EFFECT OF TECHNOLOGICAL TAX REFORMS ON VALUE ADDED TAX COMPLIANCE AMONG MEDIUM SIZED FIRMS IN KISUMU TOWN, KENYA

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF ECONOMICS, ACCOUNTING AND FINANCE, SCHOOL OF BUSINESS IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE POSTGRADUATE DIPLOMA IN TAX ADMINISTRATION, JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY (JKUAT)

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DECLARATION

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

……. ……

Signature Date

LINA ATIENO ABUYA

HDB/336-C016/6532

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

…… …….

Signature Date

Dr. Irungu Macharia

DEDICATION

I dedicate this project to my father Thoma, S.M Adero for the moral and financial support he gave me while developing this project.

ACKNOWLEDGEMENT

I am so grateful to my supervisor, Dr. Irungu Macharia, as a result of the postive encouragement and commitment. Furthermore, I thank my friends and class mates for cooperation and the support they gave me. To God, I say thank you for your sufficient grace.

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LIST OF ABBREVIATIONS AND ACRONYMS

CEPS	Customs, Excise and Preventive Service
ETRs	Electronic Tax Registers
GDP	Gross Domestic Product
ICT	Information and Communication Technology
IMF	International Monetary Fund
IRB	Inland Revenue Board
IRS	Internal Revenue Service
ITMS	Integrated Tax Management System
KESRA	Kenya School of Revenue Administration
KRA	Kenya Revenue Authority
OECD	Organization for Economic Co-operation and Development
TAM	Technology Acceptance Model
TMP	Tax Modernization Program
TOT	Turn over Tax
TRA	Theory of Reasoned Action
URA's	Uganda Revenue Administration
US	United States
UTS	Unified Tax System
VAA	Value Added Tax Auto Assessment
VAT	Value Added Tax

OPERATIONAL DEFINITION OF TERMS

Electronic Tax Registers: any device approved by the government to record and issue fiscal data of goods and services (KRA 2004)

Integrated Tax (I-Tax) System: It is an advanced system used in tax administration where the tax payers can register, file and pay their taxes online (KRA, 2014).

KRA M-Service: It is the use of mobile phones as well as mobile money services in payment of taxes. It covers the use of Mpesa services, Airtel money as well as the pay bill numbers (KRA, 2014)

Medium Sized Firms: For the purpose of this study, Medium Sized Firms are businesses that generate an annual turnover of over Kshs. 5,000,000 for the purpose of being registered for VAT purpose (KRA, 2014).

Technological Tax Reforms: Tax reform is the process through which a country changes the way in which taxes are levied, mobilized and utilized by the government of the day with an objective of improving tax administration or to provide social or economic benefits (Dom & Miller, 2018).

Value Added Tax Auto Assessment (VAA) System: It is a recent advancement at KRA that help in detection of discrepancies between seller and buyer invoices, communication of these differences to the affected parties and raising of an auto assessment (KRA, 2018).

Value Added Tax: This is a consumption tax charged on Taxable goods and services (Osambo, 2009)

VAT compliance: Explanations as to why VAT is based on receipts instead of invoices (Bhatia, 2010, VAT Act, 476)

ABSTRACT

The inception of tax reforms in Kenya can be traced back to early 1980s when the Session Paper 1 of 1986 was drafted and adopted. Despite the efforts by KRA to institute technological reforms including the introduction of the i-tax, the value added auto assessment system and the need for tax payers to pay taxes through their mobile phones as well as electronic tax registers, the level of tax compliance especially VAT has consistently remained low. The study therefore sought to determine the interaction between technological tax reforms and VAT compliance among medium sized firms in Kisumu. Specifically, the study focused on determining how the electronic tax registers, integrated tax (i-tax) system and KRA M-Service affected value added tax compliance among medium sized firms in Kisumu town, Kenya. The Economic Deterrence Theory and the Technology Acceptance Model provided anchorage to the study. The study adopted a descriptive design and a total of 370 managers, supervisors and owners of medium sized firms operating in the service sector in Kisumu town were targeted. The study used stratified random sampling technique to select 188 managers, supervisors and owners from these firms the service sector as the sample size. A pilot study was conducted to determine reliability and validity of the study instruments before actual data collection in the field. Information for the study was gathered with the aid of questionnaires that had open and close ended questions. The analysis of the collected data was conducted using descriptive, inferential and content analysis with the aid of Statistical Package for Social Sciences (SPSS) version 23 for quantitative data. The results were presented using Tables and Figures. The study established that electronic tax registers, i-tax system and KRA M-service all have significant effect on VAT compliance. The study concludes that technological tax reforms have postive and significant effect on VAT compliance. The study recommends that there is need for enhancement of ETRs to allow real time and online transmission of transaction data from firms to KRA system by speeding up the implementation of Tax Invoice Management System (TIMS). I-tax system needs to be configured so that medium sized firms are able to upload data directly from their systems to the i-tax. There is need to bring in other network operators apart from Safaricom Mpesa in the KRA M-service. The other network operators include Airtel and Telecom Kenya besides Equitel, a product by Equity Bank Group. The charges of paying VAT through mobile phones should be reduced to allow more firms to pay their VAT dues using KRA M-services. The results of the study are expected to strengthen policy formulation on technological tax reforms in Kenya.

CHAPTER ONE

INTRODUCTION

This chapter is set out to provide the background information on technological reforms and its interaction with value added tax (VAT) compliance as well as the information on medium sized entities in Kisumu town. The chapter also details the statement of the problem, the research objectives as well as research questions. The statement of the problem, the formulated objectives, research questions as well as justification, scope and limitations of the study are also presented.

1.1 Background of the Study

The rapid advancement in technology has affected the way organizations operate in their environment. These forces of technology and globalization have revolutionized and transformed how organizations operate so as to survive. These changes in technology have affected all the forms of organization whether private or public, small or large ones into the tax agencies that administer tax revenue on behalf of the government. Indeed, the changes in technology have facilitated the reforms in most government tax agencies so as to increase the amount of tax revenues collected (Lamensch & Ceci, 2018).

In Kenya, the Kenya Revenue Authority (KRA) is the sole government agency charged with the responsibility of administration of taxes on behalf of the state. The inception of tax reforms in Kenya can be traced back to early 1980s when the Session Paper 1 of 1986 was drafted and adopted (Livoi, 2017). This resulted into significant changes including the introduction of direct taxes and later on the Value Added Tax in 1990 which came as a replacement of the sales tax. Between the periods from 1986 all through to 2002, the tax reforms had gained momentum in the country and they were largely duped as Tax Modernization Programs (Gicho, 2018).

In 2003, there emerged an Economic Recovery Strategy Paper that highlighted further tax reforms including expansion of tax base as well as adoption of the Simba tax system in 2005. It was during this period that electronic tax registers (ETRs) for all businesses were introduced which aimed at keeping track of their sales so as to limit noncompliance with VAT (Kiring'a, Jagongo, Kiio, Njuguna, Muguongo, Nganyi & Qiao, 2017). The key technological reform by KRA was the introduction of the Integrated Tax Management System (ITMS) that allow the tax

payers to register, file tax returns and pay their taxes hence reducing the costs of compliance. The other recent technological reforms especially as it concern the VAT include the introduction of value added tax auto assessment system (Gitaru, 2017). It is therefore against this background that the current study will seek to determine the interaction between these technological tax reforms and VAT compliance.

1.1.1 Global Perspective on Technological Tax Reforms

A study was conducted in United States of America by Adam and Johnson (2012) that came to0 the conclusion that there is need for the government to establish a more neutral tax system as compared to the one in place. This would reduce the compliance costs and thus raise the amount of tax revenues collected. Dom and Miller (2018) conducted a study on reforming tax systems in developing nations. It was shown that international players have been vocal at giving advice on how developing nations can improve their tax revenues. Bernardi, Luigi and Gandullia, Luca and Fumagalli Laura (2005) did a study on reforms of the tax systems in Asia where significant integration has been evident in Asia.

Godar, Paetz and Truger (2015) looked at tax reforms with focus on member countries of OECD where it was shown that embracing tax reforms positively enhanced tax compliance and the amount of collected revenues. Cottrell, Ludewig, Runkel, Schlegelmilch and Zerzawy (2017) studied environmental tax reforms with focus on Asia and Pacific region and noted that sustainable development is a driven largely by environmental tax reforms. Environmental tax reforms can effectively integrate the economic and social costs in the overall pricing of the products in an economic system.

Spengel, Heinemann, Olbert, Pfeiffer, Schwab and Stutzenberger (2017) did a study in US focusing on corporate tax reforms where it was noted that worldwide taxation shaped and drove the tax reforms in United States. Christofzik and Elstner (2018) did an assessment of the role played by tax reforms using evidence from Germany. It was noted that tax cut in US resulted into a moderate increase in GDP in Germany. It was in the year 1986 that electronic filling was first conducted in United States (Lai & Choong, 2010). Since then, a number of countries both developed and developing have adopted the system where tax returns are filed online. Presently,

e-filling has expanded covering countries like Chile, Canada, Germany, France and Australia among others around the world (Ramayah et al., 2006).

1.1.2 Regional Perspective on Technological Tax Reforms

In Ghana, the tax reforms have been driven by policy instruments required for acceleration of the growth of the economy and reduction of the levels of poverty (Osei, 2006). The changes in administration of Ghana helped in growth of the revenue base of the country and these reforms include expanding the tax base, improving the tax structures. These reforms have been associated with increased tax revenue collection in Ghana (Terkper, 2004). In Uganda, the significant tax reform was the separation of the present revenue department from the ministry of finance. The key drive for this change was to create incentives where staff could improve the level of their performance hence raising the generated tax revenues. This reforms resulted into an increase in revenue collected from 7% of GDP in the year 2007 to 12% of GDP in the year 2013 (Fjeldstad, 2013). The incidences of corruption also significantly reduced due to this reform.

Using a case of sub-Saharan Africa, Mavungu and Krsic (2017) did an assessment of tax administrative reforms. In a total, a panel of 46 countries was used covering the period from 1980 to 2013. The study noted that tax reforms have not significantly performance of tax collection systems in sub-Saharan countries. Chikozho (2018) analyzed the role played by illicit transfer and tax reforms using South African context. It was shown that tax reforms play a key role in curbing illicit trade and transfers that adversely affect the collected tax revenues in an economic system.

1.1.3 Local Perspective on Technological Tax Reforms

The tax reforms in Kenya dates back to as late as 1986, starting with the Structural Adjustment Program (SAP). The essence of SAP was to raise the level of voluntary compliance among the tax payers (Fjeldstad & Rakner, 2001). There was also a tax modernization program dating back to late 1980s. Presently, a number of tax reforms have been adopted in Kenya broadly categorized into administrative, policy and technological reforms (Karingi & Wanjala, 2005). A study was conducted by Gachanja (2012) in Kenya that sought to determine the role that tax reforms play as far as collection of tax revenues is concerned. It was shown that tax reforms and revenues in Kenya are inversely interlinked. One recommendation raised by the study was the

need for KRA to examine tax reforms keenly to ensure that sufficient amount of tax revenues is collected.

Chilibasi (2014) conducted a study on VAT reforms and their interaction with the collected revenues by KRA. It was shown that filling of VAT returns online has a direct influence on the amount of VAT revenues collected. Munene and Nduruhu (2016) looked at tax reforms and their influence on collected tax revenues. The study noted that tax reforms helps in improving the tax systems of the country. Livoi (2017) studied tax reforms and their interaction with corporate tax. The study noted that a number of tax reforms have been adopted in Kenya including technological reforms since the year 1986. However, noncompliance among small business is a major challenge affecting these tax reforms.

Ombati (2018) did a study on tax reforms and their interaction with efficiency in collection of tax revenues in Kenyan context. It was shown that Kenyan tax reforms have significantly influence tax revenues performance. Ouma (2019) analyzed at tax reforms and their influence on tax revenue and the growth of the economy and noted a postive link. Musyoka (2019) noted that tax reforms are positively linked with compliance and revenue collection. Kanyinga (2016) did an analysis of tax reforms and compliance with turn over tax where it was noted that most of the small firms do embrace e-registration and e-filling and hence reduced compliance burden of these firms. Livoi (2017) conducted an assessment of tax reforms and their influence on corporate tax where it was noted that technological reforms particularly the i-tax has played an important role as far as tax compliance is concerned.

1.1.4 Value Added Tax Compliance

Tax compliance is the ability of the tax payers to pay their tax dues on time. Tax compliance refers to timeliness in registration, filling and payment of tax dues and obligations (Ssetuba, 2012). Besides timeliness, the accuracy of registration, filling and payment of taxes is also an important aspect to look at when it comes to tax compliance. Auyat (2013) view tax compliance in terms of accuracy and timeliness in lodgment of tax returns together with the required payments. The two key types of tax compliance are voluntary and non-voluntary compliance (Mandola, 2013).

With voluntary compliance, there is no needs for state enforcement before the tax payer fulfill the tax obligation unlike the involuntary compliance (Hussein et al., 2010). VAT is a form of tax that is charged on value addition. Thus, VAT compliance is timely and accurately submitting the information for remitting taxes to the relevant authorities (Nakiwala, 2010). The online systems have significantly improved how tax is administered and thus the amount of tax revenues (Mandola, 2013)

1.1.5 Medium Sized Firms

Medium sized firms operate in the large Small and Medium Enterprises (SMEs) and they are either formally registered having yearly turnover of USD. 8-100 million, as asset base of USD. 4 million while employing 50-100 employees (World Bank, 2007). Just like other firms, medium sized firms have tax obligations which they are required to honor. Some of these firms have remained in the informal sector because of the costs incurred in compliance with taxes. The implication of this is that a number of the medium sized firm does survive without payment of taxes. This situation needs to be addressed since their overall contribution to tax revenues around the world never extend beyond 5% of the total tax collected (Mutua, 2011).

In Kenya, the key feature of these medium sized firms is the ease of entry and exit into the market and low technological capabilities. Most of these medium sized in Kenya also lack sufficient skills required to operate the technological reforms that come with tax policies including i-tax system (Waweru, 2007). Kenya is focusing on realization of the Big-4 agenda (health care, food security, housing and manufacturing) that require sufficient budget which can only be realized through revenues collected from such platforms as the medium sized firms.

In Kisumu County, the medium sized firms operate in different sectors for instance manufacturing, service as well as food processing. However, most of these medium sized firms in Kisumu do encounter a number of challenges as far as taxation is concerned. For instance, Odongo (2014) noted that most of the medium sized firms in Kisumu have poor record keeping ability, low sales revenues and regular changes in ownership. The other challenges include a large number of medium sized firms which are not adequately informed on taxation systems and processes including computation of taxes (Simiyu, 2013). Therefore, it is against this background

that the current study sought to determine how technological tax reforms had affected VAT compliance among these medium sized firms in Kisumu County.

1.2 Statement of the Problem

Taxation reforms have been in existence since 1986 but, there has been a tax gap of actual and potential tax revenue raising issues on whether tax reforms have an effect on corporate compliance making it an urgent issue. Studies which have been done on tax reforms have not comprehensively covered the issue of VAT compliance in relation to tax reforms introduced. Furthermore, despite the efforts by KRA to institute technological reforms including the introduction of the i-tax, the value added auto assessment system and the need for tax payers to pay taxes through their mobile phones as well as electronic tax registers, the level of tax compliance especially VAT has consistently remained low. For instance, the period 2018/2019 recorded domestic VAT collection of Kshs. 230,348 million compared to the period 2017/2018 where the collected VAT was Kshs. 205,099 million. This represented a mere 12.3% growth in VAT, which is too low hence failing to justify the costs incurred by KRA to implement the technological tax reforms (KRA, 2019). Appendix II gives a breakdown of the actual VAT collected against the target for the financial year 2015/16, 16/17, 17/18 and 18/19 that was equivalent to actual VAT collected standing at Kshs. 159.370, Kshs. 193.081, Kshs. 205.099 and Kshs. 230.348 billion respectively (KRA, 2019).

Various studies have been conducted on technology tax reforms although in different contexts. For instance, among 13 OECD economies, Amaglobeli, Jaramillo, Karnane and Zdzienicka (2019) sought to relate tax reforms and smoothing of fiscal shocks. It was noted that fiscal stabilization is affected by reforms in tax systems through such avenues as progressiveness and efficiency in collection systems. In Moroco, Ghiaie, Auclair and Ntsama (2019) did a study on tax reforms and their effect on macro-economic and welfare status. It was noted that tax reforms is a tradeoff between the revenue to the government and growth as well as equity. Locally in Kenya, Omondi (2013) studied VAT reforms and their interaction with productivity. The study noted that VAT in Kenya is inelastic as well as non-buoyant. Ndambuki (2014) looked at regressive tax reforms and their effect on economic welfare in Kenya. It was shown that apart from the rates of exchange, all the other covered variables including interest rate and inflation have a postive interaction with the growth of the economy.

However, these studies failed to bring out the link between the technological tax reforms and VAT compliance. None of these studies was done in Kisumu County. This creates the research gap which the present study sought to fill by examining the effect of technological tax reforms on value added tax compliance among medium sized firms in Kisumu town, Kenya

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to determine the effect of effect of technological tax reforms on value added tax compliance among medium sized firms in Kisumu town, Kenya

1.3.2 Specific Objectives

The study was guided by the following specific objectives:

i. To establish the effect of electronic tax registers on value added tax compliance among medium sized firms in Kisumu town, Kenya
ii. To determine the effect of integrated tax (i-tax) system on value added tax compliance among medium sized firms in Kisumu town, Kenya
iii. To assess the effect of KRA M-Service on value added tax compliance among medium sized firms in Kisumu town, Kenya

1.4 Research Questions

The study attempted to provide answers to the following research questions:

i. How electronic tax does registers effect value added tax compliance among medium sized firms in Kisumu town, Kenya?
ii. What is the effect of integrated tax (i-tax) system on value added tax compliance among medium sized firms in Kisumu town, Kenya?
iii. To what extent does KRA M-Service affect value added tax compliance among medium sized firms in Kisumu town, Kenya?

1.5 Justification of the Study

The results from the study shall be important to the following:

1.5.1 The Management Team of Mid-Sized Firms

Just like any other entities, the mid-sized firms are headed by the management team which is responsible for the day to day decisions of their respective firms. Thus, the management of these firms would leverage on the results of this study to make sound decisions as far as compliance with VAT is concerned.

1.5.2 The Kenya Revenue Authority

The Kenya Revenue Authority (KRA) is a state agency that is charged with the responsibility of collecting tax revenues on government's behalf. This study would be important to the KRA as it would inform formulation of sound strategies and policies aimed at enhancing compliance with VAT. The study would provide the rationale for KRA to invest resources in technological reforms so as to meet the revenue collection targets.

1.5.3 Government Policy Makers

There are a number of policy makers in the government including the National Treasury that manages government finances. The national treasury would leverage on the study to make informed decisions that would enhance compliance with VAT.

1.5.4 Tax Practitioners

The tax practitioners include the withholding tax agents, tax accountants and tax auditors. All these individuals would be able to understand the interaction between technological tax reforms and VAT compliance.

1.5.5 Scholars and Researchers

The study would add to the available knowledge on technological tax reforms and VAT compliance. This would allow future scholars to carry out further studies as this will act as a point of reference.

1.6 Scope of the Study

The study looked at the interaction between technological tax reforms and VAT compliance. Specifically, the study sought to determine the interaction between electronic tax registers, i-tax and KRA M-Service with VAT compliance. The study covered the medium sized firms

operating in Kisumu town. Kisumu town was selected as a point of reference in this study because it is one of the relied on primary data that shall be gathered with the help of questionnaires. The study covered the financial year 2019/2020.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is set out to review relevant literature on the study. The theories that provided anchorage to the study are reviewed. The conceptual framework of the study is provided besides the empirical studies. The chapter summarizes the reviewed studies to show gaps.

2.2 Theoretical Review

A theoretical review is a critical examination of the theories that provide anchorage to the study (Mugenda and Mugenda, 2003). This study was guided by the economic deterrence theory and the technology acceptance model.

2.2.1 Economic Deterrence Theory

The theory was formulated by Becker in 1960s and it is also referred to as deterrence and it argues that the tax paying bodies try their best to ensure that is maximization of the benefits linked with evasion of taxes (Trivedi & Shehata, 2005). The probability that tax audits may detect evasion and the consequences that one would go through in the event of being detected either deters or encourages the tax payers to evade. Thus, tax payers would ultimately make a decision that result into maximization of their economic benefits.

Cuccia (1994) argue that there are some tax payers where an increase in audit visits, penalties and interests would have an effect on their level of compliance. There are various mechanisms that can be put in place for deterrence and these can either be corrective or enticing (Becker, 1968). This theory is similar to the Allingham and Sandmo (AS) theory which argues that sanctions and audits are used by the government in deterring tax evasion. In the event that the taxpayer evaluate and is assured that the costs of evasion are too low, there will be evasion. Furthermore, when the costs of compliance are perceived to high by the tax payers, they will be motivated to evade paying of their taxes. For instance, those tax payers who are of the opinion that the tax rate is relatively too high shall be forced to evade. Thus, evasion, probability of being detected and transaction costs linked with evasion are negatively related. This theory is relevant

to the study since it links VAT compliance as the dependent variable and the factors that can influence this compliance.

2.2.2 Technology Acceptance Model

The technological acceptance model (TAM) was advanced by Davis (1986) and it argues the factors that influence adoption of technologies in the organization. The theory argues that two factors: perceived usefulness and perceived ease of use influence the decision of use of technologies in the organization. Perceived usefulness is the degree which people hold perceptions that new forms of technologies would bring about an improvement in level of performance in the organization (Azmi & Bee, 2011). On the other hand, perceived ease of use is the degree that one perceives the use of given form of technology would free up the mental efforts. The theory indicates that these two factors influence the decision and the intent to use and adopt computer in the organization (Ramoo, 2006). This theory is relevant to the study since it link technological tax reforms and compliance. The theory provides the factors that influence adoption of technological tax reforms among medium sized firms so as to enhance their compliance.

2.3 Empirical Review

This section will review literature on the independent study variable of the study.

2.3.3 Electronic Tax Registers and Value Added Tax Compliance

Eilu (2018) conducted a study on adoption of electronic fiscal devices and its influence on collection of VAT in Kenya and Tanzania. The study adopted systematic review methods where relevant information was examined. The review was centered on determining the challenges related with adoption of EFDs both in Tanzania and in Kenya. From the review of literature, the study proposed the technology-organization-environment (TOE) framework relevant in explaining the challenges as far as EFDs adoption was concerned. Muhammed and Tesafa (2015) carried out a study on electronic tax machines and their influence on compliance of VAT using a case of Ethiopia. A total of 176 VAT registered tax payers were sampled and covered by the study. Simple random sampling helped in drawing sample sizes. Information was gathered with aid of the questionnaires. It was noted that the use of ETRs is related with increased tax compliance.

Musonera, Siringi Elijah and Naibei (2013) did a study on ETRs and their interaction with VAT compliance in Kenya. The study focused on private business entities in the context of Kenya. The study sampled out 233 private entities operating in Kisumu from a total of 590 firms that were targeted. Questionnaires helped in gathering of the required information. It was shown that regular and effective use of ETRs is linked with compliance with VAT. Using a case of SMEs in Nakuru, Jo and Kibati (2017) sought to determine the factors that shape the implementation and usage of ETRs. The variables of the study included perceptions, costs, training and tax compliance. A total of 680 SMEs were targeted out of which 197 of them were sampled out and included in the study. It was shown that submitting tax returns online reduces the costs of manual filling and it was affordable for firms to acquire as well as install ETRs.

Sagas, Nelimalyani and Kosgeikimaiyo (2015) looked at ETRs and their interaction with revenue collection in Kenya. The adopted design was survey and a total of 14 managerial staff of KRA office in Kisumu were targeted besides the 364 whole sale traders hence a total of 378 respondents formed the target population of the study. Out of this target population, 124 respondents were sampled out and included in the study. It was noted that ETRs have played a role as far as curbing of tax evasion is concerned. The efficiency of the ETRs has also helped in increasing the amount of revenues collected.

2.3.2 Integrated Tax (I-Tax) System and Value Added Tax Compliance

Vanhoeyveld, Martens and Peeters (2019) did a study on detection of fraud related with VAT system using the context of Belgium. It was noted that unsupervised anomaly detection shows high predictive power for VAT fraud detection. Rahimikia, Mohammadi, Rahmani and Ghazanfari (2017) conducted a study in Iran on how best to detect evasion of corporate taxes. The study noted detection of evasion requires adoption of sophisticated systems and mechanisms. Musyoka (2019) did a study on tax reforms and their interaction with voluntary compliance. The study focused on SMEs operating in Kenya, specifically in Nairobi. The variables of the study included i-tax registration of VAT tax payers and ICT knowledge. The study targeted 581 SMEs and random sampling was used to select respondents where 87 respondents were sampled. It was shown that most of the firms had registered for VAT and income taxes. The firms that had not registered gave inadequate information and complicated procedures as key factors contributing to this.

Wasao (2014) did a study on online tax systems and their influence on tax compliance. The study used a case of SMEs in Nairobi. The adopted design was descriptive and it was shown that online registration, filling and payment all have direct influence on compliance behavior of the tax payers. Barako (2015) conducted a study on i-tax and its influence on administration of tax using a case of Kenya. The adopted design was descriptive. It was shown that implementation of i-tax results into an increase in variability of returns in revenues. It was shown i-tax resulted into simple and streamlined processes for payment and collection of taxes. Bett and Yudah (2017) did a study on i-tax system as a strategy on revenue collection at KRA. Resource Based Theory provided anchorage to the study. The adopted design was correlational and a total of 114 respondents were targeted and 76 of them were sampled out. It was shown that tax payer registration, online tax system and electronic payment of taxes influence revenue collection.

Kiring'a, Jagongo, Kiio, Njuguna, Muguongo, Nganyi and Qiao (2017) did a study on online filling of taxes and its influence on compliance. The study used a case of SMEs in Kenya. The adopted design was descriptive survey and 1800 SMEs were targeted. From these, 316 of them were sampled out using simple random sampling. It was shown that online filing of taxes influence compliance of taxes among SMEs. The study noted negative link between online filing and compliance. Guyatu (2015) did a study on efficacy of i-tax system on tax administration in Kenya. The adopted design was correlational design and information was gathered using auxiliary sources. It was shown that variability of revenue returns at KRA has an effect on implementation of i-tax. Kipkemoi (2015) studied i-tax and its influence on service delivery focusing on KRA. Cross sectional design was adopted and KRA staff was targeted. It was shown that perceptions of staff towards i-tax have significant effect on service delivery.

Mararia (2014) looked at integrated tax management system and its influence on compliance using a case of SMEs in Nairobi. A total of 200 firms in Nairobi were targeted from which 100 of them were sampled out. The adopted design was descriptive survey. It was shown that adoption of integrated tax management system resulted into an improvement in tax compliance. Malonza (2016) used a case of SMEs in Kenya to determine the role played by i-tax on compliance with corporate taxes. The adopted design was descriptive design. It was shown that the use of i-tax results into increased tax compliance among the tax payers.

2.3.3 KRA M-Service and Value Added Tax Compliance

Tax authorities that require payment of taxes through mobile phones have been associated with an increase in the amount of taxes collected. A good example of such countries is Mauritius that reported a 12% raise in collected tax revenues after adoption of mobile phones in collection of taxes (Scharwatt, 2014). Thus, there is likelihood that adopting mobile phones in administration of taxes is related with an increase in taxes collected. McCluskey and Huang (2019) did a study on ICT and its role in administration of property taxes using a case of Tanzania. The study noted that most tax systems around the world operate manual and paper based platform particularly for property taxation. This has resulted into tax revenue leakages due to untimely collections, low collections as well as opportunities for corruption. There are difficulties encountered is estimation of the tax payers that are missing in the tax system. In addressing these issues and challenges, various advances in technologies have been seen in Tanzania.

Njenga (2017) looked at mobile based system of collecting tax revenues in Kenya. It was noted that the available manual and partly automated systems are in operations currently and they are associated with challenges like low level of reliability, slow time in processing and low decision making reports. To solve these challenges, a mobile solution referred to as M-county which facilitated remittance of payments including parking fees through platforms like M-pesa. Okiro (2015) studied e-payment system and its interaction with collection of revenues using the context of Nairobi. The adopted design was descriptive and 18 departments in Nairobi were targeted. Information was obtained from auxiliary sources and the analysis noted a significant increase in revenue collection after implementation of e-payment solutions and systems. It was concluded that e-payment system have postive and significant link with collection of tax revenues.

Ndayisenga and Shukla (2016) did a study on electronic tax management system and its interaction with revenue collection using a case of Rwanda. The study variables included internet payment systems, mobile payment systems and electronic billing system. The adopted design in the study was descriptive and the targeted respondents were 120 out of which 75 of them were sampled. Information was obtained from both primary as well as auxiliary sources. It was noted that mobile payment has significant effect on timely payment while reducing the operational costs. They are also convenient as customers can pay from any physical location.

2.4 Conceptual Framework

A conceptual framework is a diagram that illustrates the relationship between the variables as well as how they are operationalized (Kothari, 2004). The conceptual framework of the study variables is illustrated in Figure 2.1.

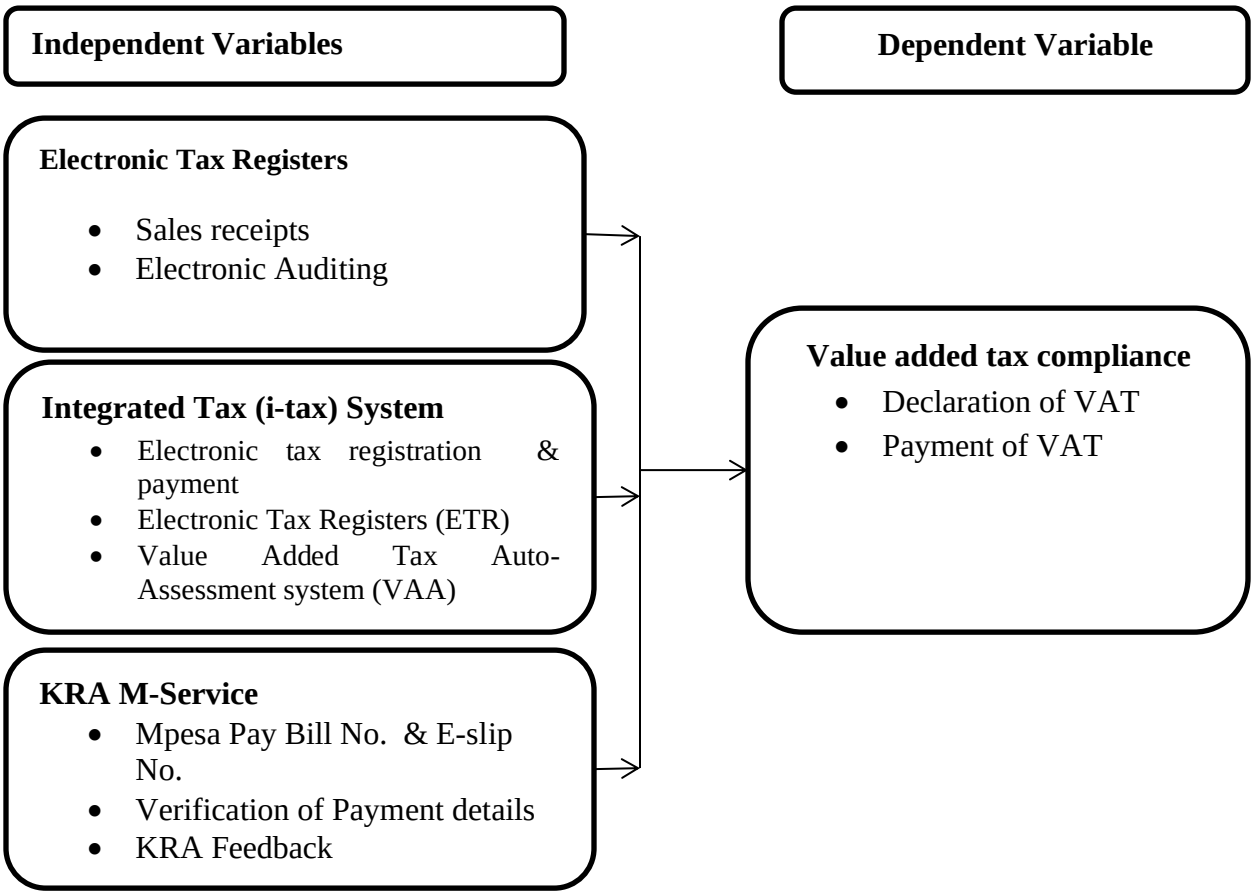


Figure 2.1: Conceptual Framework

2.4.1 Electronic Tax Registers

The first time to introduce ETRs in Kenya was in 2004 and they were meant for recording and issuance of fiscal data of products (KRA 2004). Presently, it is a must for all registered firms for VAT purpose to install ETRs so that they generate receipt of their sales. By introducing ETRs, KRA aimed at establishing the amount of payable VAT without the need for traders to provide records for cross checking (Kathuri, 2006). The results of implementation indicate that ETRs are associated with shortening of the time it takes to prepare VAT returns in comparison with the previous time it could take for the same during the manual system. The ETRs are largely adopted in the retail environment and they help in printing receipts while helping the owners to

effectively arrange and organize the shop. It has been shown that when a business uses computer systems to record activities, it would be possible to record and store data in electronic form. This electronic data may help in carrying out electronic auditing since it provides an audit trail.

2.4.2 Integrated Tax (I-Tax) System

I-tax system is a web based tax system that strives to simplify, quicken and enhance security of the tax compliance. It is among the mission of KRA in realization of the best practices around the globe. I-tax system is simply an improvement and revision of the previous online system (the integrated tax management system) whose roll out was in 2007. The ITMS had various issues and complains from the users that resulted into implementation of i-tax system. Through i-tax system, the tax payers and other users are able to register their details, file their taxes as well as pay the tax due (KRA, 2014).

There is an integration of over 30 banks in the i-tax system so that majority of the tax payers are included. Through i-tax system, the tax compliance exercise has been quickened and simplified (Economic Survey, 2015). The value added auto assessment system is a recent enhancement of this i-tax system whose role is to detect and communicate inconstancies on tax returns while raising auto assessment (KRA, 2018). This way, the system helps in reducing VAT fraud thus enhancing compliance among the registered firms.

2.4.3 KRA M-Service

The KRA M-service was launched in 2014 as a tax payment platform (KRA, 2014). There are two important service components of the KRA M-service: the mobile payment and the information service components. Through the information component, the tax payers are able to get specific information from the KRA via some texts. Through the mobile payment component, the tax payers are able to quickly and conveniently make payments with the aid of their mobile phones. Two key mobile platforms that are supported by this component include Safaricom (M-pesa) and Airtel (Airtel Money). Once this payment has been made, it is cleared, processed as well as credited to the account of KRA in real time. At the same time, the mobile provide issue the tax payer with a text message confirming payment of the sent amount.

2.4.4 Value Added Tax Compliance

Compliance refers to ability of the tax payers to get registered, file their tax returns and pay their tax dues. Tax compliance can also be viewed in terms of the ability of the tax payers to abide by all the laws that guide and govern administration of taxes in a given country (Brook, 2001; Devos, 2008; Kirchler, 2007). According to Torgler (2007), tax compliance is ensuring that tax authorities and the government are placed as the key parties that should ensure efficient administration of tax systems so as to prevent evasion of taxes. Richardson (2008) noted that the government plays an important role in changing the perceptions and attitudes of the tax payers as far as compliance is concerned.

2.5 Critique of the Literature Relevant to the Study

This chapter has reviewed a number of empirical studies. Under i-tax, most of the reviewed studies including Musyoka (2019); Wasao (2014); Barako (2015); Bett and Yudah (2017); Kiring'a et al. (2017); Guyatu (2015); Kipkemoi (2015); and Mararia (2014) there is consistency that i-tax generally help the tax payers to register, file and pay their taxes in a way that is most convenient. The studies on i-tax system largely focus on how best to reduce VAT fraud and thus by extension enhance tax compliance. For mobile platform, studies indicate that M-pesa services and the airtel money have revolutionized the way organizations including tax agencies conduct their operations.

2.6 Summary

The chapter has reviewed a number of empirical studies on the variables. For instance, on i-tax system, Musyoka (2019) analyzed the link between tax reforms and voluntary compliance using evidence from SMEs in Kenya. Wasao (2014) looked at online tax systems and compliance with reference to SMEs in Nairobi. Barako (2015) assessed the efficacy of i-tax system on tax administration in Kenya. Wasao (2014) studied online tax system and its influence on compliance among SMEs in Nairobi. Bett and Yudah (2017) studied i-tax system and collection of tax revenues using a case of KRA-Rift Valley region.

On KRA M-Service, McCluskey and Huang (2019) studied the role played by ICT in administration of taxes. Njenga (2017) sought to determine the role of mobile based county

collection systems in Kenya. Okiro (2015) sought to determine the effect of e-payment system on revenue collation by the Nairobi City County Government. Ndayisenga and Shukla (2016) looked at the effect of electronic tax management system of tax collection in Rwanda.

Eilu (2018) conducted a study on adoption of electronic fiscal devices and its influence on collection of VAT in Kenya and Tanzania. Muhammed and Tesafa (2015) carried out a study on electronic tax machines and their influence on compliance of VAT using a case of Ethiopia. Musonera, Siringi Elijah and Naibei (2013) did a study on ETRs and their interaction with VAT compliance in Kenya. Using a case of SMEs in Nakuru, Jo and Kibati (2017) sought to determine the factors that shape the implementation and usage of ETRs. Sagas, Nelimalyani and Kosgeikimaiyo (2015) looked at ETRs and their interaction with revenue collection in Kenya.

2.7 Research Gaps

Musyoka (2019) conducted a study on effect of tax reforms on voluntary tax compliance among small and medium enterprises in Kenya: a case of Nairobi County. Wasao (2014) examined the impact of online tax system on tax compliance among small taxpayers in East of Nairobi Tax District. Kipkemoi (2015) looked at i-tax system and service delivery by Kenya Revenue Authority, Nairobi stations. Mararia (2014) looked at the effect of integrated tax management system on tax compliance by small and medium sized enterprises in Nairobi central business district. All these studies were however conducted in Nairobi and not in Kisumu County hence a conceptual gap. Bett and Yudah (2017) studied the contribution of i-Tax System as a Strategy for Revenue Collection at Kenya Revenue Authority, Rift Valley Region, and Kenya. Kiring'a et al. (2017) looked at the impact of online tax filing on tax compliance among Small and Medium Enterprises (MSE) in Kibwezi Sub-County in Kenya. These studies were conducted in other counties different from Kisumu County and thus creating a contextual gap.

Lamensch and Ceci (2018) studied VAT fraud and noted that each year; the EU Member States lose billions of euros in VAT revenues on account of fraud. Podlipnik (2012) looked at missing trader intra-community and carousel VAT frauds. Vanhoeyveld et al. (2019) looked at value-added tax fraud detection with scalable anomaly detection techniques. Rahimikia et al. (2017) did a study on detection of corporate tax evasion using a hybrid intelligent system using a case study of Iran. Mwanza and Phiri (2016) did a study on fraud detection on bulk tax data using

business intelligence data mining tool using a case of Zambia revenue authority. Bogdanov et al. (2016) sought to determine how the Estonian Tax and Customs Board Evaluated a Tax Fraud Detection System Based on Secure Multi-party Computation (Short Paper). Raptis (2018) conducted a study on VAT and E-commerce: Halting Carousel E-Fraud. Pironet et al. (2009) studied the classification for fraud detection with social network analysis. None of these studies covered Kenya as a country but rather, they were conducted in other advanced countries like Iran hence creating a contextual gap. Other studies also largely focused on general tax as a whole and not specifically on VAT and hence a conceptual gap.

On KRA M-Service, McCluskey and Huang (2019) looked at the role of ICT in property tax administration with reference to Tanzania. Njenga (2017) carried out a study on mobile based County revenue collection system with key emphasis on Kenya. Okiro (2015) sought to determine the effect of e-payment system on revenue collation by the Nairobi City County Government. Ndayisenga and Shukla (2016) looked at the effect of electronic tax management system of tax collection in Rwanda. Some of these studies were conducted in other countries for instance Rwanda and Tanzania and not in Kenya. The Kenyan studies failed to specifically cover VAT compliance but only focused on other aspects.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter has information on the type of design to be adopted and the target population. The means of sampling, how data was gathered and analyzed are also discussed.

3.2 Research Design

Research design is a guide that determines how data is collected and analyzed in the study (Bell, Bryman & Harley, 2018). This study adopted a descriptive design. According to Bernard (2017), a descriptive design is important in describing the link between the study variables. It keeps the features of the phenomena in their natural state as when they occur. Through descriptive design, the study was able to determine the technological reforms put in place at KRA and how they have affected VAT compliance with reference firms operating in Kisumu.

3.3 Target Population

Rubin and Babbie (2016) says that population comprises of items that have common features which are greater interest to the study. It is important to properly chose and select the population so that it has all the features of the study. This way, it would be possible to minimize possible chances of biasness in the study. On the other hand, the target population is a sub set of the population where it is possible to generalize the results of the study (Patten & Newhart, 2017). The study targeted 370 managers and owners of medium sized firms in the service sector operating in Kisumu town as shown in Table 3.1.

Table 3.1: Target Population

	Population	Sample Proportion (%)
Managers	220	59.5
Owners	150	40.5
Total	**370**	**100.0**

Source: Kisumu County (2020)

3.4 Sampling Frame

It is in the sampling frame that a list of the items which cover all the population is provided. These items help in determining the selected sample in the study (Coolican, 2017). The

sampling frame for the study was a list of managers, supervisors and owners of the medium sized firms operating in the service sector Kisumu town.

3.5 Sampling and Sampling Technique

A sample is set of items that are representatively drawn from the rest of the population (Drake, Rancilio & Stafford, 2017). The rationale for sampling is to ensure that the population of the study is well represented (Quinlan, Babin, Carr & Griffin, 2019). The justification for sampling is to reduce the costs incurred in carrying out the study.

According to Litosseliti (2018), the two basic types of sampling designs are probability and non-probability sampling. Random selection is a key concept as far as probability sampling is concerned unlike non- probability sampling (Walliman, (2017). The study used the following formula by Kothari (2004) to determine the sample size;

$$n = \frac{z^2 . N . \partial_p^2}{(N - 1)e^2 + z^2 \partial_p^2}$$

n = $\frac{1.96^2 * 370 * 0.5^2}{(370-1)0.05^2 + 1.96^2 * 0.5^2}$

=355.348/ (0.9225+0.9604)

=355.348/1.8829

n=188 respondents

Where; n=Size of the sample

N=Size of the population and given as 370

e= Acceptable error given as 0.05

$\partial^2 \hat{p}$= the standard deviation of the population and given as 0.5 where not known

Z= standard variation at a confidence level given as 1.96 at 95% confidence level.

This study used stratified random sampling method where respondents were stratified into respective job categories and classifications as managers and owners. The distribution of the sample size of the respondents is shown in Table 3.2.

Table 3.2: Sample Size

	Population	Sample Proportion (%)	Sample Size
Managers	220	59.5	112
Owners	150	40.5	76
Total	**370**	**100.0**	**188**

Source: Kisumu County (2020)

3.6 Data Collection Procedure

Permission for gathering of the views of the respondents was sought from J-KUAT. The officials from Kisumu County government were also notified in advance as it regarded the intended study. It was also important to apply for a research permit from the National Commission for Science Technology and Innovation (NACOSTI). An average of three research assistant were engaged in gathering of the information from respondents.

3.7 Data Collection Instruments

The method of data collection involves questionnaire, interviews and observation. Questionnaires method is that comprises of items that aim at gathering the required information by the study (Yin, 2015). The use of questionnaires as study tools enables the study to gather a large amount of information from the respondents within a limited time horizon. Information for the study was gathered with the aid of questionnaires as tools. Questionnaires were structured to ease the process of analysis. There are several advantages associated with the use of questionnaire in data collection. The questionnaire was divided into six sections. The first section covered the general information on respondents while the subsequent sections had information on the dependent and the independent variables of the study. Some of the items on the questionnaires were structured on a five point Likert scale where 1=strongly disagree and 5=strongly agree.

Mugenda and Mugenda (2004) argue that questionnaires have the ability to gather a large amount of information from respondents within a limited time frame. Furthermore, questionnaires having structured questions make it easy for respondents to fill since the responses are fixed thus saving time. Questionnaires, especially when they are structured restrict the views and responses of the respondents in the study. The other disadvantage of

questionnaires is that they are only relevant to respondents who can read and write and thus not suitable to people who are physically impaired unless a translator is available.

3.8 Pilot Testing

Berger (2018) stated that a good measuring instrument needs to be pre-tested in the effort to ensure that they are efficient. Jackson (2015) stated that pre- testing tools assist the researcher to examine the competence of the instrument. According to Johnson, Reynolds and Mycoff (2015), a sample of 1% all through to 10% can be utilized as far as pilot testing of the study tools is concerned. For this reason, a pre-test was carried out by the researcher administering the questionnaire. A total of 10 respondents were used for piloting the research instruments. It was ideal to ensure that respondents taking part in pre testing are completely excluded from the sampled respondents.

3.8.1 Validity of the Study Instrument

The instruments of the study are deemed to be valid when they are in position to measure what they are designed to indicate (McCusker & Gunaydin, 2015). It is the degree of representation of the actual and desired contents on the study tools (Howitt, 2016). The supervisor shall be engaged in review of the study tools to ensure that they are as valid as possible.

The study used content and construct validity to ensure that the instruments of the study are valid. For content validity, the study engaged the supervisor who reviewed the questionnaire to ensure that the contents are aligned with the overall objectives and topic. For construct validity, the items on the questionnaires were reviewed to ensure that they measure the underlying constructs indicated in the conceptual framework.

3.8.2 Reliability of Study Instrument

The study instruments are said to be reliable when they give consistent results during their measurement (Creswell & Clark, 2017). In this study, the researcher used a well-defined and clear questionnaire as a data collection method. On measuring reliability, a Cronbach alpha was used with 0.7 being the threshold for decision making.

3.9 Data Analysis and Presentation

Mugenda (2008) define data analysis as a procedure of bring order, meaning and structure to mass information. It is the estimation of parameters that are not known with the aim of drawing inferences in a study (Howitt, 2016). Data analysis looks at how the questionnaires are scored and analysed (Yin, 2017). The gathered information shall undergo analysis with aid of SPSS tool. Descriptive and inferential statistics guided the entire process of analysis. Regression analysis was useful in achieving objective number three which was to establish relationship between technological tax reforms and VAT compliance as well as the specific objectives. Linear regression was used on the specific variables while the multiple regressions covered the three variables. The regression model to be adopted took the following form;

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

Whereby

Y = VAT Compliance

X_1 = Electronic Tax Registers

X_2= I-Tax System

X_3= KRA M-Service

$\boldsymbol{\varepsilon}$ = Error Term

β_0= Constant

β_1….. β_n= beta coefficients

3.9.1 Diagnostic Tests

To test for regression assumption, the researcher carried out diagnostic tests including multicollinearity, normality and heteroscedasticity. To test for multicollinearity, Variance of Inflation Factor (VIF) was used. Values of VIF that are between 1-10 showed that there is no multicollinearity in the data set. Normality was tested using Skewness and Kurtosis and the threshold was given as – or +3 9Kothari, 2004). For heteroscedasticity test, the study used Scatter plots. In this case, data points that are spread with no clear pattern implied absence of heteroscedasticity in the data set.

3.9.2 Operationalization of the Variables

Table 3.3 details information on how the variables of the study were operationalized:

Table 3.3: Operationalization of the Variables

Objective	Variable	Scale	Indicators
To establish the effect of electronic tax registers on value added tax compliance among medium sized firms in Kisumu town, Kenya	Independent electronic tax registers	• Nominal scale • Ordinal scale	• Sales receipts • Electronic Auditing •
To determine the effect of integrated tax (i-tax) system on value added tax compliance among medium sized firms in Kisumu town, Kenya	Independent integrated tax (i-tax) system	• Nominal scale • Ordinal scale	• Electronic tax registration, filling & payment • Electronic Tax Registers (ETR) • Value Added Tax Auto-Assessment system (VAA)
To assess the effect of KRA M-Service on value added tax compliance among medium sized firms in Kisumu town, Kenya	Independent KRA M-Service	• Nominal scale • Ordinal scale	• Mpesa Pay Bill No. & E-slip No. • Verification of Payment details • KRA Feedback
Value added tax compliance among medium sized firms in Kisumu town, Kenya	Dependent value added tax compliance	• Nominal scale • Ordinal scale	• Filling of VAT returns • Declaration of VAT • Payment of VAT

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the results of analysis on data that was gathered from primary sources. The collected data was cleaned before being entered into SPSS tool in readiness for analysis. The analysis is divided into sections starting with the general information, the information on the variables of the study and the inferential statistics given by regression analysis. The presentation of the results was done using tables and figures.

4.1.1 Response Rate

A total of 188 questionnaires were issued out to respondents of the study, from which 137 were completely filled and returned to the researcher. This was same as a response rate of 73% as presented in Figure 4.1.

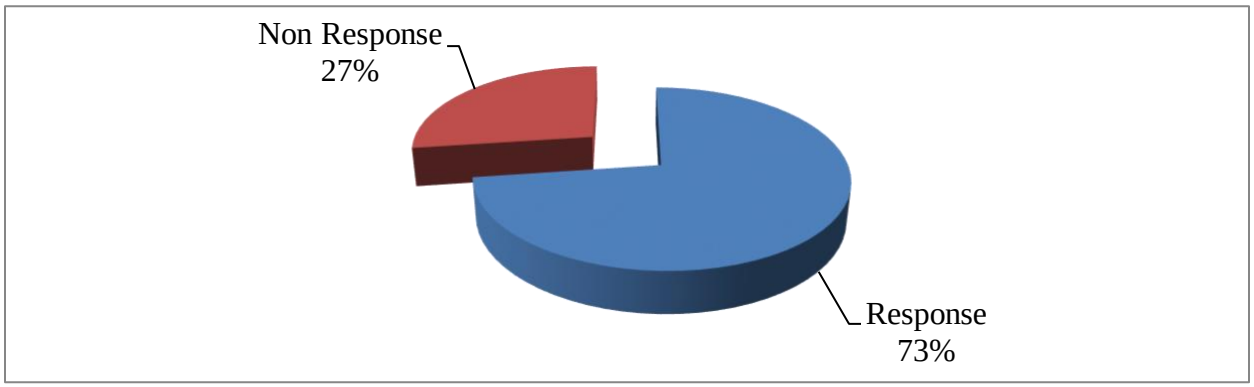


Figure 4.1: Response Rate

The above response rate was satisfactory and was consistent with Yin (2017) who recommended an above 70% response rate as excellent for analysis and presentation of results in a study.

4.1.2 Validity and Reliability Results

The researcher piloted the study instruments to ensure that they were valid and reliable. For the purpose of determining validity of the instruments, the supervisor was engaged in reviewing the items on the instruments to ensure they covered adequate contents in line with the provided

constructs in the conceptual framework. Once this review of the instruments of the study has been done, all the invalid items were deleted from the study instruments.

In order to determine reliability of the instruments of the study, the researcher computed the values of Cronbach Alpha Coefficients using the questionnaires that were piloted. The results are as presented in Table 4.1.

Table 4.1: Reliability Results

Variable	Number of Items	Cronbach Alpha Coefficient (α)	Remark
ETRs	6	.779	α >0.7 thus reliable
I-Tax	6	.765	α >0.7 thus reliable
KRA M-Service	8	.834	α >0.7 thus reliable
VAT Compliance	4	.843	α >0.7 thus reliable

From Table 4.1, all the items had Cronbach Alpha coefficient above 0.7; thus the scale used was reliable. This is in line with Creswell and Clark (2017) who gave 0.7 as a threshold of determining whether the instruments are reliable.

4.2 General Information

The study sought to gather the general information about the respondents and the firms that were covered as presented in subsequent sections.

4.2.1 General Information on Respondents

The general information of the respondents of the study covered their gender categories and the highest level of education. Figure 4.2 gives the results of the distribution of gender of the respondents.

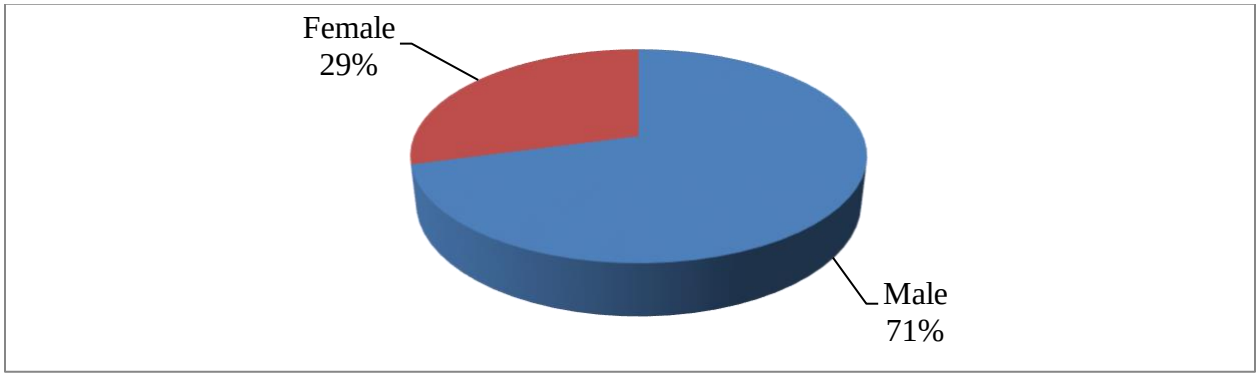


Figure 4.2: Gender Categories

From Figure 4.2, majority of the respondents (71%) were male while 29% were female. Thus, in as far as more male than female took part in the study; there was diversity since all the gender categories were involved in the study. Thus, representative findings were sought from these respondents. The results of the highest level of education of the respondents of the study are summarized in Figure 4.3

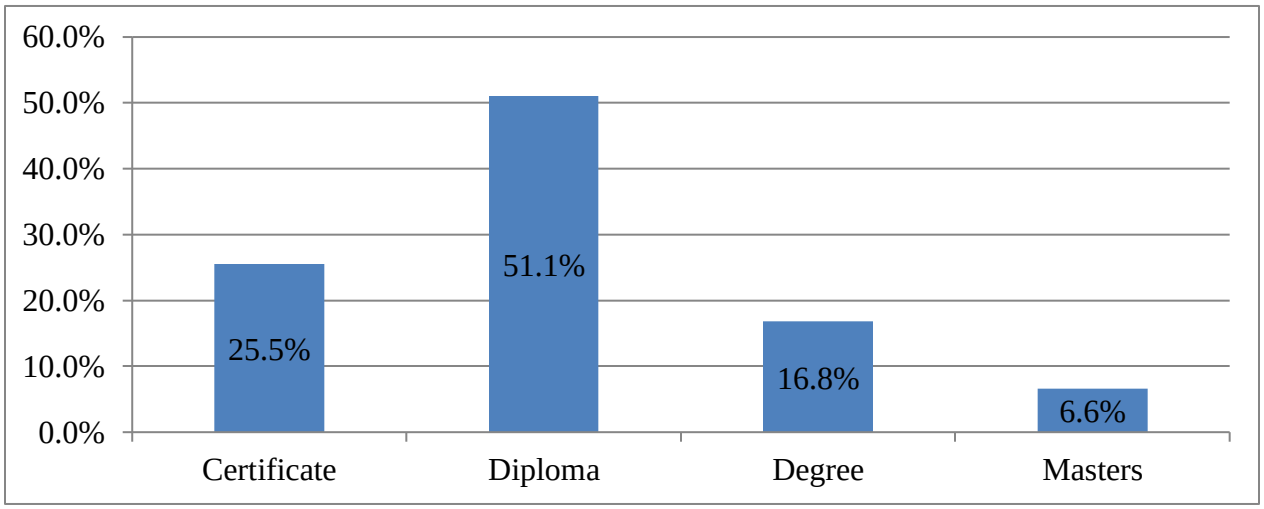


Figure 4.3: Level of Education

As indicated in Figure 4.3, 51.1% of the respondents had diplomas, 25.5% had certificates, 16.8% had degrees and 6.6% had masters' degrees. Thus, respondents who took part in the study were generally learnt and therefore understood the research questions as sought by the study.

4.2.2 General Information on the Firms

Besides the general information on the respondents, the study further sought to understand the general information of the firms that were covered. The result in Table 4.2 is on the number of years that the studied firms had been in existance.

Table 4.2: Years of Organizational Existance

	Frequency	Percentage
1- 5 years	33	24.1
5-10 years	73	53.3
10-15 years	25	18.2
above 15 years	6	4.4
Total	**137**	**100.0**

From Table 4.2, majority of the studied firms (53.3%) had been in operations for 5-10 years, 24.1% for 1-5 years, 18.2% for 10-15 years and 4.4% for over 15 years. This means that the studied firms had operated for a longer period of time and thus qualified for VAT registration and tax purpose.

The study sought to determine the average number of employees in the respective firms that were covered. The results are as summarized in Figure 4.4.

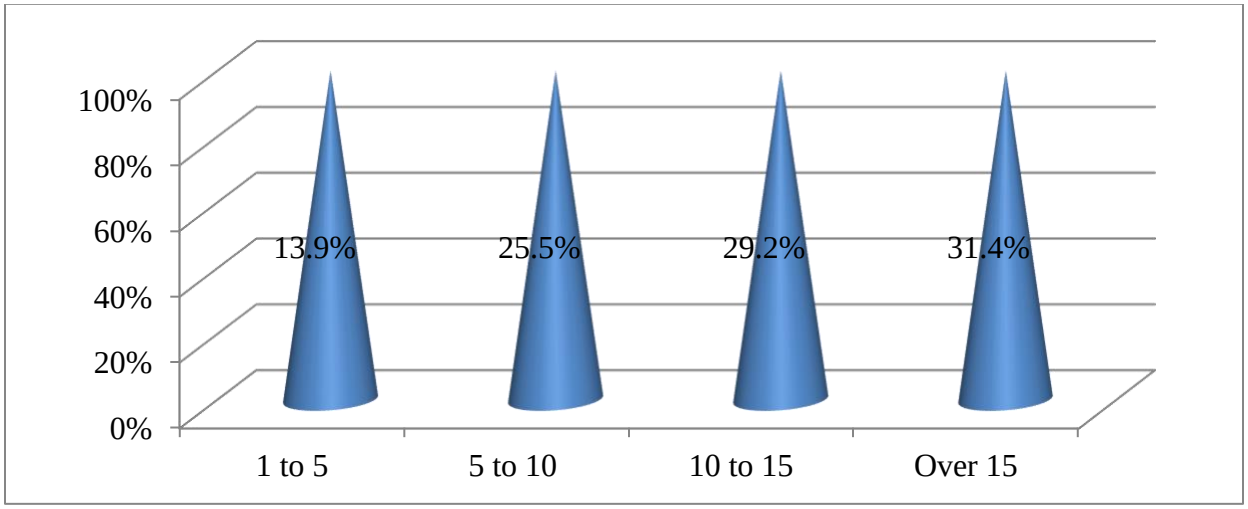


Figure 4.4: Number of Employees

As shown in Figure 4.4, majority of the firms (31.4%) had over 15 employees, 29.2% had 10-15 employees, 25.5% had 5-10 employees and 13.9% had 1-5 employees. When asked on the average amount of revenues that these firms generated, majority of the respondents said that per year, their firms generated revenue of over Kshs.6 million. This is consistent with the threshold provided by KRA of above Kshs. 5 million for firms seeking to register for VAT tax purpose (KRA, 2014).

4.3 Descriptive Statistics on Variables of the Study

The study used means and standard deviations as descriptive statistics to describe the variables as shown in subsequent sections.

4.3.1 Electronic Tax Registers

Table 4.3 is a summary of the results of descriptive statistics on electronic tax registers as another variable of the study.

Table 4.3: Electronic Tax Registers

Statement	Mean	Std. Dev
I know that this firm utilizes ETRs to print sales receipts	4.05	.866
I know that ETRs have improved the time taken to print sales receipts in this firm	3.79	.783
ETRs have helped this firm to keep records of sales electronically	3.76	.809
This firm keeps a large record of information on sales generated by ETRs	3.78	.791
The electronic information on sales generated by ETRs is used to facilitate electronic auditing in this firm	3.60	.767
ETRs provide a an audit trail for carrying out electronic auditing in this firm	3.66	.783
Overall Score	**3.77**	**.800**

As shown in Table 4.3, most of the respondents agreed (M=4.05, SD=0.866) that they knew know that their firm utilized ETRs to print sales receipts. Respondents of the study had knowledge that ETRs had improved the time taken to print sales receipts in their firm (M=3.79, SD=0.783). Respondents also agreed that their firm kept a large record of information on sales generated by ETRs (M=3.78, SD=0.791). Respondents agreed that ETRs had helped their firm to keep records of sales electronically (M=3.76, SD=0.809). Respondents of the study agreed that ETRs provided an audit trail for carrying out electronic auditing in their firm (M=3.66, SD=0.783). The study revealed that electronic information on sales generated by ETRs was used to facilitate electronic auditing in the firm (M=3.60, SD=0.767). The study sought to determine other ways through which ETRs affected VAT compliance. From the responses, the study noted that ETRs enhanced the speed at which VAT returns of the studied firms could be processed.

4.3.2 Integrated Tax System

Table 4.4 gives the results of means and standard deviations on i-tax system as a variable of the study.

Table 4.4: Integrated Tax System

Statement	Mean	Std. Dev
The firm is registered with KRA for VAT purpose	3.97	.904
I file the VAT returns for this firm electronically	3.91	.890
The firm pays the VAT due electronically	3.95	.947
I have knowledge that any discrepancies on VAT returns filed by the firm are detected by the VAA system	3.63	.760
I know that the firm receives email communication of any inconsistencies in the VAT returns filed	3.64	.757
I know that persistent failure to amend the raised auto assessment of the discrepancies on VAT returns may result into KRA debt enforcement	3.73	.675
Overall Score	**3.81**	**.822**

From the results in Table 4.4, respondents agreed (M=3.97, SD=0.904) that their firm was registered with KRA for VAT purpose. Respondents agreed (M=3.95, SD=0.947) that their firm paid the VAT due electronically besides filing their VAT returns electronically (M=3.91, SD=0.890). Respondents further agreed (M=3.73, SD=0.675) that they knew that persistent failure to amend the raised auto assessment of the discrepancies on VAT returns may result into KRA debt enforcement. Respondents agreed (M=3.64, SD=0.757) that they knew that the firm received email communication of any inconsistencies in the VAT returns filed besides having knowledge that knowledge that any discrepancies on VAT returns filed by the firm were detected by the VAA system (M=3.63, SD=0.760). The study sought further to determine other ways through which i-tax affected VAT compliance in the studied firms. From the results, respondents shared that i-tax had reduced the cost of compliance; it was convenient for the tax payers to file their tax returns anytime without necessarily visiting KRA offices to queue unlike in the past.

4.3.3 KRA M-Service

The results of KRA M-service as another variable of the study are summarized in Table 4.5.

Table 4.5: KRA M-Service

Statement	Mean	Std. Dev
I know that our firm pays VAT through the Mpesa pay bill number 572572	3.86	.783
Payment of VAT through Mpesa pay bill number 572572 is convenient	3.61	.947
I know that our firm uses an E-slip number obtained from i-tax as an account number during payment of VAT	3.77	.928
I am aware that the firm reviews the payment details before paying the VAT due using the mobile phone	3.63	.828
Review of the payment details helps to ensure that correct amount of VAT is paid by the firm	3.67	.825
The review of payment details ensures that accurate details of the business have been reflected	3.75	.654
I know that the firm receives a real time feedback from KRA confirming the amount of VAT paid	3.62	.627
We are only assured that VAT paid has been received when we receive the feedback from KRA	3.64	.841
Overall Score	**3.69**	**0.804**

From the results in Table 4.5, most of the respondents shared that they knew that their firm paid VAT through the Mpesa pay bill number 572572 (M=3.86, SD=0.783). Respondents also agreed (M=3.77, SD=0.928) that they knew that their firm used an E-slip number obtained from i-tax as

an account number during payment of VAT. Respondents agreed that the review of payment details ensured that accurate details of the business have been reflected (M=3.75, SD=0.654). Respondents also agreed (M=3.67, SD=0.825) that review of the payment details helped to ensure that correct amount of VAT was paid by the firm. Most of the respondents said that they were only assured that VAT paid had been received when they received the feedback from KRA (M=3.64, SD=0.841). Respondents were aware that their firm reviewed the payment details before paying the VAT due using the mobile phone (M=3.63, SD=0.828). Most of the respondents knew that the firm received a real time feedback from KRA confirming the amount of VAT paid (M=3.62, SD=0.627). Respondents further indicated that payment of VAT through Mpesa pay bill number 572572 was convenient (M=3.61, SD=0.947). Respondents of the study were further asked to indicate other ways that KRA M-Service had affected VAT compliance in their firm. From the responses, it was established that KRA M-service was flexible and convenient since the firm could pay the tax at any time anywhere.

4.3.4 VAT Compliance

The results on VAT Compliance as a dependent variable of the study are indicated in Table 4.6.

Table 4.6: VAT Compliance

Statement	Mean	Std. Dev
I know that our accountant files the VAT returns	3.97	.675
The firm files VAT returns to remain complaint	3.76	.917
I ensure that correct amount of VAT is declared on VAT returns	3.86	.674
The firm pays VAT to avoid legal enforcement	3.83	.887
Overall Score	**3.86**	**.788**

From Table 4.6, respondents agreed that their accountant filed the VAT returns (M=3.97, SD=0.675). Respondents also agreed that correct amount of VAT was declared on VAT returns (M=3.86, SD=0.674). Respondents also agreed (M=3.83, SD=0.887) that their firm paid VAT to avoid legal enforcement. The study established that the firms filed VAT returns to remain complaint (M=3.76, SD=0.917).

4.4 Diagnostic Tests

The study conducted diagnostic tests to test the suitability of the data set and ensure that it is in line with the assumptions of regression analysis. The specific diagnostic tests that were conducted include multicollinearity, normality and heteroscedasticity.

4.4.1 Multicollinearity Test

Multicollinearity test was conducted to ensure that none of the variables of the study were highly correlated with each other. This was conducted using Variance of Inflation Factor (VIF) and the results are as summarized in Table 4.7.

Table 4.7: Multicollinearity Test

	Collinearity Statistics	
	Tolerance	**VIF**
I-tax System	.291	3.436
KRA M-Service	.396	2.525
ETRs	.364	2.747
Overall Statistic		

a. Dependent Variable: VAT Compliance

From the results in Table 4.7, all the variables had VIF values being less than 3.5. The respective values of tolerance are less than 1. The threshold provided is that VIF within 1-10 indicate absence of multicollinearity hence the data was suitable for regression analysis.

4.4.2 Normality Test

The study conducted normality test so as to determine whether the data set was normally distributed. The study used the values of Skewness and Kurtosis in testing for normality and the results are presented in Table 4.8.

Table 4.8: Normality Test

	N	Skewness		Kurtosis	
	Statistic	**Statistic**	**Std. Error**	**Statistic**	**Std. Error**
I-tax System	137	-.030	.207	-1.148	.411
KRA M-Service	137	-1.193	.207	-.198	.411
ETRs	137	-.761	.207	-.595	.411
VAT Compliance	137	.119	.207	-1.684	.411
Overall Statistic	**137**	**-.466**	**.207**	**-.906**	**.411**

From Table 4.8, all the values of skewness and kurtosis were less than 2; Kothari (2004) provides that kurtosis and skeweness values less than + or -3 indicate that the data set is normally distributed. It can therefore be deduced that the data set of the study was normally distributed.

4.4.3 Heteroscedasticity Test

The study used scatter plots to test for heteroscedasticity and the results are summarized in Figure 4.5.

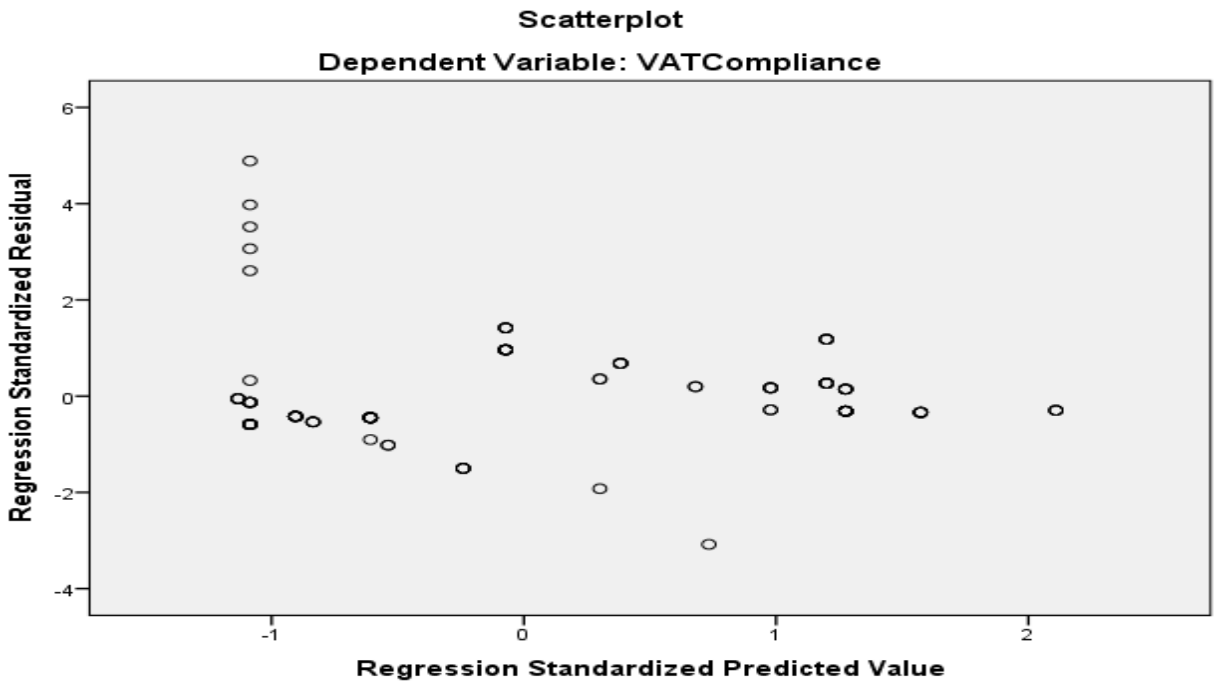


Figure 4.5: Scatter Plots

As indicated in Figure 4.5, the data points are widely spread with no clearly established pattern. This could be an indication that there was no heteroscedasticity in the data set and thus suitable for regression analysis.

4.5 Linear Regression Results

In order to achieve the formulated objectives, the study conducted linear regression analysis and the results are summarized in subsequent sections.

4.5.1 Electronic Tax Registers and VAT Compliance

The third objective of the study was to determine the effect of ETR on VAT compliance. Hence, ETR was regressed against VAT compliance and the results of the model summary are shown in Table 4.9.

Table 4.9: Model Summary of ETR

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.715[a]	.512	.508	2.92059

a. Predictors: (Constant), ETRs

The results in Table 4.9 indicate the value of R square as 0.512; this implies that 51.2% change in VAT compliance is explained by ETR. Table 4.10 gives the results of the ANOVA.

Table 4.10: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1207.550	1	1207.550	141.568	.000[b]
Residual	1151.530	135	8.530		
Total	**2359.080**	**136**			

a. Dependent Variable: VAT Compliance
b. Predictors: (Constant), ETRs

From the results in Table 4.10, the value of F calculated is taken as 141.568; this implies that the overall model of the study was significant. The results of the regression coefficients are shown in Table 4.11.

Table 4.11: Beta Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	7.518	2.168		3.467	.001
ETRs	1.011	.085	.715	11.898	.000

a. Dependent Variable: VAT Compliance

The results in Table 4.11 bring about the following modeled equation:

$Y=7.518+1.011X_3+e$……………………………………………………………………………(iii)

Where Y=VAT Compliance, X_3= ETR and e =error term

From the results, it can be inferred that when all the variables of the study are held constant, VAT compliance would be at 7.518. A unit change in ETR other factors kept constant would result into 1.011 change in VAT compliance. At 5%, the study established that ETR ($p<0.05$) has significant effect on VAT compliance. The results are consistent with Muhammed and Tesafa (2015) who noted that the use of ETRs is related with increased tax compliance. Musonera et al. (2013) indicated that regular and effective use of ETRs is linked with compliance with VAT. Jo and Kibati (2017) suggested that submitting tax returns online reduces the costs of manual filling and it was affordable for firms to acquire as well as install ETRs.

4.5.2 I-Tax System and VAT Compliance

The first objective of the study was to determine the effect of i-tax system on VAT compliance. To achieve this objective, the researcher regressed i-tax system against VAT compliance and the results of the model summary are shown in Table 4.12.

Table 4.12: Model Summary of I-tax

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.780[a]	.609	.606	2.61370

a. Predictors: (Constant), I-tax System

From Table 4.12, the value of R square is 0.609; this means that 60.9% variation in VAT compliance is individually explained by i-tax system. The results of the analysis of variance (ANOVA) are summarized in Table 4.13.

Table 4.13: Analysis of Variance on I-Tax System

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1436.841	1	1436.841	210.329	.000[b]
Residual	922.240	135	6.831		
Total	**2359.080**	**136**			

a. Dependent Variable: VAT Compliance
b. Predictors: (Constant), I-tax System

From the results in Table 4.13, the value of F calculated is recorded as 210.329 which is large enough to infer that the overall model of the study was significant. Table 4.14 gives the results on beta coefficient and p-values.

Table 4. 14: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	7.289	1.797		4.057	.000
I-tax System	1.179	.081	.780	14.503	.000

a. Dependent Variable: VAT Compliance

From Table 4.14, the following equation is established:

$Y=7.289+1.179X_1+e$……(i)

Where Y=VAT Compliance, X_1=I-Tax System and e =error term

Thus, when all the variables are relaxed, VAT compliance among medium sized firms in Kisumu would be at 7.289. A unit change in i-tax system other factors relaxed would bring about 1.179 increase in VAT compliance. At 5%, the study noted that i-tax system ($p<0.05$) has significant effect on VAT compliance. The results are consistent with Wasao (2014) who indicated that online registration, filling and payment all have direct influence on compliance behavior of the tax payers. Barako (2015) said that i-tax resulted into simple and streamlined processes for payment and collection of taxes. Bett and Yudah (2017) indicated that that tax payer registration, online tax system and electronic payment of taxes influence revenue collection.

4.5.3 KRA M-Service and VAT Compliance

The second objective of the study was to determine the effect of KRA M-service on VAT compliance. In achieving this objective, the study regressed KRA M-service against VAT compliance and the results of the model summary are as shown in Table 4.15.

Table 4.15: Model Summary of KRA M-Service

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.569[a]	.324	.319	3.43661

a. Predictors: (Constant), KRA M-Service

From the findings in Table 4.15, the value of R square is 0.324; this means that 32.4% change in VAT compliance is individually explained by KRA M-service. Consider Table 4.16 giving the ANOVA results.

Table 4.16: ANOVA for KRA M-Service

	Sum of Squares	df	Mean Square	F	Sig.
Regression	764.693	1	764.693	64.748	.000[b]
Residual	1594.387	135	11.810		
Total	**2359.080**	**136**			

a. Dependent Variable: VAT Compliance
b. Predictors: (Constant), KRA M-Service

As indicated in Table 4.16, the value of F calculated is 64.748; this means that overall regression model of the study was significant. Table 4.17 gives the results of the beta coefficients and the p-values.

Table 4.17: Beta Coefficients for KRA M-Service

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	18.446	1.850		9.969	.000
KRA M-Service	.676	.084	.569	8.047	.000

a. Dependent Variable: VAT Compliance

From Table 4.17, the equation below is formulated:

$Y=18.446+.676X_2+e$……(ii)

Where Y=VAT Compliance, X_2= KRA M-Service and e =error term

Therefore, all variables held constant, VAT compliance among medium sized firms in Kisumu would be at 18.446. A unit change in KRA M-service holding other things constant would bring about 0.676 unit change in VAT compliance. At 5%, it was shown that KRA M-service ($p<0.05$)

has significant effect on VAT compliance. The results are consistent with McCluskey and Huang (2019) who noted that most tax systems around the world operate manual and paper based platform particularly for property taxation. This has resulted into tax revenue leakages due to untimely collections, low collections as well as opportunities for corruption. Okiro (2015) concluded that e-payment system have postive and significant link with collection of tax revenues.

4.6 Multiple Regression Results

The overall objective of the study was to determine the effect of technological tax reforms on VAT compliance. Technological tax reforms were operationalized into i-tax system, KRA M-service and Electronic tax registers. Thus, these three sub-variables were regressed against VAT tax compliance. The findings of the model summary are indicated in Table 4.18.

Table 4.18: Overall Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.854[a]	.729	.723	2.19216

a. Predictors: (Constant), ETRs, I-tax System, KRA M-Service

From the results in Table 4.18, the overall value of R square is 0.729; it means that 72.9% change in VAT compliance is jointly explained by variation in ETR, i-tax system and KRA M-service.

Table 4.19: Overall ANOVA Table

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1719.943	3	573.314	119.303	.000[b]
Residual	639.137	133	4.806		
Total	**2359.080**	**136**			

a. Dependent Variable: VAT Compliance
b. Predictors: (Constant), ETRs, I tax System, KRA M-Service

From Table 4.19, the value of F calculated is 119.303; this means that the overall regression model of the study was significant. The results of the regression beta coefficients and the p-values are summarized in Table 4.20.

Table 4.20: Overall Beta Coefficients and Significance

	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	2.197	2.023		1.086	.279
ETRs	1.618	.251	1.144	6.439	.000
I tax System	1.058	.160	.700	6.602	.000
KRA M-Service	1.328	.173	1.118	7.660	.000

a. Dependent Variable: VAT Compliance

From Table 4.20, the following regression equation is formulated:

$$\mathbf{Y = 2.197 + 1.618X_1 + 1.058X_2 + 1.328X_3 + \varepsilon}$$

Whereby

Y = VAT Compliance

$\mathbf{X_1}$ = Electronic Tax Registers

$\mathbf{X_2}$= I-Tax System

$\mathbf{X_3}$= KRA M-Service

Therefore, holding other factors constant, VAT compliance among medium sized firms in Kisumu would be at 2.197. A unit change in electronic tax registers holding other factors constant would result into 1.618 change in VAT compliance. A unit changes in i-tax system other factors kept constant would result into 1.058 increase in VAT compliance. A unit change in KRA M-Service other factors kept constant would lead to 1.328 change in VAT compliance.

At 5%, electronic tax registers ($p<0.05$) had significant effect on VAT compliance. Sagas et al. (2015) noted that ETRs have played a role as far as curbing of tax evasion is concerned. The efficiency of the ETRs has also helped in increasing the amount of revenues collected. The study established that i-tax system ($p<0.05$) has significant effect on VAT compliance. Kiring'a et al. (2017) noted negative link between online filing and compliance. Mararia (2014) showed that adoption of integrated tax management system resulted into an improvement in tax compliance. Malonza (2016) noted that the use of i-tax results into increased tax compliance among the tax payers. KRA M-service ($p<0.05$) has significant effect on VAT compliance. Ndayisenga and Shukla (2016) noted that mobile payment has significant effect on timely

payment while reducing the operational costs. They are also convenient as customers can pay from any physical location.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the findings of the study with conclusion and recommendations. This is done in line with the formulated objectives of the study. The areas that require further research are also pointed out in this chapter.

5.2 Summary of the Findings

5.2.1 Electronic Tax Registers and VAT Compliance

The section is set out to present a summary of the findings of the study as informed by the specific objectives. The first objective of the study was to determine the effect of electronic tax registers on VAT compliance. The study noted that electronic tax registers have significant effect on VAT compliance. Most of the respondents that they knew know that their firm utilized ETRs to print sales receipts. Respondents of the study had knowledge that ETRs had improved the time taken to print sales receipts in their firm. Respondents also agreed that their firm kept a large record of information on sales generated by ETRs. Respondents agreed that ETRs had helped their firm to keep records of sales electronically. Respondents of the study agreed that ETRs provided an audit trail for carrying out electronic auditing in their firm. The study revealed that electronic information on sales generated by ETRs was used to facilitate electronic auditing in the firm.

5.2.2 I-Tax System and VAT Compliance

The second specific objective sought to determine the effect of i-tax system on VAT compliance. From the results, the study noted that i-tax system has significant effect on VAT compliance. Respondents shared that their firm was registered with KRA for VAT purpose. Most of the firms paid the VAT due electronically besides filing their VAT returns electronically. Respondents further agreed that they knew that persistent failure to amend the raised auto assessment of the discrepancies on VAT returns may result into KRA debt enforcement. Respondents agreed that they knew that the firm received email communication of any inconsistencies in the VAT returns

filed besides having knowledge that knowledge that any discrepancies on VAT returns filed by the firm were detected by the VAA system.

5.2.3 KRA M-service on VAT Compliance

The last objective of the study was to determine the effect of KRA M-service on VAT compliance. From the results, it was shown that KRA M-service has significant effect on VAT compliance. Most of the respondents shared that they knew that their firm paid VAT through the Mpesa pay bill number 572572. Respondents also agreed that they knew that their firm used an E-slip number obtained from i-tax as an account number during payment of VAT. Respondents agreed that the review of payment details ensured that accurate details of the business have been reflected. Respondents also agreed that review of the payment details helped to ensure that correct amount of VAT was paid by the firm. Most of the respondents said that they were only assured that VAT paid had been received when they received the feedback from KRA. Respondents were aware that their firm reviewed the payment details before paying the VAT due using the mobile phone. Most of the respondents knew that the firm received a real time feedback from KRA confirming the amount of VAT paid. Respondents further indicated that payment of VAT through Mpesa pay bill number 572572 was convenient.

5.3 Conclusion

The study indicated that ETR had a postive beta coefficient with p-value lower than 0.05. On the basis of this result, the study concludes that ETR has postive and significant effect on VAT compliance. Through ETRs, firms are able to print sales receipt and store information on sales electronically. ETRs also provide audit trail for carrying out electronic auditing in most firms.

The study established that i-tax system had a postive beta coefficient with p-value less than 0.05. Based on this finding, the study concludes that i-tax system has a direct and significant effect on VAT compliance. Through i-tax system, firms are able register with KRA for VAT tax purpose, pay and file tax returns electronically. VAA system is a component of i-tax that has significantly contributed to VAT compliance through detection and communication of inconsistencies on the VAT returns decaled.

The results of the study indicated that KRA M-service had a postive beta coefficient with p-value less than 0.05. In view of this result, the study concludes that KRA M-service has postive and significant effect on VAT compliance. KRA M-service is a payment platform that allows tax payers to pay their tax obligations through avenues like MPesa Pay bill numbers. KRA M-service gives E-slip numbers that are used as account numbers by the tax payers when paying their tax dues. KRA M-service also allows the tax payers to review the payment details for accuracy.

5.4 Recommendations of the Study

There is need for enhancement of ETRs to allow real time and online transmission of transaction data from firms to KRA system by speeding up the implementation of Tax Invoice Management System (TIMS). This will reduce the errors encountered while filing VAT returns by firms.

The study recommends that the i-tax system needs to be configured so that medium sized firms are able to upload data directly from their systems to the i-tax. This will reduce the time wasted by firms in computing data which is then uploaded to the KRA system and thus compliance. Although firms are able to file their returns electronically through the i-tax system, they however need print the financial statements and then type the same into the i-tax system.

The results of regression analysis showed that KRA M-service had significant effect on VAT collection. Based on this finding, the study recommends that there is need to bring in other network operators apart from Safaricom Mpesa in the KRA M-service. The other network operators include Airtel and Telecom Kenya besides Equitel, a product by Equity Bank Group. The charges of paying VAT through mobile phones should be reduced to allow more firms to pay their VAT dues using KRA M-services.

5.5 Limitations of the Study

The study relied on primary data as gathered with aid of the questionnaires. The limitation of use of primary data is that gathering of information shall only be limited to employees who shall present in the firms at the time of data collection. This shows that respondents who had left the organizations at the time of gathering of information did not have a chance to take part in the study. The other limitation is that respondents were too busy with their day to day activities and

thus making it too hard to gather data in a single day. During gathering of the data, the respondents had fear given the fact that information to be gathered may be so sensitive. To overcome these challenges, the study provided assurance to respondents that all i9nformation shared was to be used for academic purpose only.

5.6 Areas for Further Research

The current study looked at technological tax reforms and VAT compliance. Future studies should focus on other reforms for instance policy and administrative reforms and their effect on other tax heads like PAYE or corporate taxes. Future studies should be done in other firms away from medium sized business and apart from Kisumu County.

REFERENCES

Alm, J., Martinez-Vazquez, J., & Rider, M. (Eds.). (2005). *The challenges of tax reform in a global economy*. Springer Science & Business Media.

Amaglobeli, M. D., Jaramillo, L., Karnane, P., & Zdzienicka, M. A. (2019). *Tax reforms and fiscal shock smoothing*. International Monetary Fund.

Bernardi, Luigi and Gandullia, Luca and Fumagalli, Laura (2005): *Tax systems and tax reforms in south and east Asia: Overview of tax systems and main policy issues.* Published in: Bernardi L., Fraschini A. Shome P. (Eds) Tax Systems and Tax Reforms in South and East Asia - London, Routledge 2006 : pp. 3-35.

Bett, B. K., & Yudah, O. A. (2017). Contribution of i-tax system as a strategy for revenue collection at Kenya Revenue Authority, Rift Valley Region, Kenya. *International Journal of Scientific and Research Publications*, *7*(9), 389-396.

Bird, R. M., & Zolt, E. M. (2008). Technology and taxation in developing countries: from hand to mouse. *National Tax Journal*, 791-821.

Bogdanov, D., Jõemets, M., Siim, S., & Vaht, M. (2016). How the Estonian Tax and customs board evaluated a tax fraud detection system based on secure multi-party computation (Short Paper).

Carnahan, M. (2015). Taxation challenges in developing countries. *Asia & the Pacific Policy Studies*, *2*(1), 169-182.

Chetty, S., & Holm, D. B. (2000). Internationalization of small to medium-sized manufacturing firms: a network approach. *International business review*, 9(1), 77-93.

Chikozho, C. (2018). Illicit transfers and tax reforms in South Africa: Mapping of the literature and synthesis of the evidence.

Christofzik, D. I., & Elstner, S. (2018). *International spillover effects of US tax reforms: Evidence from Germany* (No. 08/2018). Arbeitspapier, Sachverständigenrat zur Begutachtung der Gesamtwirtschaftlichen Entwicklung.

Cottrell, J., Ludewig, D., Runkel, M., Schlegelmilch, K., & Zerzawy, F. (2017). *Environmental tax reform in Asia and the Pacific* (No. WP/17/05). United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).

Dai, Y. (2019). China's 2018 Individual income tax reform: A global perspective. *Tax Notes*, *94*(9).

Dom, R., & Miller, M. (2018). *Reforming tax systems in the developing world: What can we learn from the past?*. ODI Report.

Eilu, E. (2018). Adoption of electronic fiscal devices (EFDs) for value-added tax (VAT) collection in Kenya and Tanzania: a systematic review. *The African Journal of Information and Communication*, *22*, 111-134.

Eissa, N. O., Jack, W., & Gordon, R. H. (2010). Tax reform in Kenya: Policy and administrative issues. *Taxation in Developing Countries: Six Case Studies and Policy Implications*, 198.

Ghiaie, H., Auclair, G., & Ntsama, J. F. N. N. (2019). Macroeconomic and welfare effects of tax reforms in emerging economies: A case study of Morocco. *Journal of Policy Modeling*, *41*(4), 666-699.

Gicho, D. N. (2018). *Revenue collection systems and revenue collection levels in lands, housing and physical planning department at Kiambu County* (Doctoral dissertation, University of Nairobi).

Gitaru, K. (2017). The impact of system automation on revenue collection in Kenya Revenue Authority: (A Case Study of SIMBA). *Unpublished MBA Project-University of Nairobi*

Godar, S., Paetz, C., & Truger, A. (2015). The scope for progressive tax reform in the OECD countries. *Revue de l'OFCE*, (5), 79-117.

Guyatu, G.B. (2015). Efficacy of i-tax system on tax administration in Kenya

Heine, D., Norregaard, J., & Parry, I. (2012). Environmental tax reform: principles from theory and practice to date.

IMF (International Monetary Fund). (2015). Current challenges in revenue mobilization: Improving tax compliance.

Jo, N., & Kibati, P. (2017). Factors influencing implementation and utilization of electronic tax registers by small and medium enterprises in Nakuru town.

Kayaga, L., & Lahey, K. (2007). Tax policy challenges facing developing countries: A case study of Uganda.

Keen, M., & Smith, S. (2006). VAT fraud and evasion: What do we know and what can be done?. *National Tax Journal*, 861-887.

Kipkemoi, C. W. (2015). iTax system and service delivery by Kenya Revenue Authority, Nairobi Stations. *Unpublished master's thesis, University of Nairobi, Nairobi, Kenya*.

Kiring'a, S. E., Jagongo, A., Kiio, J. M., Njuguna, I. M., Muguongo, G. K., Nganyi, M. S., ... & Qiao, Y. (2017). Impact of online tax filing on tax compliance among Small and Medium Enterprises (MSE) in Kibwezi Sub-County in Kenya. *International Journal of Current Research*, *9*(4), 45196-45206.

Lamensch, M., & Ceci, E. (2018). *VAT fraud: Economic impact, challenges and policy issues* (No. UCL-Université Catholique de Louvain).

Livoi, G. M. (2017). The Effect of tax reforms on corporate tax compliance to Kenya Revenue Authority (*Doctoral dissertation, KCA University*).

Mararia, A. K. (2014). The effect of integrated tax management system on tax compliance by small and medium sized enterprises in Nairobi central business district.

Mavungu, M. N., & Krsic, N. (2017). Assessing the impact of tax administration reforms in Sub-Saharan Africa.

McCluskey, W., & Huang, C. Y. (2019). The role of ICT in property tax administration: Lessons from Tanzania. *CMI Brief, 2019*(06).

Muhammed, A., & Tesafa, Z. (2015). The impact of electronic tax register machines on vat compliance in Ethiopia, the case of Bahir Dar city. *Research Journal of Finance and Accounting*, *6*(13), 17-21.

Munene, R., & Nduruhu, D. (2016). Effect of Tax reforms on revenue collection at customs and border control department of Kenya Revenue Authority. *Journal of Business and Management*, *18*(4), 61-66.

Musonera, E., Siringi Elijah, M., & Naibei, K. (2013). Impact of electronic tax registers on VAT compliance: A study of private business firms in Kenya. *Advances in Management*.

Musyoka, N. N. (2019). Effect of tax reforms on voluntary tax compliance among small and medium enterprises in Kenya: a case of Nairobi County (*Doctoral dissertation, Strathmore University*).

Musyoka, N. N. (2019). Effect of tax reforms on voluntary tax compliance among small and medium enterprises in Kenya: a case of Nairobi County (*Doctoral dissertation, Strathmore University*).

Mwanza, M., & Phiri, J. (2016). Fraud detection on bulk tax data using business intelligence data mining tool: A case of Zambia revenue authority. *Intelligence*, *5*(3).

Ndambuki, F. (2014). Regressive tax reforms and economic welfare in Kenya (*Doctoral dissertation, School of Economics, University of Nairobi*).

Ndayisenga, E & Shukla, J. (2016). Effect of electronic tax management system of tax collection in Rwanda: Case study of Rwanda Revenue Authority (RRA). *The International Journal Of Business & Management* 4 (5)

Ngigi, M. B. (2015). The Effect Of Intergraded Tax Management System On Tax Compliance By Small And Medium Enterprises In The Central Business District, Nairobi County. *Unpublished master's thesis, University of Nairobi, Nairobi, Kenya*.

Njenga, G. K. (2017). *Mobile based County revenue collection system* (Doctoral dissertation, Strathmore University).

Odd-Helge, F., & Lise, R. (2003). *Taxation and tax reforms in developing countries: Illustrations from sub-Saharan Africa*. Chr. Michelsen Institute.

OECD. (2017). Technology tools to tackle tax evasion and tax fraud.

Okiro, A. (2015). The effect of e-payment system on revenue collection by the Nairobi City County Government.

Ombati, N. A.(2018). The effect of tax reforms on the efficiency of revenue collection in Kenya

Omondi, F. (2013). *VAT reforms and revenue productivity in Kenya (1990–2010)* (Doctoral Dissertation, School of Economics, and University of Nairobi).

Ouma, D. (2019). Revenue effects of tax reforms, economic growth and political environment in Kenya. *African Journal of Economic Review*, *7*(1), 136-153.

Owens, J. (2005). Tax reform: an international perspective. *presentation to The President's Advisory Panel on Federal Tax Reform, San Francisco*, *31*.

Pironet, M., Antunes, C., Moura, P., & Gomes, J. (2009). Classification for fraud detection with social network analysis (*Doctoral dissertation, Dissertation, October*).

Podlipnik, J. (2012). Missing trader intra-community and carousel VAT frauds-ECJ and ECtHR case law. *Croatian yearbook of European law & policy*, *8*(8), 457-472.

Rahimikia, E., Mohammadi, S., Rahmani, T., & Ghazanfari, M. (2017). Detecting corporate tax evasion using a hybrid intelligent system: A case study of Iran. *International Journal of Accounting Information Systems*, *25*, 1-17.

Raptis, Z. M. N.(20`18). VAT and e-commerce: Halting Carousel E-Fraud.

Sagas, C. C., Nelimalyani, M., & Kosgeikimaiyo, E. (2015). An assessment of the impact of electronic tax register on revenue collection by Kenya Revenue Authority Western Region, Kenya. *ZENITH International Journal of Business Economics & Management Research*, *5*(4), 111-118.

Slemrod, J. (2018). Is this tax reform, or just confusion?. *Journal of Economic Perspectives*, *32*(4), 73-96.

Spengel, C., Heinemann, F., Olbert, M., Pfeiffer, O., Schwab, T., & Stutzenberger, K. (2017). Analysis of US corporate tax reform proposals and their effects for Europe and Germany.

Ter-Minassian, T. (2009, January). Challenges in tax reform for Turkey in an international perspective. In *Ministry of Finance-UNDP Seminar on Tax Policy Options on the Way to EU Accession, Ankara*.

Umar, M. A., & Tusubira, N. F. (2017). Challenges of tax administration in developing countries: Insights from the 5th Annual Tax Administration Research Centre Workshop, 2017. *Journal of Tax Administration*, *3*(2), 108-123.

Vanhoeyveld, J., Martens, D., & Peeters, B. (2019). Value-added tax fraud detection with scalable anomaly detection techniques. *Applied Soft Computing*, 105895.

Wasao, D. (2014). The effect of online tax system on tax compliance among small taxpayers in east of Nairobi Tax District. *Unpublished Masters of Science project, submitted to University of Nairobi, Kenya*.

APPENDICES

Appendix I: Letter of Introduction

Dear Respondent,

RE: **DATA COLLECTION**

I am a student at the J-KUAT University, currently undertaking a research study on **EFFECT OF TECHNOLOGICAL TAX REFORMS ON VALUE ADDED TAX COMPLIANCE AMONG MEDIUM SIZED FIRMS IN KISUMU TOWN, KENYA.** You have been selected to participate in this study and I would highly appreciate if you assisted me by responding to all questions in the attached questionnaire as completely, correctly and honestly as possible. Your response will be treated with utmost confidentiality and will be used only for research purposes of this study.

Your cooperation is highly appreciated.

Yours sincerely,

Lina Atieno Abuya
0719125052

Appendix II: Questionnaire

SECTION A: GENERAL INFORMATION

1) What is your gender

   Male [ ] Female [ ]

2) What is your highest level of education?

   Certificate [ ] Diploma [ ] Degree [ ]

   Masters [ ] PhD [ ]

   Other (Please explain) ----------

3) How long has the organization been in existence?

   1- 5 years [ ] 5-10 years [ ]

   10-15 years [ ] above 15 years [ ]

4) What is the average number of employees in the firm?

   1- 5 [ ] 5-10 [ ]

   10-15 [ ] above 15 [ ]

5. Kindly indicate the average revenue generated by your firm annually?

.....

SECTION B: ELECTRONIC TAX REGISTERS

10. For each of these statements on Electronic Tax Registers, kindly indicate the extent of your agreement on how they affect tax compliance in your organization. Use the Likert scale which ranges from 1 -5 where 1= strongly disagree; 2 = disagree 3= neutral; 4= agree and 5= strongly agree.

Statement	1	2	3	4	5
I know that this firm utilizes ETRs to print sales receipts					
I know that ETRs have improved the time taken to print sales receipts in this firm					
ETRs have helped this firm to keep records of sales electronically					
This firm keeps a large record of information on sales generated by ETRs					
The electronic information on sales generated by ETRs is used to facilitate electronic auditing in this firm					
ETRs provide a an audit trail for carrying out electronic auditing in this firm					

11 In what other ways have Electronic Tax Registers affected VAT compliance?

……

……..

SECTION C: I-TAX

6. For each of these statements on i-tax system, kindly indicate the extent of your agreement on how it applies in your organization. Use the Likert scale which ranges from 1 -5 where 1= strongly disagree; 2 = disagree 3= neutral; 4= agree and 5= strongly agree.

Statement	1	2	3	4	5
The firm is registered with KRA for VAT purpose					
I file the VAT returns for this firm electronically					
The firm pays the VAT due electronically					
I have knowledge that any discrepancies on VAT returns filed by the firm are detected by the VAA system					
I know that the firm receives email communication of any inconsistencies in the VAT returns filed					
I know that persistent failure to amend the raised auto assessment of the discrepancies on VAT returns may result into KRA debt enforcement					

7. In what other ways has I-tax affected VAT compliance in your firm?

……

……..

SECTION D: KRA M-SERVICE

8. For each of these statements on KRA M-Service, kindly indicate the extent of your agreement on how it affects tax compliance in your organization. Use the Likert scale which ranges from 1 - 5 where 1= strongly disagree; 2 = disagree 3= neutral; 4= agree and 5= strongly agree.

Statement	1	2	3	4	5
I know that our firm pays VAT through the Mpesa pay bill number 572572					
Payment of VAT through Mpesa pay bill number 572572 is convenient					
I know that our firm uses an E-slip number obtained from i-tax as an account number during payment of VAT					
I am aware that the firm reviews the payment details before paying the VAT due using the mobile phone					
Review of the payment details helps to ensure that correct amount of VAT is paid by the firm					
The review of payment details ensures that accurate details of the business have been reflected					
I know that the firm receives a real time feedback from KRA confirming the amount of VAT paid					
We are only assured that VAT paid has been received when we receive the feedback from KRA					

9. How else has KRA M-Service affected VAT compliance in your firm?

……

…….

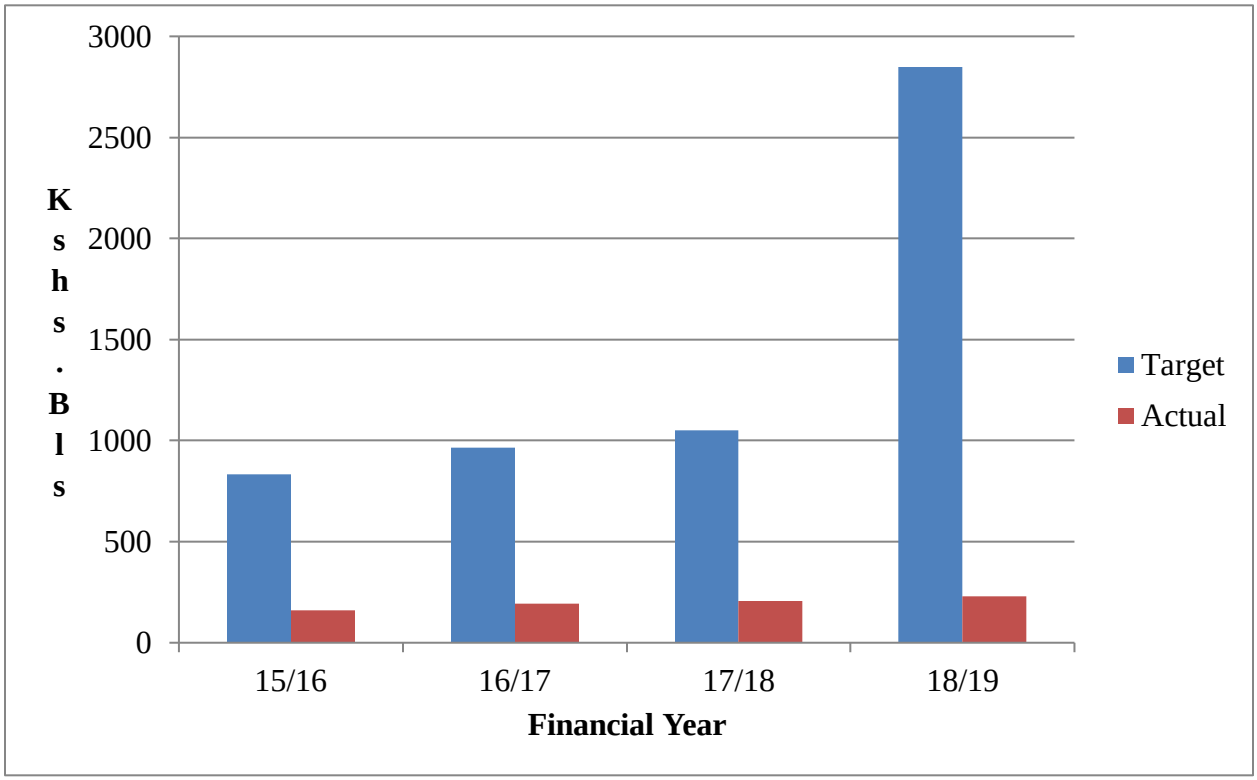
SECTION E: VAT COMPLIANCE

12. For each of these statements on VAT compliance, kindly indicate the extent of your agreement on how it affects tax compliance in your organization. Use the Likert scale which ranges from 1 -5 where 1= strongly disagree; 2 = disagree 3= neutral; 4= agree and 5= strongly agree.

Statement	1	2	3	4	5
I know that our accountant files the VAT returns					
The firm files VAT returns to remain complaint					
I ensure that correct amount of VAT is declared on VAT returns					
The firm pays VAT to avoid legal enforcement					

THANK YOU

Appendix III: Targeted Against Actual VAT Figures



Source; KRA (2019)

Appendix IV: List of Firms

1. TEEMAC ENTERPRISES LIMITED P O BOX 2636 – 40100 KISUMU
2. 93. GAVINS HOLDINGS LIMITED P O BOX 2636 – 40100KISUMU
3. 94. PROLEX DEVELOPERS P.O BOX 19695-40123 KISUMU
4. 95. CIRCUIT OF THE EAST COMPANY LTD PO BOX 9620 – 40141KISUMU
5. 96. ZEALOTES CONSTRUCTION CO LTD P O BOX 3751 – 40100 KISUMU
6. 97. AL KARIM CONTRACTORS LIMITED P O BOX 8645 – 30100 ELDORET
7. 98. GREYSHADE ENGINEERS LIMITED P O BOX 380 SOTIK
8. 99. KODAGO CONTRACTORS LIMITED P O BOX 41 -40101 KISUMU
9. 100. RADOGO GLOBAL MERCHANTS LIMITED P.O BOX 786-40100 KISUMU
10. 101. TRIPLE (G) HOLDING LIMITED P O BOX 3299 KISUMU
11. 102. CONTON GROUP LIMITED P O BOX 4923 – 40100 KISUMU
12. 103. MARKSRAJ ENETERPARSES P O BOX 2528 – 40100 KISUMU
13. 104. RAMER INVESTMENT LIMITED P O BOX 28918 NAIROBI
14. 105. BERCONSULT COMPANY LIMITED P O BOX 7589 – 40100 KISUMU
15. 106. JAPRI INVESTMENTS LTD P O BOX 7589 -40100 KISUMU
16. 107. WESTLORN COMPANY LTD P O BOX 7935 KISUMU
17. 108. TRIPLE G HOLDINGS LIMITED P O BOX 3299 – 40100 KISUMU
18. 109. AXECAP LIMITED P O BOX 66444 – 00800 NAIROBI
19. 110. ALCAT GEN CONT & SUPPLIES LTD P O BOX 160 KISUMU
20. 111. DESNOLINVESTMENT P O BOX 8041 KISUMU
21. 112. PRINTECH MEDIA LIMITED P O BOX 10586-00100 NAIROBI

22. 113. CHESIMARK LIMITED P O BOX 10586 – 00100 NAIROBI
23. 114. HOMANET GENERAL SUPPLIES P O BOX 25077 NAIROBI
24. 115. WEENSIIYN VENTURES LTD P O BOX 49722 NAIROBI
25. 116. DINOTECH GEN WORKS LTD P O BOX 102 P / ONDITI
28. KENMUCHES COMPANY LTD P.O BOX KISUMU
26. 129. NYALS ENGINEERING & CONSTRUCTION LTD P O BOX
27. 130. HOMSTOL LIMITED P O BOX P O BOX 211 KISUMU
28. 131. HOMEBOYZ ENTERTAINMENT
29. 132. WHOLELIFE ENTERPRISES P O BOX 211 KISUMU
30. 133. OUTBACK ENERGY LTD P O BOX 3559 NAIROBI
31. 134. CURTENN INVESTMENTS P O BOX 526 WEBUYE
32. 135. NADIX INVESTMENTS P O BOX 526 WEBUYE
33. 136. PROTRACK COMPANY P O BOX 3559 NAIROBI
34. 137. GORA & SONS ENT LTD P O BOX 40100 KISUMU
35. 138. FATOM BUILDING CONTRACTORS P.O BOX 675 KISUMU
36. 139. CALMAPE ENG LTD P O BOX 18390 – 20100 NAKURU
37. 140. OGIADUENT P O BOX 40100 KISUMU
38. 141. COMIYWEYO (K) COMPANY
39. 142. AKIOM LIMITED P.O BOX 43942 NAIROBI
40. 143. OBENJO GEN TRADERS LTD P O BOX 40100 KISUMU
41. 144. NORMATIVE OUTCOMES P O BOX 40100 KISUMU
42. 145. SCHARTZ ENT P O BOX 00200 NAIROBI
43. 146. CHANASE ENGINEERING COMPANY LTD P.O BOX KISUMU
44. 147. PAEK INVESTMENTS P.O BOX 2665-40100 KISUMU
45. 148. O G PLUS A COMPANY LTD P O BOX 508 – 00606 WESTLANDS NRB
46. 149. ADVAMELA INVEST LTD P O BOX 387 NDIWA
47. 150. KAKOMO & SONS ENTER P O BOX 6 NYANGANDE
48. 151. WAWEYA INVESTMENT LTD P.O BOX 54750-40100 KISUMU

49. 152. RAVENS SUPPLIES & ENT P O BOX – 40100 KISUMU
50. 153. WAWEYA INVEST LTD P O BOX - 40100 KISUMU
51. 154. NEW LOOKERS ENTER CO LTD P O BOX 4 OYUGIS
52. 155. HAGO'S GEN WORKS P O BOX 8 NYANGANDE
53. 156. BULTONUZY CONSTRUCTION COMPANY P.O BOX 186 KISUMU
54. 157. VISHAL CO LTD P O BOX 151 PAP – ONDITI
55. 158. POVO CIVIL ENGINEERING P.O BOX 43 SONDU
56. 159. MARION GENERAL WORKS P.O BOX 8 NYANGANDE
57. 160. MASHOLA ENTER P O BOX 151 PAP – ONDITI
58. 161. JOMINYIECH ENTER LTD P O BOX KISUMU
59. 162. CALOW MAINTENANCE & FAB LTD P O BOX KISUMU
60. HIPEERJOO ENTER LTD P O BOX KISUMU
61. 164. TERZ ENGINEERING SERVICES LIMITED P.O BOX 51084-00200 NAIROBI
62. 165. BERINET INVEST LTD P O BOX 1009 KISUMU
63. 166. GEMINI FOODS LIMITED P.O BOX 93 RABUOR
64. 167. KAYDEN CONTRACTORS & SUPPLIERS P.O BOX
65. 168. NETYAW INVEST LTD P O BOX 326 KISUMU
66. 169. FRONTLINE INTERNATIONAL P.O BOX 7973-40100 KISUMU
67. 170. MWIJO LIMITED P O BOX 9063 KISUMU
68. 171. WILJOE ENTER LTD P O BOX 3538 KISUMU
69. 172. OSAO ENTER P O BOX 1009 KISUMU
70. 173. SARVI ENTER P O BOX 1009 – 40100 KISUMU
71. 174. RESEARCH DIMENSION SERVICES P O BOX 14709 NAIROBI
72. FEI GEN SUPPLIES P O BOX 14332 NAIROBI
73. BACK TRACK LIMITED P.O BOX 19888 NAIROBI
74. O.G PLUS A COMPANY LIMITED P.O BOX 508-00606 WESTLANDS
75. CANOPY SYSTEMS P.O BOX 19888 NAIROBI
76. SONABU LIMITED P O BOX 24185 NAIROBI
77. . SAVOUR AFRICA LIMITED P.O BOX 8588-00100 NAIROBI

78. . AROMA DEVELOPERS LTD P O BOX P O BOX 99 KATITO
79. KAYO CREATIVE LTD P O BOX P O BOX 99 KATITO
80. CANAAN DALA LIMITED P O BOX 2241 KATITO
81. KOMBURE LIMITED P O BOX 2241 KATITO
82. FORTY-TWO GEOMETRIC SERVICES P O BOX 4079 KISUMU
83. INTROSPECT CONSULT LTD P O BOX 7573 KISUMU
84. GEOMARK CONSTRUCTION LIMITED P.O BOX KISUMU
85. CAMCEB ENTERPRISES P O BOX 73558 – 00200 NAIROBI
86. MITIJOS CO LTD P O BOX 2607 KSM
87. JULLIAAC SOLUTIONS P.O BOX 9062 NAIROBI
88. ELTERICS E.A LTD P.O BOX 7093-40100 KISUMU
89. MIYAZAKI SOLUTIONS P.O BOX 6940 KISUMU
90. ERNA GENERAL SUPPLIES P.O BOX 744 KISUMU
91. . TRANSOLA ENTERPRISES P O BOX 3788 KSM
92. LENANA ENGINEERING LTD P.O BOX 71 NYAMIRA
93. SUPERSWITCH TECHNOLOGIES P.O BOX 216-50314 EMUHAYA
94. WASHINGTON BULD CONTRACTORS P O BOX 2611 KSM
95. VILLIAC INVESTMENTS P.O BOX 6041 KISUMU
96. 208. PRESSOLIVE ENTERPRISES LTD P.O BOX 5784-40100 KISUMU
97. 209. P C ROLE KENYA P O BOX 1781 NAIROBI
98. 210. KELAMAATBE CONSTRUCTION COMPANY P.O BOX 8083 KSM
99. 211. MILLENIUM ENERGY SOLUTIONS LTD P O BOX 63097 NAIROBI
100. 212. KENEL ENTERPRISES LTD P.O BOX 1003 KISUMU
101. 213. PEPETA HOLDINGS LIMITED P O BOX 1462 – 00100 NAIROBI
102. 214. WINONA CONSTRUCTION & LOGISTICS P.O BOX 455 KISUMU
103. 215. MARLIN LIMITED P.O. BOX 700 NAIROBI
104. 216. MARANGA ELECTRICALS & CONTRACTORS P.O BOX 73878 NRB
105. 217. FAIDI LIMITED P O BOX 37458 NAIROBI
106. 218. OWICH INVESTMEMENTS P.O BOX 111-40102 KOMBEWA
107. 219. LAIMAH TRADERS & COMPANY P.O BOX 33407-00600 NAIROBI

108.	220. TRITEL CONSTRUCTION LTD P.O BOX 40 DARAJA MBILI
109.	221. DONFIL INVESTMENT LTD P O BOX KISUMU
110.	222. FRONTGATED INVESTMENT LTD P O BOX KISUMU
111.	223. ASSORTED SYSTEMS P.O BOX 115-00515 NAIROBI
112.	224. KENAGEN HOLDINGS LIMITED P O BOX 1923 NAIROBI
113.	225. HORONDERI ENTERPRISES LIMITED P O BOX 9697 KISUMU
114.	226. ASOLID SOLUTION LIMITED P O BOX 9680 KISUMU
115.	227. JAX CONSTRUCTION COMPANY LTD P.O BOX 73878 -00200 NRB
116.	228. BIZZ-TECH SOLUTIOS LIMITED P.O. BOX 73878 -00200 NRB
117.	229. STAR LAKE SOLUTIONS LTD P.O BOX 50-40302 NDHIWA
118.	230. TIGER OF VALLEY CO LIMITED P O BOX 77 KISUMU
119.	231. ARCHVONE SOLUTIONS P.O BOX 35760 NAIROBI
120.	232. NYADINO ENTERPRISES P.O.BOX 1781-00100 NAIROBI
121.	233. JACATO INVESTMENT LTD
122.	234. PENDULUM ENTERPRISES P.O BOX KISUMU
123.	235. BLUENEXT LIMTED P. O BOX 46 PAP ONDITI
124.	236. CEDAR CONSTRUCTION AFRICA LTD P.O BOX 7132-40100 KSM
125.	237. TOCASAJI ENTERPRISES
126.	238. ARSENE AGENCIES LIMITED P O BOX 300 KAMURIA
127.	239. SAMARCOL INVESTMENT LTD P.O BOX 770 NAIROBI
128.	240. KAROUR GEN SUPPLIES P O BOX 211AHERO
129.	241. DIAMOND SYSTEMS LIMITED
130.	242. CHALON TECHNICAL SERVICES P O BOX 4096 KISUMU
131.	243. AT- COST STRUCTURES LIMITED P O BOX 4710 THIKA

132. 244. KADEYA GENERAL CONS.CO. LTD P.O BOX 51-40100 KISUMU
133. 245. STARCOM INVESTMENTS P O BOX 235 AHERO
134. 246. MWANGAZA CIVIL WORKS CO. LTD P.O BOX 102192 NAIROBI
135. 247. WAYMAX ENTERPRISES P O BOX 1366 KISUMU
136. 248. NERA ELECTRICALS & HARDWARE LTD P.O BOX 2697KISUMU
137. 249. FLAMERBAX CONTRACTORS P O BOX 1366 KISUMU