (2023)

The results revealed that **85% (80.5%+3.5%)** agreed with the statement that the system facilitate any persons in the supply chain to authenticate the excisable goods. The results also showed that **67.0%** agreed with the statement that Facilitating tracking of goods There is a system that facilitate tracking of good along the supply chain KRA has competent counterfeiting task force

The results also revealed that **68.3%** percent of respondents agreed that the KRA has competent counterfeiting task force. Furthermore, 46.1 percent disagreed with the notion that the KRA use of devices to aid authentication of genuine goods

The overall mean is **3.47,** indicating that the majority of respondents agree with the majority of the claimed stamps security features. The data is scattered around the mean with a standard deviation of **0.73**. This indicates that the majority of respondents agree with the majority of assertions on the stamps features security.

4.4.4 Excise Duty collection

The respondents were asked to indicate whether they agreed or disagreed with the assertions about Excise Duty collection. Table 4.6 summarizes the findings.

Table 4.6: Excise Duty collection

Statement	SD	D	N	Axci	SA	Mean	Std. Dev
Implementation of excisable goods management system has enhance timely payment of revenue in our firm	5.90%	1.20%	13.30%	**65.70%**	**12.80%**	3.7	0.87
Manufacturers and importers pay their revenue on time	4.70%	25.40%	20.30%	**46.30%**	**2.30%**	3.16	0.98
The system allow collection of revenue from different prices for different types of excisable goods thus improving on revenue collection	1.20%	32.00%	23.00%	**28.30%**	**17.40%**	3.26	1.13
Implementation of EGMS system has led to eliminated revenue loss associated with manual method of fixing stamps	6.60%	9.40%	19.90%	54.60%	9.40%	3.51	1.02
Aggregate mean						**3.44**	**1.00**

Source: Research Data (2023)

The results showed that **78.5% (65.7%+12.8%)** of the participants agreed with the assertion that Implementation of excisable goods management system has enhance timely payment of revenue in our firm. Results also showed that **48.6%** of the respondents agreed with the statement that. Manufacturers and importers pay their revenue on time. The results further revealed that **45.7%** of the participants agreed with the statements that,The system allow collection of revenue from different prices for different types of excisable goods thus improving on revenue collection The findings also revealed that **64.1%** of respondents agreed with the statement that the . Implementation of EGMS system has led to eliminated revenue loss associated with manual method of fixing stamps

4.5 Diagnostic Tests

When the assumptions of the linear regression model are correct, ordinary least squares (OLS) provides efficient and unbiased estimates of the parameters (Long & Ervin, 1998). To ensure that there was no violation of the assumptions, this study tested for multicollinearity, homoscedasticity, and autocorrelation and normality test.

4.5.1 Normality Test

Normality of data was tested using the Shapiro-Wilk test. Results are shown in Table 4.8.

The Shapiro-Wilk Test was carried out to test whether the score of the samples were normally distributed with the same mean and standard deviation. If the test is significant **(P<0.05)** then the distribution is not significantly different from a normal distribution, but if the test is non– significant **(P>0.05**) then the distribution of the sample is significantly different from a normal distribution (Kilungu et al., 2015)

Table 4.7: Normality Test Results

	Shapiro-Wilk		
	Statistic	**df**	**Sig.**
Excise duty collection	0.941	291	0.113
Verification of stamps	0.923	291	0.103
Stamps application procedures	0.911	291	0.105
Stamps security features	0.954	291	0.054

Source: Research Data (2023)

Normality was tested by use of Shapiro-Wilk test as shown in Table 4.7. The tests results showed that the ***p-values*** for the variables > 0.05 as shown in table above. The tests ***f*** rejects the hypothesis of normality when the ***p-value*** is greater than 0.05 (Sharpiro & Wilk, 1965) illustrating that the standardized residuals were significantly normally distributed.

4.5.2 Multicollinearity Test

Multicollinearity test was assessed using the Variance Inflation Factor **(VIF)** and Tolerance statistics (Gujarati 2013). VIF values greater than ten, according to Field (2009), indicate the presence of Multicollinearity.

Table 4.8: Multicolliearity Test

	Tolerance	VIF
Verification of stamps	0.681	1.46
Stamps application procedures	0.813	1.21
Stamps security features	0.807	1.23
		1.31

Source: Research Data (2023)

a. Dependent Variable: *Excise Duty collection*

The results in Table 4.8 present the findings of the multicollinearity tests. The tolerance level which is the reciprocal of the VIF and the VIF values ranged from 1.21 and 1.456. Multicollinearity is indicated by VIF values greater than 10, and absence of multicollinearity is indicated by VIF values less than 10. This implied that there was no correlation among the repressors.

4.5.3 Heteroscedasticity Test

Heteroscedasticity is a situation where the variability of a variable is unequal across the range of values of a second variable that predicts it. In this study, Heteroscedasticity was tested by performing the Breuch-pagan. Breusch-Pagan test the null hypothesis that the error variances are all equal versus the alternative that the error variances are a multiplicative function of one or more variables. Homoscedasticity is to be evident when the value of "Prob > Chi-square" is greater than 0.05 (Park, 2008). Results in table 4.9 showed that the constant variance (Chi-square= 1.459) is insignificant (P = 0.918).

Table 4.9: Breusch-Pagan Test for Heteroscedasticity

Breusch-Pagan and Koenker test statistics and sig-values

	LM	**Sig**
BP	1.459	.918
Koenker	4.01	.548

Null hypothesis: heteroskedasticity not present (homoskedasticity)

Heteroscedasticity is a situation where the variability of a variable is unequal across the range of values of a second variable that predicts it.

In this study, Heteroscedasticity was tested by performing the Breuch-pagan. Breusch-Pagan test the null hypothesis that the error variances are all equal versus the alternative that the error variances are a multiplicative function of one or more variables. Homoscedasticity is to be evident when the value of "Prob > Chi-square" is greater than 0.05 (Park, 2008). Results above shows that the constant variance (Chi-square= 1.459) is insignificant (P = 0.918). Thus we fail to reject the null hypothesis and conclude that the error variance is equal thus heteroscedasticity is not a problem in the data.

4.5.4 Autocorrelation Test

Autocorrelation was tested using Durbin Watson test. This tested whether there is a (linear) correlation between the error term for one observation and the next. A Durbin Watson test value (d) takes on values between 0 and 4. A value of d = 2 means there is no autocorrelation.

Table 4.10: Autocorrelation test

Model	Durbin-Watson
1	2.001

Predictors: (Constant), Verification of stamps, stamps application procedures and stamps security features

b. Dependent Variable: Excise Duty collection

Autocorrelation was tested using Durbin Watson test in Table 4.10. This tested whether there is a (linear) correlation between the error term for one observation and the next. A Durbin Watson test value (d) takes on values between 0 and 4. A value of d = 2 means there is no autocorrelation. A value substantially below 2 (and especially a value less than 1) means that the data is positively auto correlated, i.e. on average a data element is close to the subsequent data element. A value of d substantially above 2 means that the data is negatively auto correlated, i.e. on average a data element is far from the subsequent data element. Based on the results the Durbin Watson test value (d) was 2.001(close to two) and therefore implied that there was no autocorrelation

4.6 Correlation analysis Results

The result in Table 4.11 shows the correlation between the study variables.

Table 4.11: Correlation Matrix

		Excise Duty Collection	Verification Of Stamps	Stamps Application Procedures	Stamps Security Features
Excise duty collection	Pearson Correlation	1.000			
	Sig. (2-tailed)				
Verification of excise stamps	Pearson Correlation	.706**	1.000		
	Sig. (2-tailed)				
	p	0.000			
Stamps application procedures	Pearson Correlation	.488**	.156**	1.000	
	Sig. (2-tailed)				
	p	0.000	0.005		
Stamps with security features	Pearson Correlation	.783**	.516**	.474**	1.000
	Sig. (2-tailed)				
	p	0.000	0.000	0.000	

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

Source: Research Data (2023)

The findings demonstrated a favorable and substantial relationship between verification of stamps and excise duty collection **(r=0.706, p=0.000).** These findings corroborated those of (Grant Thornton, 2017), who discovered that verification of stamps is strongly linked to excise duty collection. Furthermore, there was a positive and significant relationship **(r=0.488, p=0.000)** between stamps application procedures and excise duty collection. These findings corroborated those of Amon (2012) who found that stamps application procedures has a significant impact on excise duty collection

Furthermore, stamps security features were found to have a positive and substantial relationship with excise duty collection **(r=0.783, p=0.000).** (Kenya Revenue Authority, 2017). The study found that there is a significant and positive association between stamps security features and excise duty collection based on these data.

4.7 Regression Results

To assess the adequacy of the model, the overall significance level of the model and the importance of funding practices in the model: Summary of the model, ANOVA coefficients and regression models are derived, and the results are presented as follows: -

Table 4.11: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.854a	0.729	0.721	0.29095

Source: Research Data (2023)

Excisable Goods Management systems were found to satisfactory explain the excise duty collection at Kenya Revenue Authority, Kenya, with coefficient of determination, **R^2 of 0.729.** This also suggests that Excisable Goods Management Systems account for **72.9** percent of the variation in the dependent variable, which is excise duty collection. This also means that additional variables not included in the model account for **27.1** percent of the variation in the dependent variable.

Table 4.12: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	29.413	3	9.804	48.431	.000b
Residual	50.958	136	0.374		
Total	80.371	139			

Source: Research Data (2023)

Table 4.12 shows that F statistic of **48.431** and the associated P-value of 0.000 which is a value less than a p value of 0.05. This implies that tax behavior has statistically significant effect on Excise duty collection at a **95%** confidence level.

Table 4.13: Regression of Coefficient

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**		
(Constant)	-0.641	0.154		-4.153	0.000
Verification of stamps	0.454	0.036	0.434	13.11	0.000
Stamps application procedures	0.257	0.045	0.194	6.03	0.000
Stamps security features	0.468	0.036	0.453	12.722	0.000

a. Dependent Variable: Excise duty collection

Source: Research Data (2023)

Regression of coefficients showed that verification of stamps and excise duty collection were positively and significantly related **(β=0.454, p=0.000).** This implied that an increase in verification of stamps by one unit would lead to an increase in excise duty collection by **0.454 units**. In addition, stamps application procedures and excise duty collection were positively and significantly related **(β=0.257, p=0.000).** This implied that an increase in stamps application procedures by one unit would lead to an increase in excise duty collection by **0.257 units**...

Results further showed that stamps security features and excise duty collection were positively and significantly related **(β=0.468, p=0.000**). This implied that an increase in stamps security features by one unit would lead to an increase in excise duty collection by **0.464 units**.

From the hypothesized model ($Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$), the following model was estimated:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$),

$Y = 0.641 + 0.454X_1 + 0.257X_2 + 0.468X_3$ were significant with p- values of 0.000, 0.000, 0.000 respectively

4.9 Test of Hypotheses

4.9.1 Test of Hypothesis One

H_{01}: There is no significant effect of verification of stamps on excise duty collection in Domestic Taxes Department, Enforcement division, Kenya Revenue Authority.

The regression results for verification of stamps in Table 4.13 revealed that the p value =0.000. The decision rule for hypothesis testing was to reject H01 if p value<0.05. This hypothesis was rejected since the p value was less than 0.05 (p<0.05). This implies that verification of stamps have a major effect excise duty collection in Domestic Taxes Department, Nairobi Region ,Kenya Revenue Authority. Kenya.

4.9.2 Test of Hypothesis Two

H_{02}: There is no significant effect of stamps application procedures on excise duty collection in Domestic Taxes Department, Nairobi Region, Kenya Revenue Authority.

The regression results for stamps applications procedures in Table 4.13 revealed that the p value =0.000. The decision rule for hypothesis testing was to reject H_{02} if p value<0.05. This hypothesis was rejected since the p value was less than 0.05 (p<0.05). This implies that stamps application procedures have a major effect on excise duty collection in Domestic Taxes Department, Nairobi Region, Kenya Revenue Authority.

4.9.3 Test of Hypothesis Three

H_{03}: There is no significant effect of stamps security features on excise duty collection in Domestic Taxes Department, Enforcement division, Kenya Revenue Authority.

The regression results for stamps security features in Table 4.13 revealed that the p value=0.000. The decision rule for hypothesis testing was to reject H_{03} if p value<0.05. This hypothesis was rejected since the p value was less than 0.05 ($p<0.05$). This implied that there is a significant effect of stamps security features on excise duty collection in Domestic Taxes Department, Nairobi Region, Kenya Revenue Authority.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings, which were obtained in accordance with the study's objectives. The study's goals were to determine the effect of Excisable Goods Management Systems on excise duty collection, stamps application procedures and stamps security with features on excise duty collection in Domestic Taxes Department, Nairobi Region, Kenya Revenue Authority.

5.2 Summary of Findings

5.2.1 Verification of Stamps on Excise Duty Collection

The study established that any person involved in the supply chain of excisable goods, are required to verify and authenticate the stamps placed on excisable goods before accepting them. Majority of the manufacturers and importers have put a system in place for authenticate the stamps placed on excisable goods before admitting the goods. In addition, manufacturers and importers are supposed to mark goods for re-authentication of stamps. The study established that counterfeit stamps do not bring revenue to the government but benefit individuals. In addition, verification helps prevent the counterfeiting of goods which affects revenue collection as these goods avoid taxes paid. Verification enables correct prediction of revenue as in if no verification is done, the Authority cannot be able to predict the revenue to be collected. Also, verification of excise stamps makes sure all the products in the market have genuine excise stamps hence more collection in excise revenue.

The correlation results showed that of verification of stamps has a positive association with on excise duty collection in Domestic Taxes Department, Enforcement division, Kenya

Furthermore, regression analyses revealed that a one-unit rise in verification of stamps corresponded to a 0.454 unit rise in excise duty collection. The results of the hypothesis also revealed that verification of stamps has a major effect on excise duty collection in Domestic Taxes Department, Nairobi Region, Kenya

5.2.2 Stamps application procedures

The study found that the excise stamp fees paid by the manufacturers or importers of excisable good are based on quantity of stamps issued to them. Further, the study established that the revenue from the excise stamp fees is retained for the financing of the System. Also, the excise stamp fees are payable before the stamps are issued to the manufacturer or importer. The study revealed that manufacturers are supposed to specify the quantities of goods they are intending to import. The study also found that importers are required to provide a forecast of the quantities of excise stamps which they intend to use. Also, KRA has a system that requires proof of importation by an importer of excisable goods before issuing the importer with the excise stamps

Furthermore, the study found that excise stamps procedure help KRA predict the revenue to be collected thus the procedure enables control of stamps issuance. In addition, the application process helps KRA in ordering the manufacturing of excise stamps. Further, the authority is able to forecast the amount of excise revenue a company is expected to pay thus can be used as intelligence once the company does not remit all taxes.

Stamps application procedures has a favorable relationship with excise duty collection in Domestic Taxes Department, Nairobi Region, Kenya. according to the correlation data. Furthermore, regression analyses revealed that a one-unit improvement in stamps application procedures corresponded to a 0.257-unit improvement in excise duty collection. The results of the hypothesis also revealed that stamps application

procedures has a substantial effect on excise duty collection in Domestic Taxes Department, Nairobi Region, Kenya.

5.2.3 Stamps security features on excise duty collection

The study established that Kenya Revenue Authority (KRA) use of devices to aid authentication of genuine goods. In addition, the study established that KRA has fully installed Excisable Goods Management System. However, the findings of the study indicated that KRA has no competent counterfeiting task force. The study established that KRA has a system that facilitates tracking of stamps along the supply chain.

In addition, there is a system that facilitates tracking of good along the supply chain. Also, the system facilitates any persons in the supply chain to authenticate the excisable goods. The study revealed that KRA has a system that enables accounting for the production of excisable goods. The study also found that there is a system that has been put in place to allow excise stamps on imported excisable goods to be affixed at the production facility in the exporting country. Further, the track and tracing of excise stamps help in determining the approximate revenue to be collected. In addition, the unique features on the excise stamps help in authenticating the genuinely of the excise stamps.

The findings revealed that stamps security features have a favorable relationship with excise duty collection in Domestic Taxes Department, Enforcement division, Kenya. The regression studies revealed that a one-unit increase in stamps security features would result in a 0.468-unit rise in tax compliance. The results of the hypothesis also revealed that stamps security features had a substantial effect on excise duty collection in Domestic Taxes Department, Enforcement division, Kenya

5.3 Conclusion

According to the findings, verification of stamps had positve and significant effect on excise duty collection in Domestic Taxes Department, Enforcement division, Kenya. verification helps prevent the counterfeiting of goods which affects revenue collection as these goods avoid taxes paid. Verification enables correct prediction of revenue as in if no verification is done, the Authority cannot be able to predict the revenue to be collected. Also, verification of excise stamps makes sure all the products in the market have genuine excise stamps hence more collection in excise revenue.

The study found that stamps application procedures had positive and significant effect on excise duty collection in Domestic Taxes Department, Enforcement division, Kenya. Further, in addition, the application process helps KRA in ordering the manufacturing of excise stamps. Further, the authority is able to forecast the amount of excise revenue a company is expected to pay thus can be used as intelligence once the company does not remit all taxes. The null hypothesis that there is no significant influence of stamps application procedures on excise duty collection in Domestic Taxes Department, Enforcement division, Kenya

The study concluded that stamps security features have a positive and significant effect on excise duty collection in Domestic Taxes Department, Enforcement division, Kenya. The study also found that there is a system that has been put in place to allow excise stamps on imported excisable goods to be affixed at the production facility in the exporting country. Further, the track and tracing of excise stamps help in determining the approximate revenue to be collected. In addition, the unique features on the excise stamps help in authenticating the genuinely of the excise stamps. The null hypothesis that there is no significant effect of stamps security features on excise duty collection in Domestic Taxes Department, Enforcement division, Kenya.

5.4 Recommendations

From the study findings, verification of stamps has a positive and significant relationship with excise duty revenue collection excise duty collection in Domestic Taxes Department, Nairobi Region, Kenya. Furthermore, verification enables correct prediction of revenue as in if no verification is done, the Authority cannot able to predict the revenue to be collected. Also, verification of excise stamps makes sure all the products in the market have genuine excise stamps hence more collection in excise revenue.

This study therefore recommends that enforcement of the requirements of verification of stamps including adequate light for verification of stamps so as to ensure impartial verification of stamps and identification of counterfeit stamps.

From the study findings, stamps application procedures has a positive and significant relationship with excise duty collection in Domestic Taxes Department, Nairobi Region, Kenya. Furthermore, the study found that excise stamps procedure help KRA predict the revenue to be collected thus the procedure enables control of stamps issuance. In addition, the application process helps KRA in ordering the manufacturing of excise stamps. Further, the authority is able to forecast the amount of excise revenue a company is expected to pay thus can be used as intelligence once the company does not remit all taxes. However, the excise stamps procedure is bureaucratic thus preventing thus reducing the efficiency. The study therefore recommends that the management of Kenya Revenue Authority should reduce the bureaucracies involved in the issuance and application of stamps so as to enhance compliance.

From the study findings, stamps security features has a positive and significant relationship with excise duty collection in Domestic Taxes Department, Enforcement

division, Kenya. The study found that track and tracing of excise stamps help in determining the approximate revenue to be collected. This study therefore recommends that the management of Kenya Revenue Authority should enhance the features of excise stamps to prevent counterfeiting.

5.5 Contribution to Theory, Policy and Practice

This research is projected to make a significant contribution to tax administration theory, policy, and practice. The study adds to the body of information on the relationship between Excisable Goods Management Systems and Excise duty collection, from a theoretical standpoint. Furthermore, the research supports the theoretical framework and the many theories that were utilized to explain the variables. In terms of policy, the report advises policymakers like KRA and government of Kenya the study provides information on how the excise stamps affects excise stamps' application procedure on monitoring which can be used in the review and adjustment of the policy to improve tax revenue at KRA. This study will be useful to the Kenyan Government. Despite the manufacturing sector growing at a very fast rate in Kenya, the collection of excise duty from this sector has been a great challenge and the gains have been dwindling with time. This study will provide results that will discuss this problem diagnosing the ways in which the government and policy makers to enforce manufacturers of excisable goods as well as importers so that they remain compliant

5.6 Areas for Further Studies

The purpose of this study was to investigate the effect of excise duty collection in Domestic Taxes Department, Enforcement division, Kenya. The study was limited to Nairobi County. For comparison, further research might be conducted on other importers and liquor Manufacturers and Enforcement officers from other counties such as Nakuru and Mombasa. In addition, other studies can focus on other East African Countries for purposes of comparison.

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APPENDICES

Appendix 1: Introductory Letter to the Research Respondents

8th March 2023

Everlyne Nekesa Makokha

P. O. Box 12602-00100

NAIROBI

Dear **Respond**ent,

RE: REQUEST TO FILL THE QUESTIONNAIRE

I am a postgraduate student of Masters in Tax and Customs at Kenya School of Revenue and Administration in collaboration with Moi University, School of Business and Economics. I am currently on research work and the questionnaire has been designed to collect information on: ***Effect of Excisable Goods Management Systems On Excise Duty Collection in Domestic Taxes Department, Nairobi Region, Kenya Revenue Authority".***

The information you provide will be used only for academic purposes and shall be kept strictly confidential.

Therefore, you are kindly requested to give accurate information.

Thank you for your cooperation.

Everlyne Nekesa Makokha

Appendix II: Questionnaire

This questionnaire is designed to collect information on **"EFFECT OF EXCISABLE GOODS MANAGEMENT SYSTEMS ON EXCISE DUTY COLLECTION IN DOMESTIC TAXES DEPARTMENT, NAIROBI REGION, KENYA REVENUE AUTHORITY".** Kindly answer the following questions honestly and accurately as possible. The information given will be treated with a lot of confidentiality. Please do not write your name anywhere on this questionnaire.

SECTION A: VERIFICATION OF EXCISE STAMPS

Please tick (√) the extent of agreement to each of the statements provided below:

Key: SA -Strongly Agree**, A-**Agree**, N-**Neutral, **D**-Disagree**, SD-** Strongly Disagree

S/NO	Statement					
1	The system allows storage and retaining of information during the verification and validation of excisable goods which can be referred at a later date	**SA**	**A**	**N**	**D**	**SD**
	EGMS has optimized the verification process of excisable goods at KRA					
	EGMS has improved the execution time of the validation and verification of excisable goods in the organization					
	The evidence stored in the system during the verification is reliable and relevant for decision making					
	EGMS has reduced the risk associated with smuggling of excisable goods due to strict verification					

SECTION B: STAMPS APPLICATION PROCEDURES

Please tick (√) the extent of agreement to each of the statements provided below:

Key: SA -Strongly Agree**, A-**Agree**, N-**Neutral, **D**-Disagree**, SD-** Strongly Disagree

S/N	Statement	SA	A	N	D	SD
1	Proof of importation. KRA has a system that requires proof of importation by Ian importer of excisable goods before issuing the importer with the excise stamps.					
2	Importers are required to provide a forecast of the quantities of excise stamps which the they intends to use					
3	Manufacturers are supposed to specify the quantities of goods they are intending to import					
4	The excise stamp fees paid by the manufacturers or importers of excisable good are based on quantity of stamps issued to them.					
5	The revenue from the excise stamp fees is retained for the financing of the System.					
6	Payment of excise stamp fees The excise stamp fees is payable before the stamps are issued to the manufacturer or importer					
7	A manufacturer applying for stamps must have a fully installed Excisable Goods Management System					
8	The system permit digital stamps to be printed by the system on each package in case the stamp application is successful					
9	Application for the stamps Manufactures applying for remission must be tax compliant					

SECTION C: STAMPS WITH SECURITY FEATURES

Please tick (√) the extent of agreement to each of the statements provided below:

Key: SA -Strongly Agree**, A-**Agree**, N-**Neutral, **D**-Disagree**, SD-** Strongly Disagree

S/N	Statement					
1	Accounting for the production. KRA has a system that enable **accounting for the production** of excisable goods There is a system that facilitate accounting for **imported goods**	**SA**	**A**	**N**	**D**	**SD**
2	There is a system that has been put in place to allow excise stamps on imported excisable goods to be affixed at the production facility in the exporting country					
3	The system facilitate any persons in the supply chain to authenticate the excisable goods					
4	KRA has a system that facilitate tracking of **stamps** along the supply chain					
5	Facilitating tracking of goods. There is a system that facilitate tracking of **goods** along the supply chain					
6	KRA has competent counterfeiting **task force**					
7	KRA use of devices to aid authentication of **genuine goods**					

SECTION D: EXCISE DUTY REVENUE COLLECTION

Please tick (√) the extent of agreement to each of the statements provided below:

Key: SA *-Strongly Agree,* ***A****-Agree,* ***N****-Neutral,* ***D****-Disagree,* ***SD****- Strongly Disagree*

S/N	Statement	SA	A	N	D	SD
1	Implementation of excisable goods management system has enhance **timely payment of revenue**					
2	Manufacturers and importers **fill** their returns of time					
	Manufacturers and importers **pay** their revenue on time					
3	The system allow collection of revenue from different prices for different types of excisable goods thus improving on revenue collection					
4	Adoption of excisable goods management system has led to improvement in revenue collection;					
5	Implementation of EGMS system has led to eliminated revenue loss associated with manual method of fixing stamps					
6	Since implementation of excisable goods management system, excise tax debt has declined					