

**IMPACT OF iTAX SYSTEM ON VAT COMPLIANCE: A CASE OF
NORTH OF NAIROBI STATION**

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AGRICULTURE AND TECHNOLOGY**

2018

DECLARATION

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

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

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ABSTRACT

The objective of this research study was to find out the impact of the tax system on VAT compliance in North of Nairobi Station. The objective of the study was answered using three research questions which revolved around e-registration, e-filing, and e-payment and how each is affected by the iTax system in order to enhance VAT compliance. The study was based on three theories that provide the theoretical background of this research study. The theories include; Theory of Reasoned Action (TRA), Psychological Theory and Theory of Planned Behavior (TPB). This was followed by the review of existing empirical literature for each variable and a conceptual framework of the same. In order to come up with the research gaps, critique of existing literature as advanced by different scholars was carried out and discussed at length. A summary was then drawn from the literature review

The research problem was solved using descriptive study design. The target population for the study was 142 KRA DTD officers stationed at North of Nairobi, KRA headquarters Times Tower building. The Fishers model was used to select 103 respondents for the study. A four-point Likert scale structured questionnaire which covered all variables of the study was used to collect primary data. A pilot test was conducted to assess validity of the research instruments, whereas Cronbach's coefficient alpha was used to determine reliability of the research instruments. Data obtained was subjected to quantitative methods of data analysis using SPSS (version 25). The results obtained were presented using tables and graphs for ease of understanding and interpretation. In addition, both correlation and regression analyses were done and summaries presented.

Both descriptive and inferential statistics were used to analyze the data. The statistical significance of relationships among selected variables was determined using multiple regression analysis. The study established that e-registration, e-filing and e-payment have a significant contribution on VAT compliance at North of Nairobi station. The study concluded that the iTax system has an impact on VAT compliance in North of Nairobi station, though KRA DTD officers at North of Nairobi station feel that taxpayers are still faced with system challenges

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DEDICATION

This project is dedicated to my sister Mrs. Caroline Koester for constant encouragement and iTax Rollout manager Mrs. Millicent Hawi for her dedication on the success of the system, advice and support and prayers offered throughout

DEFINITION OF TERMS

Nairobi Central Business District

This is the geographical area mapped and demarcated as the city Centre in the heart of Nairobi County for purposes of coordination, monitoring and administration by Kenya Revenue Authority. It covers area in Nairobi's down town, uptown, Parklands and Ngara. The coordinating office stationed at 14th floor Times Tower building.

Small and Medium enterprises

This is a firm or a business enterprise which is non-subsidiary and independent firm which has less than 50 employees and has a turnover of less than 50

Million euros. (United Nations Development Organization, 2009)

iTax system

It is a web-enabled and secure application system that provides a fully-integrated and automated solution for administration of domestic taxes. It enables Taxpayer internet- based PIN registration, returns filing, payment registration to allow for tax payments and status inquiries with real-time monitoring of accounts (ICPAK 2015)

Tax compliance

Is defined as adhering to all the laws of the country as it pertains to the filing registering and paying of taxes due on time. This involves "taxpayers' willingness to comply with tax laws, declare correct income, claim the correct deductions, relief and rebates and pay all taxes on time" (Palil and Mustapha, 2011)

Taxation

A means by which governments finance their expenditure by imposing charges on citizens' earnings and corporate entities. Taxation is the only known practical manner for collecting resources in order to finance public expenditure for goods and services consumed by any citizen (Charles E. McLure, 2015)

Value Added Tax is defined as a multistage consumption tax applied to the sale of goods and services at all stages of the production and distribution chain. Only registered traders are required to charge VAT, and for a trader to qualify for registration under VAT, he or she must have an annual sales turnover of Kshs.5 million and above (PSC, 2010).

LIST OF ABBREVIATIONS

EAC	East African Community
IRB	Internal Revenue Board
IRS	Internal Revenue Service
IT	Information Technology
ITMS	Integrated Tax Management System
KRA	Kenya Revenue Authority
OECD	Organization for Economic Co-operation and Development
PIN	Personal Identification Number
PSC	Public Service Commission
SPSS	Statistical Program for Social Sciences
TRA	Theory of Reasoned Action
TBP	Theory of Planned Behaviour
VAT	Value Added Tax
WTO	World Trade Organization

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CHAPTER ONE: INTRODUCTION

1.1 Background of the study

The use of automated systems has been proven to be capable of introducing massive efficiencies to business processes at a minimal cost (Wasao, 2014). Information systems have helped organizations to be highly efficient and to stay competitive in its environment; therefore, it has been widely used in the public sector and business organizations (Gupta, 2012). Technology is transforming the ways governments deliver services and interact with citizens across various sectors, from public financial management to social programs to elections and many others (World Development Report, 2016). These e-government initiatives typically seek to improve service delivery and efficiency. Often, they also aim to combat corruption by automating systems and reducing officials' discretion. The success of KRA in its core mandate of revenue collection largely depends on the efficacy and efficiency of the introduced iTax system in increasing tax compliance and sealing tax leakages occasioned by tax evasion. The study seeks to investigate the impact of the iTax system on VAT compliance in North of Nairobi Station.

Olatunji & Ayodele (2017) define e-taxation as a process where tax documents or tax returns are submitted through the internet, usually without the need to submit any paper return; it encompasses the use of internet technology. Mohd et al (2011) defines Tax compliance as the fulfilment of tax laws, declaration of the correct income & expenses and the payment of taxes on time, that is, complying with the tax laws, accurate declaration of income & expenses and timely settlement of tax liabilities. Value Added Tax (VAT) is a tax on consumer expenditure introduced by KRA in January 1990 to replace Sales Tax, which had been in operation since 1973. VAT was introduced as a measure to increase Government revenue through the expansion of the tax base, which hitherto was confined to the sale of goods at manufacturing and importation level under the sales tax system. Value Added Tax is a multistage consumption tax applied to the sale of goods and services at all stages of the production and distribution chain. Only registered traders are required to charge VAT, and for a trader to qualify for registration under VAT, he or she must have an annual sales turnover of Kshs.5 million and above (PSC, 2010). Further to that those who wish to register on a voluntary basis has also been embraced, especially to those who would like to transact with the government

Tax revenue plays a significant role in the economic growth of the country. Tax evasion and tax avoidance hamper revenue collection which leads to inefficiency in government operations. Tax evasion refers to the illegitimate intentional actions by taxpayers taken in order to reduce their tax liability. (Alm, 2012). Tax evasion is achieved through criminal acts of omission such as failure to register for VAT and acts of commission or under declaration of sales, overstating expenses, claiming of personal expenses as if they are business expenses and misclassifying supplies to lower rates of tax

1.1.1. Global perspective of use of technology on VAT compliance

The use of technology to foster tax compliance by the United States Internal Revenue Service (IRS) shows that more developed economies also face challenges in increasing the use of e-filing. The IRS introduced e-filing of federal tax returns in 1986. Though this system predated Singapore's, it was initially less comprehensive. In fact, even though the number of electronic returns filed increased over time, the potential savings from that increase were partly offset by the ongoing use of paper filings for complex returns. But by 2012 the IRS achieved 80% e-filing of major returns. (Electronic Tax Administration Advisory Committee, 2012).

Initially, e-filing was not entirely paperless. Until 1999 electronic filers still had to submit signed paper documents. Seeking the benefits of electronic tax systems and reflecting the government's vision of leveraging online technology, Malaysia's Inland Revenue Board (IRB) launched its electronic system for taxes in 2004. IRB aimed to increase revenue collection by improving taxpayer services. The goal was to cut time and cost and to allow taxpayers to comply with tax obligations more easily, enabling IRB to maintain a good reputation with taxpayers even as it widened its tax base. (Doing business, 2014)

1.1.2 Regional perspective of use of technology on VAT compliance

Tax systems in developing economies, like those in more developed ones, face both new challenges and new possibilities because of technological change. Malaysia's ongoing reform of its electronic tax filing and payment system describes how technology can benefit both tax authorities and taxpayers. Singapore was one of the first economies to adopt electronic systems in its public administration. In 1992, the Inland Revenue Department was replaced by the Inland Revenue Authority of Singapore, which developed an integrated, computerized tax administration system (World Bank, 2000). The authority's first step was shifting from a hard-copy filing system for paperless imaging. Going electronic made administrative processes more efficient by freeing staff from unproductive paper shuffling, enabling better taxpayer service. The time needed to issue assessments dropped from 12–18 months to 3–5 between 1992 and

2000 This change allowed staff to work more on auditing and investigation. (World Bank, 2000).

For every tax filing or payment, taxpayers had to log in, select and complete the appropriate forms, sign and submit them digitally. An acknowledgment is received immediately. The e-filing system automatically calculates the necessary payment details. It also curbs deductions that taxpayers are entitled based on deduction rules—enabling taxpayers to avoid mistakes that would result in penalties (Doing business, 2014). In addition, prefilled online tax returns have been available since 2006, starting with taxpayer’s basic information and later extended to include their incomes and reliefs. In 2012 IRB enhanced its e-filing system by introducing smartphone

Gupta. (2012) stated in his study that all the reforms in Rwanda’s tax base system were aimed at improving tax collections, administrations, and above all tax compliance. In a bid to improve tax compliance, Rwanda Revenue Authority (RRA) decided to opt for the electronic tax management system which includes e-payment, e-filing and electronic tax education in order to improve on tax collection in the country. This research analyzed the effect of an electronic tax management system on tax collection in Rwanda. In Kenya, the earliest form of the online filing of tax returns was through the implementation of the Integrated Tax Management System (ITMS) in 2009. This was to facilitate the online payments of Value Added Tax (VAT), Corporate Tax amongst others (Lukorito, 2012)

1.1.1. Kenyan perspective of use of technology on VAT compliance

Value Added Tax is charged on the supply of taxable goods or services made or provided in Kenya and on the importation of taxable goods or services into Kenya. Taxable goods and services are contained in the various schedules to the VAT Act. VAT is levied on consumption of taxable goods and services supplied or imported into Kenya and are collected by registered persons at designated points who then remit it to the Commissioner. Registered persons only act as VAT agents. VAT is imposed by the Kenya revenue Authority (KRA) as per the laws of the Value Added Tax Act 2013. The Value Added Tax is an indirect tax on consumption applicable on the sale of supplies at all levels of production and distribution. VAT registered taxpayers acts as agents in collecting and remitting collected VAT to the government. The VAT paid on inputs in turn is claimed as a credit when registered taxpayers declare output VAT on their sales (VAT Act 2013 Sec 17). A tax authority engages in many activities, such as processing returns and related information from taxpayers, entering tax return data into a

database, matching returns against filing requirements, processing tax payments and matching them against assessments, and issuing assessments and refunds

1.2 Statement of the problem

This study seeks to find out the impact of the iTax system on VAT tax compliance

The Kenya Revenue Authority's iTax System was introduced in 2011 and was launched in 2013 to ease the process of tax administration (KRA press release 2015). iTax System is one of the key improvements that tax Authority has made in the history of Kenya taxation. The system makes revenue collection easy for both the taxpayers and KRA itself. According to KRA, "the iTax system gives taxpayers the luxury of filing tax returns from anywhere anytime. Despite such an investment the compliance level is relatively low, especially with Value added Tax in Kenya (KRA press release, 2015). Available information indicates that a significant percentage of registered VAT firms are Nil or Non-filers, (KRA iTax system reports, 2018). For example, within a period of January to April 2018, VAT filing report, a total of 51,422 VAT registered taxpayers in North of Nairobi filed nil returns. Additionally, 3,561 of the VAT had a zero liability while others did not file at all. More surprisingly, are the refundable amount of 35,883,862,143.33 within the same period.

This contradicted KRA iTax inconsistency data reports which indicated that some of these firms had conducted business with withholding tax agents during the same period but failed to file and pay the VAT for the stated months. According to data from (KRA, report, 2015) North of Nairobi, tax region alone has a potential of collecting over 350 billion in Kenya shilling annually, this is largely because this station has the highest number of SMEs amongst all the tax regions in Kenya. However, this has remained a dream since most of these taxpayers either do not pay taxes and those who pay, under declare their tax liability.

iTax has since boosted a tax authority's efficiency is by expanding its use of information and communication technology. Such technology can facilitate a broad range of services, including registering taxpayers, filing returns, processing payments, issuing assessments and checking against third-party information (Ochieng, 2017). Despite the increasing need to increase revenue collection and enforcement so as to provide public services, and the introduction of electronic tax systems in most countries across the global divide, developing countries like Kenya have not the desired tax compliance levels

VAT in general continues to perform below expectations despite the increased taxable business transactions, especially among firms dealing with the registered withholding tax agents. The recent pin suspension initiative implemented by KRA confirmed that more than 95,000 individuals and firms which either had registered for VAT and have not been filing or those transacting vatable supplies and did not declare revealed that the number of businesses transacting with vatable supplies are either nil or non-fillers and could be three times the number of business that are actually registered and filing their returns. The question that the researcher seeks to answer is whether the iTax systems has any significant impact on VAT compliance as envisioned. If yes, to what extent and what can be done to mitigate the gap which currently exist to enhance tax compliance. There have been few published empirical studies on the reactions of taxpayers towards an online filing system in enhancing VAT compliance.

Available studies have been undertaken to explain the effect of electronic tax systems on tax compliance and revenue collection. For instance, in Nigeria, Oseni (2015) concluded that there is no hiding place for tax evaders with the use of this modern technology since all potential taxpayers are captured by the system. He stated that the use of ICT can be catastrophic if carelessly employed by both the taxpayers and the tax administrators as scammers and hackers of the internet facilities can utilize the ignorance or the lax security of the system. Efunboade (2014) indicated that these emerging global infrastructures (Taxpayer Identification Number-TIN, Factual Accurate, Complete Timely- Project fact and Integrated System of Tax Administration- ITAS) could make it increasingly possible for eligible taxpayers to pay tax online anywhere and anytime. The two studies gave insightful information. However, the studies are both done in Nigeria and study in Kenya is necessary to get Kenyan perspective.

Kamau (2014) did a study to determine the impact of adoption of technology as a strategic tool in enhancing tax compliance in Kenya in his study. The study concludes that indeed the adoption of technology does impact on the tax compliance levels of the large taxpayers. There was a gap that needed to fill as the study mainly focused on the large taxpayers of Kenya Revenue authority. A research study on the impact of tax on VAT compliance is therefore inevitable in a station such as North of Nairobi, which cover all types of taxpayers ranging from large, medium, small enterprises and micro enterprises to give a comparative analysis on the impact of the electronic tax system in Kenya. The study is therefore seeking to determine the impacts of iTax on VAT tax compliance in North of Nairobi station.

1.3 Research objective

1.3.1 General objective

The main objective is to find out the impact of the iTax system on VAT compliance in North of Nairobi Station

1.3.2. Specific Objectives

1. To find out the impact of online VAT e-registration process on tax compliance in North of Nairobi Station.
2. To establish the impact of online VAT e-filing on tax compliance in North of Nairobi Station.
3. To determine the impact of online VAT e-payment on tax compliance in North of Nairobi Station.

1.4 Research questions

1. What are the impacts of VAT e-registration on tax compliance in North of Nairobi Station?
2. What are the impacts of VAT e-registration on tax compliance in North of Nairobi Station?
3. What are the impacts of VAT e-payment on tax compliance in North of Nairobi Station?

1.5 Justification of the study

From the study, recommendation outlined, will provide useful suggestions to the Kenya Revenue Authority and the government to come up with a policy that enable helps in mitigating the challenges of VAT compliance in Kenya. In addition, the outcome of the study will be a resourceful reference material to various stakeholders in the economy and the readers in general who are interested in gaining more knowledge about the impact of the iTax system on VAT compliance. Financial institutions and investors in technologies will find the information useful when developing tax administration systems.

Academicians and scholars will find the study useful as it forms the basis upon which further studies on the impact on electronic system on tax compliance with revenue authorities could be conducted as well as adding to the body of knowledge in enhancing tax compliance and increasing revenue collections.

1.6 Scope

The study was conducted to find out the impact of the iTax system in VAT compliance in north of Nairobi station. The unit of analysis was 142 KRA DTD officers at KRA North of Nairobi station. The station premise is in Times Tower building KRA headquarter 14th floor within the Nairobi Central business. The process involved; administering questionnaires to staff as the main tools to collect primary data. Secondary data were obtained from KRA yearly reports and treasury revenue reports. The exercise also included checking total return filed; total revenue collected, the number of default notices in the financial year 2014/2015 when iTax system was made mandatory and financial year 2016/2017 and after the iTax system was fully implemented.

1.7 Limitation of the study

The study was limited to impacts of iTax system on VAT compliance within North of Nairobi Station. The researcher only focused on businesses with VAT obligation and were transacting using electronic tax register machine.

The main challenge was obtaining information from KRA officials who most of them were not comfortable giving any information pertaining to tax matters. The limitation was mitigated by explaining to the respondents the importance of the research and assuring them anonymity and secrecy of their views hence respondents gave socially acceptable responses. Most of the information from KRA is confidential in nature the researcher had limited access to some information. This was, however mitigated by using information that was accessed by the public such as a KRA press release, treasury report and obtaining a letter from KRA human resource department which enabled me to carry out research and access information that was required. Time was another challenge from the researcher as the researcher was also on full time employment. This was sorted out by a researcher taking two weeks leave to collect and analyse data within stipulated time frame

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter discussed rationalization of iTax system and how it impacts VAT compliance in North of Nairobi station. The discussions were based on three chosen theories that provide the theoretical background of this study. This was followed by the existing empirical evidence for each variable and a conceptual framework of the same. Critique of existing literature that have been advanced by different scholars was also discussed at length. In conclusion summary was drawn from this review of literature. And the research gaps were highlighted.

2.2 Theoretical reviews

This study borrowed heavily from existing research that is increasing. It was influenced by the following theories which have been put across by various scholars with regard to adoption of technology in society. Theory of Reasoned Action, Psychological Theory and Theory of Taxation and Classical Approach to Tax Compliance (AS Theory). The theories were discussed in the context of the topic of study, which was the impact tax on VAT compliance with the Nairobi central business district.

2.2.1 Theory of Reasoned Action

Many researchers have used the theory of reasoned action (TRA) in their studies. The theory has been applied to various behavioural situations (Chu & Wu, 2004; Hanno & Violette, 1996; Oliver & Bearden, 1985; Shimp & Kavas, 1984) and has been used to explain human behaviour as a dominant theoretical framework (Fishbein & Ajzen, 1975). Behavioural performance in the theory can be predicted from people's intentions (Fishbein & Ajzen, 1975).

TRA focus is on behavioural intention as antecedent to actual behaviour. Intentions are assumed to capture the motivational factors that influence behaviour. Intention indicates how hard individuals are willing to try or how much effort they would exert to perform the behaviour (Ajzen, 1991). In order to understand a particular individual's behaviour (for example taxpayer's behaviour), it is important to identify the determinant of behavioural intention

(Hanno &Violette, 1996). TRA postulates two independent determinants of intentions that is the attitude toward behavior and subjective norms.

One of the factors that determine attitudes is behavioural belief, which involves evaluation of the consequences or outcomes of a particular behaviour (Ajzen & Fishbein, 1980). Attitudes are influenced by a belief in an outcome in which its degree is measured in terms of outcome evaluation. Normative belief is influenced by one's belief toward a referent other or referent group. This means that an individual attempt to carry out an action when he/she believes that other people think it is important for them to carry out the act. (Bidin, Shamsudin, & Othman, 2014)

This theory will be important in predicting taxpayer behaviour in relation to online filing and online payment because TRA proposes a direct relationship between intention and behaviour. Intention is an essential component of online filing and payment as it is only through the willing participation in registration of VAT when a taxpayer transacts vatable products or meet a requirement of 5 million and above of annual turnover. This will help the researcher to understand how the taxpayer's intention of filing and paying the tax due before or on 20th of every month as stipulated in the VAT Act 2013.

2.2.2 Psychological Theory

Psychology theory by Mocetti (2004) urges that the tax obligations are complied with due to the influence of psychological factors. The theory considers taxpayers' ethics and morals as a key, among other factors. The theory indicates that taxpayers comply even when the likelihood of detection is minimal. Tax morale is termed as the individual factor that motivates a person to comply with tax obligations. As a determinant of tax behavior, tax morals aim to explain how and why a taxpayer morality influences his or her tax behavior Tax evasion can be attributed to the tax morale (Mocetti, 2004). Taxpayers would be inclined to evade tax when the communities in which they live or operate disapprove of tax evasion. Taxpayers are more likely to conform to tax obligation requirements if their friends, relatives and acquaintances comply with these obligations. Also, taxpayers will evade taxes if they feel that other people are getting away with tax evasion. In other words, if a society tolerates tax evasion, such a society would encourage tax evasion.

Cummings (2007) supports the theory in his study where he said taxpayers can feel morally justified in evading taxes if they feel that the quality of public goods and services are unsatisfactory. In most economies, tax evasion rate is low when the provision of public goods and services is satisfactory. Taxpayers will end up complying with their tax obligations if they feel that their government is honest, democratic and participatory and also if the taxpayers feel they play a meaningful role in governance. The theory is crucial in this study since explains how moral and ethics can play a role for an individual to be tax compliance or not. The researcher related how morals and ethics of taxpayers affects tax compliance especially when it comes to registration. Filing. and payment of VAT tax due when transacting business.

2.2.3 Theory of Planned Behaviour

Ajzen's (1991) Theory of Planned Behaviour (TPB) is a theory within the field of social psychology. TPB theorizes that individuals make rational choices to engage (or not engage) in the behaviour of interest. The choices made are influenced by individuals' own beliefs about the outcome and the evaluation of the favourableness (or unfavourableness) of the outcomes from engaging in the target behaviour. These beliefs and expected outcomes underlie three conceptually distinct salient beliefs, which are central to the TPB Model: behavioural beliefs (perceived beliefs about the likely outcomes from engaging in the target behaviour and the evaluation of the desirability of these outcomes); normative beliefs (perceived social pressure); and control beliefs (perceived ease or difficulty of engaging in a desired/undesired behaviour). Collectively, these elements influence individuals' intentions to engage in the target behaviour.

An individual's intention to behave in turn (together with the direct effect of perceived behavioural control) influences an individual's behaviour. Since its development some twenty years ago, the TPB has been widely used to explain human behaviour. The literature suggests that the TPB is one of the most influential models in predicting behavioral intentions and behaviors, and it has been comprehensively validated in the behavioral domain (Smart, 2013).

In conclusion, the Theory of Planned Behavior suggests that individuals' intentions, together with their perceived control over the behavior determine whether or not they will actually engage in the behavior. This means that if the taxpayer is aware of online monitoring of tax transactions, he/she will try to correctly declare by filing the returns and make the correct payments

2.3 Empirical Review

Tax authorities in various countries pay high attention to the electronic services, there are several studies on on-line tax filing and e-payments. For example in Germany, J. Seaman et al., (2011) did a study on the benefits of a computerized integrated system of taxation (iTax). They found out that iTax system has cost saving and service improvement effects induced by e-Government. The KRA sixth corporate plan is guided by the authority's ability to leverage technology to enhance service delivery and promote compliance. A research study of South Korea and Turkey on user evaluation of tax filing websites was done by Lee et al. (2013), to compare the design and the complexity of the web sites and the ease with taxpayers can file tax returns and queries on their tax status. While Turkey had a complex online system, to the contrary Turkish users did not find tax filing system difficult to use and that was attributable to the fact that they relied on accounting professionals to do their tax returns online

According to a study conducted by Gidisu (2012), the following are the major usefulness Turkey is enjoying from the adoption of automation tax collection in the operation and management of municipalities: The automation of tax collection saves the cost and enhances the efficiency of the process. The adoption of the system in Turkey saved the country \$23.1 million dollars as the system presented a platform for fewer workers to be employed with optimum efficiency: Another usefulness is time savings; in Turkey the new system of municipal management offers a great deal of effective management as the system is employed to perform a multiple task within a limited timeframe. Automation of tax collection also brings about efficiency and effectiveness in the declaration and subsequent payment of tax due. The situation in Turkey indicated that the new system offers a framework for all taxpayers to be tracked. The ultimate of all of these is enhancing tax compliance. (Gidisu (2012)

Wamathu (2013) studied the effects of electronic taxation on the financial performance of audit firms in Kenya. From the finding the study found that there has been timely filing of returns since inception of iTax, there has been a reduction in audit period due to introduction of iTax, respondents were quite knowledgeable, system failure when login were less, iTax was user manual friendly , iTax system was reliable and that iTax was not user friendly, iTax system cost effective, iTax system was cost effective and respondent were aware of that, iTax system was electronic cash register and electronic signature device. She recommended that there is a

need for the Kenya Revenue Authority to invest in technology in order to reduce the system failure as the study revealed that system failure affects system logins. System failure discourages use of technology.

A study done by Kamau (2014) focused on the adoption of technology as a strategic tool in enhancing tax compliance in Kenya: a case study of large taxpayers of Kenya Revenue Authority. The study examined the impact of adoption of technology as a strategic tool in enhancing tax compliance in Kenya. The study revealed that the adoption of technology does have an impact on the tax compliance levels of the large taxpayers. In addition, it was found that there is a positive relationship between the adoption of technology and the tax compliance levels.

2.4 Conceptual Framework

This research study proposes a conceptual framework in which the independent variables are online tax filing, online tax payments and online monitoring and the dependent variable is the VAT compliance

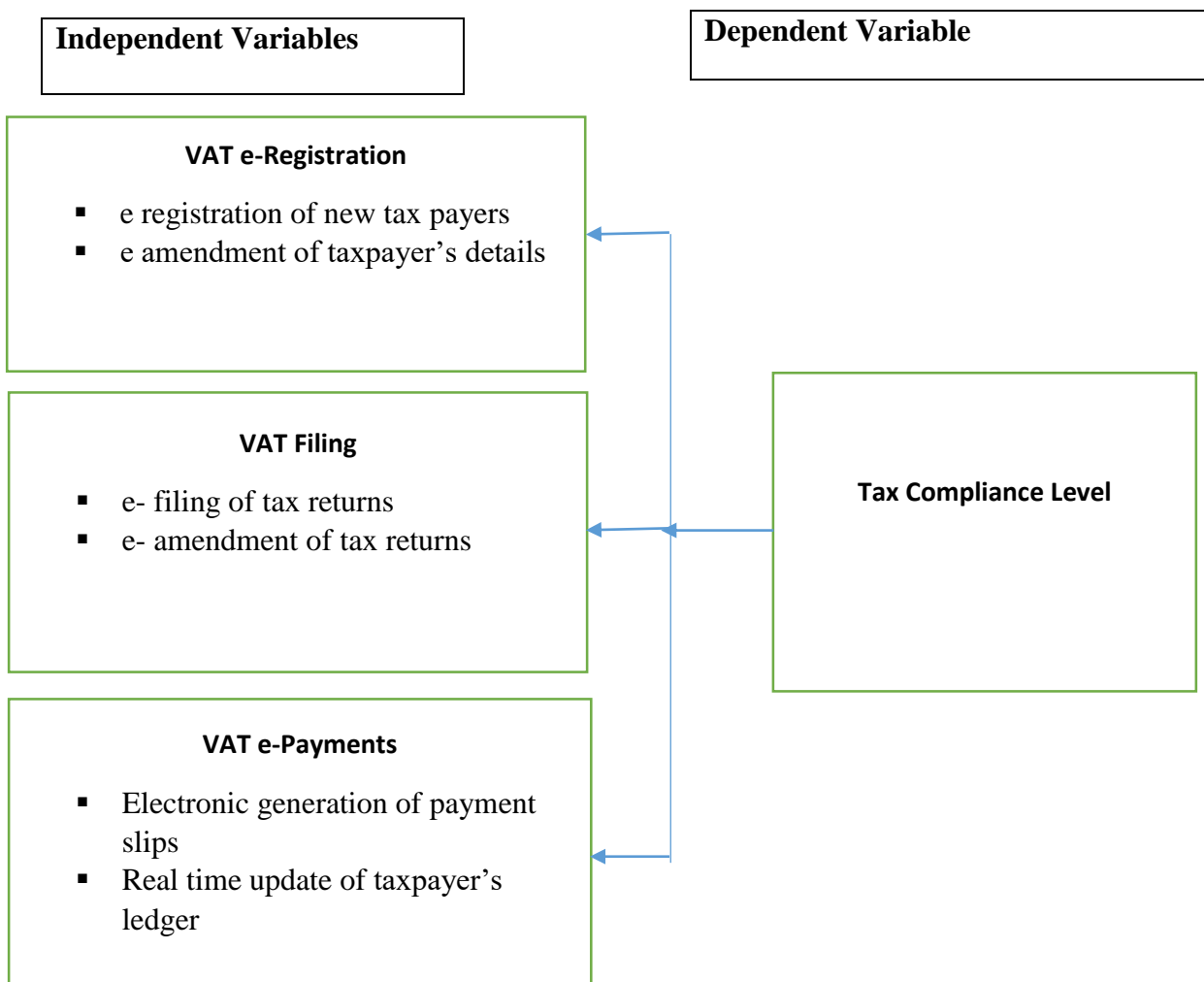


Figure 2.1: Conceptual Framework

The conceptual framework above shows the relationship between the independent variable and the dependent variable. The independent variable is the online VAT services (e-registration, e-filing and e-payment) while the dependent variable is the VAT tax compliance. The components of iTax include online taxpayer registration, online tax return processing, online payment

In this study, compliance was looked at comprehensively as VAT registration compliance, filing compliance and payment compliance, Registration compliance relates to the portion registered tax payers with the appropriate tax obligation which is VAT in this study. Filing compliance relates to the proportion of VAT tax returns filed on time, e-return acknowledgement receipt and penalty imposed for non-compliance. Computation compliance measures the percent of the correct VAT tax liability that is correctly computed and reported. Tax payment compliance measures the portion of the computed tax liability that is paid within the timelines of tax laws through payment registration slip based on the reported tax due and bank confirmation receipt.

2.4.1 e-VAT registration (online)

An accurate central taxpayer registry is paramount for ensuring proper management of taxpayer obligations. In many rapidly growing markets, this task can be especially challenging, as much of the economy is likely to comprise “informal” and small-scale businesses, and the tax authorities lack most of the external controls that ensure a taxpayer stays within the system. Given that such administrations do not have the resources to effectively control all taxpayers, it is all too easy for a potential taxpayer to effectively fall off the radar in these circumstances—either by not registering in the first place or by stopping declarations and to do so without facing any major consequence

Sagas, Nelimalyani and Kimaiyo (2015), did an assessment of the impact of the electronic tax register of revenue collection by Kenya Revenue Authority western region, Kenya. The findings from their study indicated that indicated that 75% of the respondents were of the opinion that ETR machines have helped to curb cases of tax evasion. 86% of the respondents were of the opinion that ETRs have helped increase revenue collection due to their efficient nature.

(Wang’ombe, 2014)

2.4.2 e-VAT filing (online)

Mandola (2013) defines electronic filing as an internet-based system that enables the taxpayers to register and submit their tax returns over the internet. A number of governments have responded by adopting electronic filing (henceforth e-filing) of taxes. E-filing refers broadly to online submission of tax declarations, typically replacing in-person submission to tax officials. As of 2015, 32 percent of developing countries had introduced e-filing and its prevalence continues to grow rapidly (World Development Report, 2016)

The most common feature of tax reforms reported in the 2015 World Bank Doing Business Indicators was the introduction or enhancement of electronic systems for filing and paying taxes, with 26 economies implementing such changes on e-filing contribute to system-wide efficiency gains by removing the need for physical collections of forms and data entry. Lastly, by making tax information submitted by taxpayers immediately available electronically, e-filing may increase the ease of data analysis for monitoring. (World Development Report, 2016). Electronic filing allows taxpayers to submit their tax declarations online instead of in person at the tax office, thereby eliminating the need for time-consuming visits to the tax office and frequent interactions with tax officials (and the potential unofficial behaviors that may arise from these interactions) (Okunogbe, 2017). E-filing or online return filing of income tax refers to successful filing of Tax Returns through the internet or web-based tax systems. Electronic systems for filing returns and paying the due taxes, if accepted and adopted by most businesses and individual taxpayers, result in tangible advantages to both the taxpayers and the government.

The government gains in the form of reduced operating costs such as costs associated with submission, storage and handling of returns in addition to saving time which in turn boosts compliance. The taxpayer benefits from the system is formed of reduced calculation errors, preparation and filing time. Furthermore, the tax domain is different from other situations where individuals may choose electronic services over traditional services, such as electronic retail services or online banking because the domain (that is the tax law) is complex and most taxpayers are not experts. In addition, e-filing introduces the issues of security and privacy protection and taxpayers' dislike and distrust of the tax authorities and the government in general. Finally, e-filing research provides an intersection of various academic disciplines, namely information systems, public finance, public administration, public policy, and accounting (taxation). (Pippin & Tosun, 2014).

The iTax system has simplified the various tax processes, shortening the time taken to file returns and increased revenue collection. Taxpayers can use the iTax system to file returns for Pay As You Earn (PAYE), Value Added Tax (VAT), Individual annual Income Tax Return (IT1), Corporate Tax returns and agency revenue that includes Sugar Development Levy, Stamp Duty and Kenya Bureau of Standards. (KRA press release ,2015)

2.4.3 e- VAT payment (Online)

There have been several studies concerning the electronic tax payments across the globe. Automation of tax payment was first implemented in US. Australia is among the countries that had implemented the system in the management of their municipalities (Turner et al, 2004). However, the purpose of the tax strategy in Turkey is to simplify tax laws and regulations and to harmonize the tax law with European Union law. The development and utilization of modern technology in revenue mobilization has become a critical feature of every country particularly developing countries. This is as a result of the numerous usefulness modern technology offers in the development of the municipalities. For every tax filing or payment, taxpayers have to log in, select and complete the appropriate forms, sign and submit them digitally. An acknowledgment is received immediately (Turner et al, 2004).

The e-filing system automatically calculates the necessary payment details. It also limits deductions that taxpayers are entitled to base on deduction rules—enabling taxpayers to avoid mistakes that would result in penalties (Doing business, 2014). In many rapidly developing economies, mobile and Internet penetration is often comparatively high. Tax administrations can exploit this infrastructure by introducing electronic channels such as Internet portals, mobile payment options, and ATMs as a powerful lever for improving service levels. By using these channels for simple taxpayer transactions, such as tax declarations and payments, and while conveying a strong sense of its public purpose. Such approaches not only help reduce the length of queues at tax offices, but by so doing remove a barrier to compliance.

They also enable the databases to be of much better quality and, as a result, provide the basis for more effective audit and collection processes in the medium term. (Pereira, Hoekstra, & Queijo, 2013). Seelmann, Lerche, Kiefer and Lucante (2011) did a study Benefit of a computerized integrated system of taxation in Tanzania, they argued that Taxation is often the most important source of state revenue. However, many developing countries lack effective

tax administration structures and processes. Technological innovations have not filtered through to the daily working reality of tax officials.

2.5 Critique of literature review

Ayodeji (2014) looked at the Impact of electronic tax systems for Tax Administration in Nigeria. He argued that the dwindling global fortune occasioned by the fall in the price of crude oil, the major source of wealth for Nigeria shifted the attention of the government and major stakeholders in the country to the revenue generated locally. But the daunting task of boosting the internally generated revenue necessitates the adoption of electronic tax systems technologies to drive Tax administration and concluded that electronic tax systems plays an important role in the increase of internally generated revenue in Nigeria by ensuring compliance thereby boosting productivity and economic activities in the country.

Mandola (2013) noted that half of the sampled respondents in her study on the adoption of ITMS system indicated that any online e-government services need to be easy to use to enable even those with little internet experience to effectively use the service. In this context, she found a correlation between an individual's internet experience, with the small and medium enterprises, the issues are much more complex than the availability of the internet. Other issues like time to attend forum such as taxpayer's education was also an issue. It was also evident that small and micro enterprises tend to perceive iTax system as complex and payment system so complicated to them. Lack of the ability to use the e-filing system quickly and efficiently or lack of understanding of the type of information required by the online tax filing system forces taxpayers to engage third parties (Mandola, 2013).

Kamau (2014), sought to determine the impact of adoption of technology as a strategic tool in enhancing tax compliance in Kenya. The study focused on the large taxpayers of Kenya Revenue authority. The study concludes that indeed the adoption of technology does impact on the tax compliance levels of the large taxpayers. Additionally, it was concluded that the Kenya Revenue Authority has effectively implemented its Internet and Communication Technology strategy at large. Wamathu (2013) studied the effects of electronic taxation on the financial performance of audit firms in Kenya. From the finding the study found that there has been timely filing of returns since inception of iTax, there has been a reduction in audit period due to introduction of iTax, respondents were not quite knowledgeable, system failure when

logging in were less, iTax system was reliable and that iTax was not user friendly, iTax system was cost effective and respondent were aware of the iTax system, electronic cash register and electronic signature device.

2.6. Research Gaps

A review of the studies above, revealed a gap that the researcher opted to bridge by conducting a study in effect iTax system on VAT revenue collection in North of Nairobi. For instance, Ayodeji (2014) looked at the Impact of electronic tax systems on Tax Administration in Nigeria. He argued that the dwindling global fortune occasioned by the fall in the price of crude oil, the major source of wealth for Nigeria shifted the attention of the government and major stakeholders in the country to the revenue generated locally. Even though Nigeria is developing country like Kenya. Kenya does not have crude oil as the major source of wealth like in Nigeria. The topic was as also generalized on tax administration and not focus on a specific area like VAT compliance.

Kamau (2014) in a bid to determine the impact of adoption of technology as a strategic tool in enhancing tax compliance in Kenya in his study. The study concludes that indeed the adoption of technology does impact on the tax compliance levels of the large taxpayers. There was a gap that needed to fill as the study mainly focused on the large taxpayers of Kenya Revenue authority. This study is imperative since it will look at a station like North of Nairobi, which deals with both large, small and medium enterprise.

Sabul (2017) in her study assessed the impact of iTax system on tax compliance in Kenya. Even though the study is related to this, the glaring gap in the study was the wide scope of and hence the findings did not address any specific obligation like VAT.

Author	Year	Findings	Research gap
Kamau S.K	2014	The adoption of technology does impact on the tax compliance levels of the large taxpayers	The study only focuses on large tax payers on not small and medium

			enterprises was not captured
Oyeyinka, Ayodeji	2014	Electronic tax systems on having a significant effect on Tax Administration in Nigeria.	The study was done outside Kenya and there a need replicates the same study in Kenya
Sabul, Martin	2017	The iTax system has an impact on tax compliance in Kenya	The wide scope of was wide and hence the findings did not address any specific obligation like VAT

Table 2.1 Research Gaps

2.7 Summary

Findings from of the study of Ayodeji (2014) indicates that electronic tax systems play an important role in the increase of internally generated revenue in Nigeria by ensuring compliance thereby boosting productivity and economic activities in the country. This also resonates with the conclusion in (Kamau 2014) report, which revealed that the adoption of technology does affect the tax compliance levels of the large taxpayers. Additionally, it was concluded that the Kenya Revenue Authority has effectively implemented its Internet and Communication Technology strategy. Similarly, Wamathu, (2013) stated in his findings that there has been timely filing of returns since inception of iTax, there has been a reduction in audit period due to introduction of I-Tax, respondents were quite knowledgeable. A past study reviewed above is directly contributing to the study at hand as there is a relationship between the past study and this study as they both aimed to find use of electronic service on tax administration.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the procedure that was followed to carry out the entire study, which was to determine the effect of iTax system in VAT tax compliance in North of Nairobi station. This chapter discusses a systematic account of how the research work will be conducted to obtain the information necessary to cover the three research objectives. It majorly addresses the research design, the population, the census design, research instrument, pilot test, data collection, procedure, and data processing and analysis. In addition, the chapter spells out how the study findings will be presented.

3.2 Research Design

Research design is a blueprint for fulfilling the objectives of the study. Although there are numerous research designs, the study employed descriptive research design. This is because the design is well structured with clearly stated research questions. (Kothari ,2004). Descriptive research design will be adopted as it enabled the researcher to generalize the findings to the study population. The study will utilize a quantitative approach in the collection of data. According to Kothari (2009), the approach enables data to be systematically collected and analyzed to provide a descriptive account of the questions under study. The design is preferred because it helps produce data that is holistic, contextual, descriptive, in-depth and rich in details.

The study design enabled an analysis of the relationship between compliance and VAT online registration, VAT online filing and VAT online payment. A research study done by Wasao (2014) utilized the descriptive study design by using it to effectively analyze the relationship between technology and levels of tax compliance in terms of on-line filing of tax returns and on-line remittance of taxes due. The study concluded that there was iTax system does affects remittance of taxes due. Odongo (2016) in his study also utilized the descriptive study design approach to establish and analyze the possible relationship subsisting between electronic filing system and tax compliance levels demonstrated by the degree of adherence to electronic filing of returns for various taxes and their tax due remittance. The research study was able to

establish the effects of electronic filing systems on tax compliance among the small and medium enterprises within the Mombasa Central Business District.

3.3 Target Population

According to Kothari (2006), a population refers to an entire group of individuals, events or objects having a common observable characteristic. A target population is the complete group of specific population elements relevant to the research project. In this context the target population was 142 KRA DTD officers stationed at North of Nairobi, KRA headquarters Times Tower building.

Table 3.1
Distribution of target Population

SECTIONS	NO OF OFFICERS	PROPORTION (%)
Taxpayer Services (TPS)	38	26.7%
Compliance	46	32.4%
Debt	44	31.0%
Policy Unit	8	5.6%
Support Staff	6	4.2%
Total	142	100%

3.4 Sampling Frame

According to Schindler and Cooper (2001), a sampling frame comprises of a list of people from which the researcher uses to obtain information about the study. A sampling frame includes a numerical identifier for everyone liable for study, plus other identifying information about characteristics of the individuals, to aid in analysis and allow for division into further frames for more in-depth analysis. The researcher used a list of KRA DTD staff in KRA both permanent and temporary staff to design a sampling frame.

3.5 Sample and sampling technique

Sampling entails the selection of part of the population that represents the characteristics of the entire group. To determine the sample for various target populations, the researcher used simple random sampling methods which one of the scientific sampling methods which is recommended because it give equal chance to respondent participation hence eliminating biases. Fisher's Model will be used for computing sample size. The sample size will determine by employing the equation below:

Equation $N = \frac{Z^2 p q}{e^2}$

Equation

n= refer to the desired sample size

Z=the standard normal deviate usually set at 1.96 which corresponds to the 95% confidence level.

P= Population of the target population estimated to have a particular characteristic, 50% is normally used because it is the recommended measure if there is a lack of reasonable estimate.

Q=1.0 – p

E=degree of accuracy desired in this context set at 0.05

$$N = \frac{z^2 * p * q}{\varepsilon^2} = \frac{(1.96)^2 (0.5) (0.5)}{(0.05)^2} = 384$$

Given that the target population is less than 10,000. Therefore, the actual sample size will be;

$$NF = n / (1 + n/N)$$

Where NF = desired sample size (when the population is less than 10,000).

N = desired sample size (when the population is more than 10,000).

N = the estimate of population size.

The target population for the study was 142 KRA DTD officers in North of Nairobi station

$$NF = 384 / (1 + 384/142)$$

$$= 103$$

3.6 Data Collection Instruments

In data collection, the researcher described the major instrument(s) for collecting data from the subjects, Schindler and Cooper (2001). In this study the main data collection instruments will be the questionnaires containing both open ended and close ended questions. Questionnaires were preferred because they are effective data collection instruments that allow respondents to give much of their opinions pertaining to the researched problem. The questionnaires used the four Likert scale (from strongly agree to strongly disagree). The questionnaires were

administered to KRA Domestic Taxes staff at North of Nairobi staff. Secondary data relating to VAT revenue collection in Kenya together with the trend were obtained from KRA revenue reports. Questionnaires had an introductory letter introducing the researcher to the respondents and explaining the purpose of the research. Respondents were assured of strict confidentiality of the information they have shared with the researcher and that the information will be strictly for research purposes. This was done to enhance the response rate.

3.7 Data collection procedure

The study utilized both primary and secondary data. Primary data were obtained by the use of a structured questionnaire containing both open-ended and close ended questions. The questionnaires were administered to KRA DTD officers at North of Nairobi station. Secondary data to support the growth of the VAT revenue collection together with the trend was obtained from published revenue collection reports (ICPAK, 2015)

3.8 Pilot Study

A pilot study was done as stated by Saunders et al. (2009) and this will help to test the survey instrument, helped to validate the questions, remove errors of omission and commission, rectify mistakes and check the general structure of the questionnaire. This was carried out before proceeding to collect the actual data for analysis. Hence a pilot study was 10 KRA DTD staff in West of Nairobi station. The intention of carrying out a pilot study outside the study area was to avoid affecting the study sample. The rule of thumb is that 1% of the sample should constitute the pilot test (Cooper & Schilder, 2011).

3.9 Data analysis

For the researcher to ensure that only the sufficiently and appropriately filled ones are considered for the study ascertained the questionnaires collected from the respondents. This was done to eliminate incomplete data and minimize outliers in the eventual findings. The Statistical Package for Social Sciences (SPSS) version 25.0 computer software was used to facilitate data analysis. Data collected from the questionnaires was analyzed using descriptive and inferential statistics. Descriptive statistics encompassed, frequencies, percentages, means and standard deviations while inferential statistics constituted Pearson's product moment correlation coefficient and multiple regression analysis. The findings have been presented in the form of tables and were interpreted and discussed in line with the study objectives.

3.9.1 Analytical Model

The following regression analysis was used to determine the effect of of iTax system on VAT tax compliance in North of Nairobi station; KRA. The research, analytical model was depicted by the linear equation given below:

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

Where:

Y = Tax compliance Level

$\beta_0 - \beta_3$ = Regression coefficient of independent variable

X1 = e-VAT Online Registration

X2 = e-VAT Online Filing

X3 = VAT Online payment

π = error term, it considers all the possible factors that would possibly influence the dependent variable though not captured in the model which includes tax payer education, increase in the number of business and tax audit.

CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter discusses findings that were obtained in the analysis of the impact of iTax system on VAT compliance in KRA North of Nairobi station. This was done using methodology that was discussed in chapter three above. The chapter discusses the summary statistics of the variables that were used and the other statistical measures of the variability. The variables included services offered on iTax such as online registration, online filing and online payments. The data collected and analyzed was both primary and secondary data. The research sampled 103 KRA officers stationed at KRA North of Nairobi station and the data were interpreted as per the research questions.

4.2 Response Rate

One hundred and three (103) questionnaires were distributed to KRA DTD officers. Out of that 90 questionnaires were returned, from which 5 questionnaires were discarded for being incomplete. The researcher ended up with 85 usable questionnaires which represented a response rate of 87%. The highest response was attributed to the respondent's enthusiasm to participate as the researcher explained the reason for conducting research since Mugenda recommended between 50-70%

Table 4.1 Response Rate

Response	A questionnaire administered	Questionnaire filled and returned	Percentage
Total	103	90	87%

4.2.1 Reliability Analysis

Prior to the actual study, the researcher carried out a pilot study to pre-test the validity and reliability of data collected using the questionnaire. The pilot study allowed for pretesting of the research instrument. The result in reliability of the research instruments are presented in Table 4.2 below

Table 4.2: Reliability Coefficient Results

Scale	Cronbach's Alpha	Number of items
Online registration	0.739	5
Online filing	0.742	5
Online payment	0.802	5
VAT Compliance	0.871	5

Cronbach's alpha of well above 0.7 implied that the instruments were sufficiently reliable for the measurement. As most item total correlations were reasonably high, with Cronbach's alpha exceeding 0.7, the construct validity of the instrument was considered accurate (Bryson 2002).

4.2.2 Analysis of position held by the respondents within the Authority

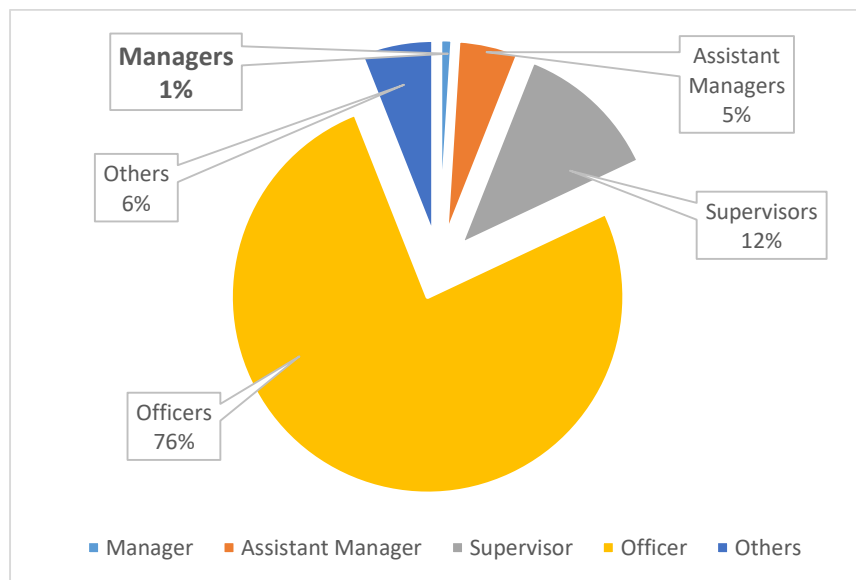


Fig 4.1 Respondent Positions in KRA North of Nairobi Station

Fig.4.1 Above shows the percentage of the respondent positions within the organization with the majority of respondents holding officer position with 76% followed by supervisor with 12% percent. In addition, 5% of the respondents were holding positions of Assistant managers, others were represented by 6%, while the position with least staff according to the respondents were managers with 1%

4.2.3 Distribution by Length of service period in KRA

Table 4.3 Distribution of respondents by Length of service period at KRA

Length of Service	Number of respondents	%
Less than 1 year	2	2.4
1-5 years	30	35.3
6-10 years	25	29.4
11-15 years	15	17.6
16-20 years	10	11.8
More than 20 Years	3	3.5
Total	85	100

The staff who participated by filling the questionnaire from KRA North of Nairobi had worked for KRA for different number of years as captured in Table 4.4. The majority (35.3%) of the respondents had worked for 1-5 years, 2.4% worked for less than a year while 17.6% have worked since 11-15 years. Further, 29.4% had worked for a period of 6-10 years while only 3% have worked for more than 20 years.

4.2.4 Analysis of respondent by the sections or departments

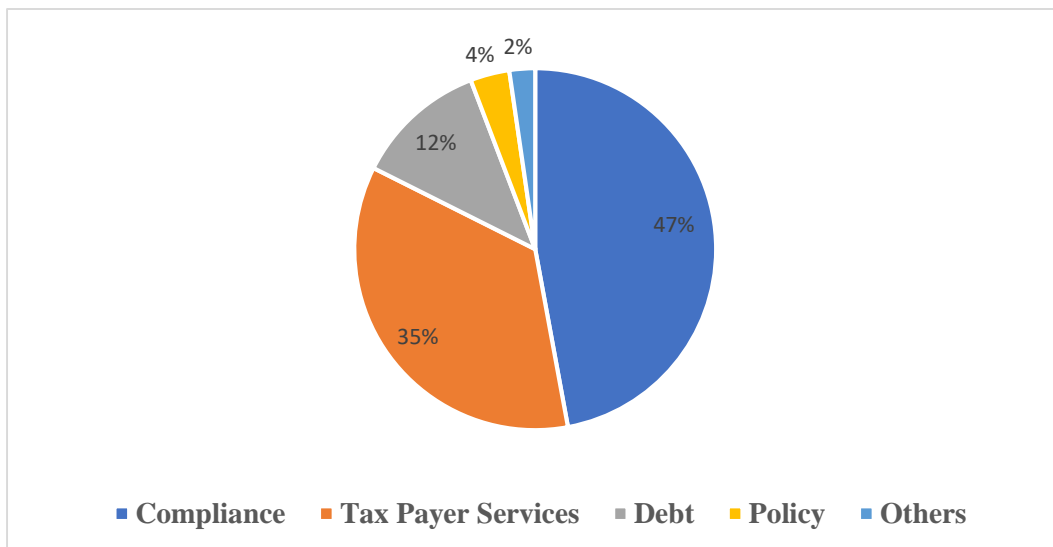


Fig.4.2 Distribution of respondents by the sections or departments

Staff from KRA North of Nairobi station were asked to indicate the section or department where they are stationed and fig 4.2 above shows the various sections the respondent operate from. 47% of the respondents of which are the majority indicated they were from the Compliance section and 35% of taxpayer services who frequently assist taxpayers in filing and generating payment slips of various tax obligations including VAT. Additionally, 12% percent of respondents indicated that they were from debt section.

4.2.5 Analysis of Frequent interaction with iTax

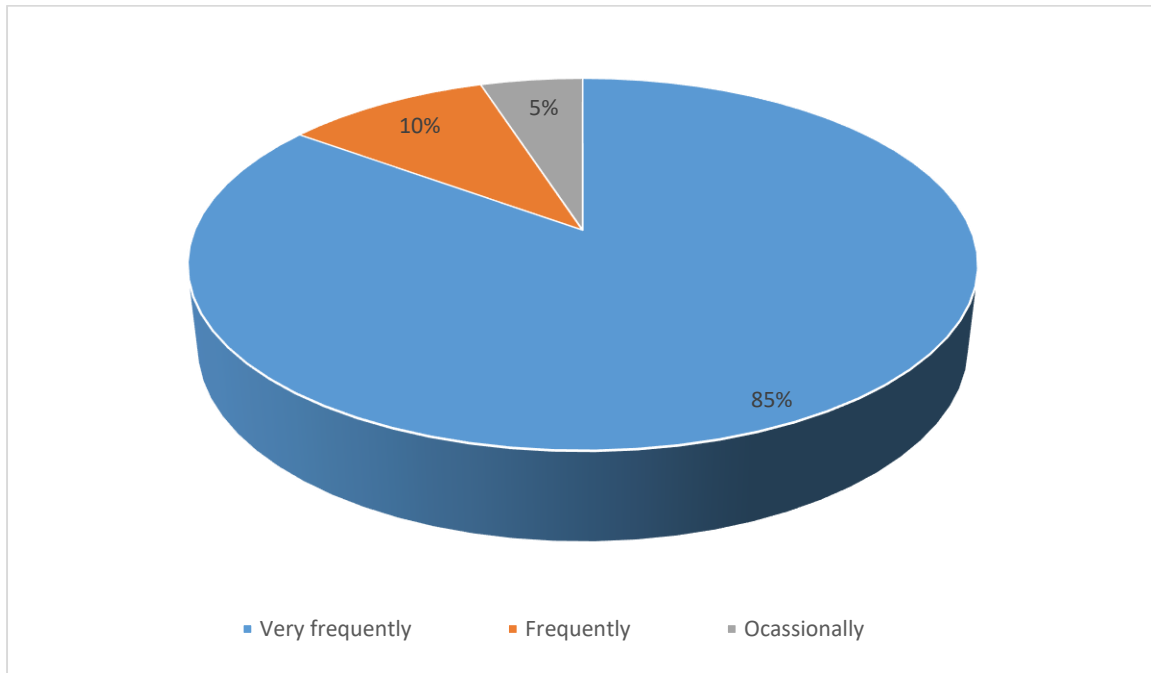


Fig.4.3 Analysis of Frequent interaction with iTax

Respondents were asked to state how frequent they were interacting with iTax system when performing their duties. Finding shows that the majority of the staff interacted with the iTax system very frequently while the lowest percentage were interacting with it occasionally as depicted in the figure above. This shows that iTax system was very popular and a significant number of the officers were using it.

4.3 DTD staff perspective on the use of iTax system on VAT Compliance

The KRA DTD staff from North of Nairobi station indicated their level of agreement with the following statements regarding the use of iTax system on a scale of 1-4: where 1-Strongly agree, 2. Somewhat agree, 3- Somewhat disagree, and 4-Strongly disagree

Table 4.4 VAT e-registration

Statements	N	Mean	Standard deviation
iTax has enabled KRA to monitor taxpayer's e-registration details and identify inconsistencies	89	1.323	.8073
iTax system has enabled to taxpayers to amend their e-registration details to incorporate VAT obligation when need arise	89	1.7445	.9068
Since introduction of iTax system the number of VAT e-registration has tremendously increased	89	2.3131	.7037
VAT registration on iTax has enabled staff to generate a report of the number of tax payers with VAT obligation and are not filing or paying their tax due	88	1.1043	.8541
Registration of VAT is simple and easy on iTax hence this has encouraged voluntary compliance.	89	2.515	.9711

According to findings on table 4.4 above, the respondents strongly agreed with the fact that tax has enabled KRA to monitor taxpayer's e-registration details and identify inconsistencies with a mean score of 1.323 with a standard deviation of 0.8073. This shows that that e-registration in iTax system has made it easier to monitor taxpayer registration details. The respondents also strongly agreed with the statement that iTax system has enabled tax payers to amend their e-registration details to incorporate VAT obligation when need arise with a means of 1.7445 with a standard deviation of 0.9068. However, respondents somewhat agreed with the statement that since the introduction of iTax system the number of VAT e-registration has tremendously increased with a means of 2.3131 with a standard deviation of 0.7037.

Additionally, KRA DTD North of Nairobi staff strongly agreed with the fact that, VAT registration on tax has enabled staff to generate a report of the number of taxpayers with VAT obligation and are not filing or paying their tax due with a mean score of 1.1043 with a standard deviation of 0.8541. Lastly, respondents somewhat agreed with the fact that registration of VAT is simple and easy on tax hence this has encouraged voluntary compliance with a mean score of 2.515 and standard deviation of 0.9711 With the target population being homogenous, the standard deviation small margin of variation between 0.9711 and 0.7037.

Table 4.5 VAT e-filing

Statements	N	Mean	Standard deviation
Filing of VAT return is simple and easy	89	1.323	.8073
Filing of VAT return takes a shorter time	88	1.7445	.9068
Filing VAT using iTax system has reduced the number of taxpayers visiting the KRA premises to be assisted in filing VAT return	88	2.3131	.7037
Filing VAT using iTax system has enabled KRA to identify VAT defaulters and enforce payment measures	88	1.1043	.8541
Filing VAT using iTax has encouraged voluntary compliance among taxpayers	88	2.515	.9711

According to findings on table 4.5 above, the respondents strongly agreed with the fact that Filing of VAT return is simple and easy with means score of 1.323 with a standard deviation of 8073. This shows that that VAT filing in iTax system process has been made easier on iTax. The respondents also strongly agreed with the statement of filing of VAT return takes shorter time with a means of 1.7445 with a standard deviation of .9068. This is contrary to the assumption made during the first time the system was launch when there was an outrage that the iTax system was cumbersome to use. However, respondents somewhat agreed with the statement of VAT filing using iTax system has reduced the number of taxpayers visiting the KRA premises to be assisted in filing VAT return with a means of 2.3131 with a standard deviation of 7037. This shows that even though iTax system has made it simple and easy file returns it has not reduced the number of taxpayers visiting the KRA premises.

Quite a number of taxpayers still visit the KRA premises to get assisted. Additionally, KRA DTD north of Nairobi staff strongly agreed with the fact that, Filing VAT using iTax system has enabled KRA to identify VAT defaulters and enforce payment measures with a means score of 1.1043 with a standard deviation of 0.8541. Lastly, respondents somewhat agreed with the fact that filing VAT using tax system has encouraged voluntary compliance among taxpayers with a mean score of 2.515 and standard deviation of 0.9711. With the target population being homogenous, the standard deviation small margin of variation between 0.9711 and 0.7037.

Table 4.6 VAT e-Payment

Statements	N	Mean	Standard deviation
iTax has enabled KRA officers to raise additional assessment with regards to VAT e-payments	89	1.323	.9073
iTax has enabled taxpayers to see real-time transactions and e-payments details in taxpayer's ledger account and act accordingly	88	1.4541	.8068
Electronic VAT e-Payment has enabled taxpayers to file and pay using their mobile phones	88	2.1131	.9037
iTax has enabled KRA officers to raise additional assessment with regards to VAT e-payments	89	1.9103	.7546
Electronic generation of payment slip has reduced chances of evading payment of tax	89	2.9159	1.0711

From the findings in table 4.6 above. The respondents also strongly agreed with the statement, iTax has enabled KRA officers to raise additional assessment with regards to VAT e-payments with a means score of 1.323. with a standard deviation 0.9073. Furthermore, the respondents somewhat agreed with the fact iTax has enabled taxpayers to see real-time transactions and e-payments details in taxpayer's ledger account and act accordingly with a means score of 1.4541 with a standard deviation of 0.8068. Additionally, Staff in KRA DTD North of Nairobi staff somewhat agreed with the facts Electronic VAT e-Payment has enabled tax payers to file and pay using their mobile phones with a means score of 2.1131 with a standard deviation of 0.9037.

When asked to state whether iTax has enabled KRA officers to raise additional assessment with regards to VAT e-payments; the respondents agreed with the statement with a means score of 1.9103 with a standard deviation of 0.7546. However, respondents somewhat disagreed with the statement; electronic generation of payment slip has reduced chances of evading payment of tax with a mean score of 2.9159 with a standard deviation of 1.0711. This indicates that the

electronic generation of payment slip has not effectively contributed to tax payers' evading tax payments as cases of tax evasion is still high as revealed in the recent PIN deactivation exercise. With the target population being homogenous, that is the population was purely KRA staff, the standard deviation is of a small margin of variation with the highest value of 1.0711 and the lowest value 0.7546

Table 4.7 VAT Compliance

Statements	N	Mean	Standard deviation
Real time update of taxpayer ledger account has increased chances of accuracy and transparency with regards to VAT tax payment hence increased compliance.	85	1.1135	1.0533
Since the introduction of mandatory filing, and Payment of VAT the level of VAT compliance has increased.	85	1.7453	.9513
The electronic tax system has encouraged voluntary compliance among tax payers hence increasing overall VAT compliance	84	1.4217	.9753
With the use of iTax system, it is easy to detect under declaration of VAT tax or non-declaration of VAT tax liability among taxpayers	85	2.1873	.8997
The electronic tax system has enabled KRA to detect unregistered tax payers who transact vatable goods without declaring the same	85	1.1843	1.078

From the table 4.7 above findings shows that the respondent strongly agreed with the fact the Real time update of taxpayer ledger account has increased chances of accuracy and transparency with regards to VAT tax payment hence increased compliance with a mean score of 1.1135 and standard deviation of 1.0533. Moreover, the respondents also agreed with the fact, since the introduction of mandatory filing, and Payment of VAT the level of VAT compliance has increased with a mean score of 1.7453 and standard deviation of 0.9513

Furthermore, findings also indicated that Electronic tax system has encouraged voluntary compliance among tax payers hence increasing overall VAT compliance with a mean score of and standard deviation of 1. 4217 and standard deviation 0.9753. In addition to this, the findings indicate that with the use of the tax system, it is easy to detect under declaration of VAT tax or

non-declaration of VAT tax liability among taxpayers with a mean score of 2.1873. Lastly, the respondents agreed with the fact that the tax system has enabled KRA to detect unregistered tax payers who transact vatable goods without declaring the same with a mean score of 1. 1843 and standard deviation of 1.078. The finding concludes that iTax system has indeed increased VAT compliance by facilitating the process of e-registration, e-filing, and e-payment. The population being homogenous this resulted to a small margin variation

4.4 Correlation Analysis Matrix

The correlation analysis is one of the most common and most useful statistics. A correlation is a single number that describes the degree of relationship between two variables (Wilcox D.W.2010). The results show that e-registration had a positive correlation on VAT compliance. E-payment had a positive correlation on VAT compliance. E-payment had a positive correlation on VAT compliance. This indicates that e-registration, e-filing, and e-payment had significant impact on VAT compliance.

Table 4.8 Correlation Analysis Matrix

Correlations

		e-Registration	e-Filing	e-Payment	VAT Compliance
e-Registration	Pearson Correlation	1	.510**	.148	.028
	Sig. (2-tailed)		.000	.000	.000
	N	85	85	85	85
e-Filing	Pearson Correlation	.510**	1	.515**	.172
	Sig.(2tailed)	.000		.000	.000
	N	85	85	85	85
e-Payment	Pearson Correlation	.148	.515**	1	.488**
	Sig.(2tailed)	.000	.000		.000
	N	85	85	85	85
VAT Compliance	Pearson Correlation	.028	.172	.488**	1
	Sig.(2tailed)	.000	.000	.000	
	N	85	85	85	85

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

Table 4.9 Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.692^a	.479	.178	2.45569

Predictor (constant) Predictors: (Constant), e-Registration, e-Filing, e-Payment

4.5 Coefficient of Determination

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variations in the dependent variable (revenue collection) that is explained by all independent variables. The findings indicate that 47.9% of VAT compliance is attributed to a combination of the three independent factors investigated in this study (e-registration, e-filing, and e-payment).

4.6 Regression Analysis

In statistical modelling, regression analysis is a statistical process for estimating the relationship among variables. It includes many techniques for modelling and analyzing several variables when the focus is on the relationship between a dependent variable and one or more independent variables (Marshalls, C, 2012). Using SPSS Version 25 the regression analysis given below was projected from the research

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

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	89.355	3	29.785	4.8080	.00 ^b
	Residual	272.562	44	6.195		
	Total	361.917	47			

a. Dependent Variable: Revenue Collection

b. Predictors: (Constant), e-Registration, e-Filing, e-Payment

4.7 Regression Coefficient

This is an extension of simple linear regression. It is used to predict the value of a variable based on the value of two or more variables. The variable to predict is called the dependent variables or criterion variable

Table 4.11 Coefficients

Model		Unstandardized		Standardized	t	Sig.
		Coefficients		Coefficients		
		B	Std. Error	Beta		
1	(Constant)	45.037	4.679		1.641	0.001
	e-Registration	.005	.140	.005	0.290	0.0010
	e-Filing	.139	.191	.111	0.624	0.0023
	e-Payment	.086	.213	.545	3.524	0.002

a. Dependent Variable: VAT Compliance

The model summary and ANOVA table reveal that the regression model had predictive power on VAT Compliance ($R = .692$, $p < .05$) And explained 69.2% of the variability in VAT Compliance. The coefficients indicate that e-filing had the highest explanatory power on VAT compliance ($B = .139$, $p < .05$), followed by e-payment ($B = .086$, $p < .05$) And lastly, online e-registration ($B = .005$, $p < .05$). The fitted regression model from the research findings was presented as follows. $VAT\ Revenue\ Collection = 45.037 + 0.005x_1 + 0.139x_2 + 0.086x_3$. In this regard the research findings and the regression analysis show a connection between the variable involved in the study. This study has therefore proven that the tax system has a significant impact on VAT compliance in North of Nairobi station

$$Y = 45.037 + 0.005x_1 + 0.139x_2 + 0.086x_3$$

Where,

Y = Dependent variable (VAT Compliance)

x_1 = e-Registration

x_2 = e-Filing

x_3 = e-Payment

CHAPTER FIVE: SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of the study done with specific reference to the objectives and research questions of the study used as units of analysis. Data were interpreted and the results of the findings were correlated with both empirical and theoretical literature available. The conclusion relates directly to the specific objectives and research question. The recommendations were deduced from conclusions and discussion of the findings.

5.2 Summary of findings

The research findings showed that there was a significant impact of iTax system on VAT compliance in North of Nairobi station. Most of the respondents agreed to the fact that since the introduction of iTax system they have been able to file VAT returns on time, pay on time and also monitor various VAT online transactions through iTax system. An interview session carried out to KRA DTD officers in North of Nairobi revealed that the iTax system has indeed increased VAT compliance. The staff are able to monitor those who supplied taxable products and services. This is now possible on iTax system since the staff can now generate inconsistency reports through the use of iTax system. Correlation analysis showed that e-filing and e-payment had a positive correlation on VAT compliance. E-registration also had a positive correlation on VAT compliance.

5.2.1 e-Registration and VAT compliance

The study results showed that there was a significant contribution of e-registration on VAT compliance for taxpayers in North of Nairobi station. In all the five questions in table 4.4. above. This implies that through online taxpayer registration, tax system has led to accurate capture of taxpayer's basic information; taxpayers' data captured through tax system have assisted KRA to staff itself accordingly and actively plan its core tax administration function. Through online taxpayer registration, KRA is able to widen its taxpayers' base and consequently increase in VAT compliance. Similarly, KRA staff from North of Nairobi station also agreed with the fact that iTax system has enable KRA to monitor taxpayer's registration details and amend accordingly

However, findings also revealed that iTax system is still complex for this group and majority still visit KRA premises to get assistance which is contrary to what iTax system implementation

was supposed to achieve. Many taxpayers also alluded to the fact that iTax system is still not stable especially when it approaches the due dates.

5.2.2 e-filing and VAT Compliance

The study results showed that there was a significant contribution of e-filing on VAT compliance in North of Nairobi station. In all the five questions in table 4.5 above the findings revealed that respondents agreed with all the question except the question which asked about whether filing VAT returns using iTax had encouraged voluntary compliance among taxpayer's respondents somewhat disagreed with the statement.

This implies that though iTax system has an enhanced revenue collection in North of Nairobi station, voluntary compliance and payment is not directly attributed to this. There are other factors such as revamping tax payer education, sending constant reminder of due date payment which can significantly improve voluntary filing of VAT returns

These findings resonate well with a study done by Odongo (2016) that confirmed that electronic tax filing enhances better decision making. A number of taxpayers appreciated the advantages accruing to electronic tax filing such as accuracy, real-time ledger update while noting the slow processing speed around deadlines. The findings from the research study confirmed that electronic tax filing significantly improves tax compliance

5.2.3 e-Payment and VAT Compliance

From the findings. iTax system has significantly improved the payment process with respondent strongly agreed with the facts that the iTax system has enhanced prompt VAT payments. The majority of respondents also alluded to the fact that in the tax system, the VAT Payment procedure is simple and has been made easier through the use of electronic payment systems. The study also revealed that there was a significant contribution of electronic tax payments on tax compliance. This implies that by embracing electronic tax payments KRA is able to accurately reconcile and validate taxes paid. Electronic tax payments of taxes have improved taxpayer's tax accountability, reduced loopholes for tax evasion and timely payment of taxes due. In this regard, online electronic payments have increased the VAT compliance. Correlation analysis also shows that e-payment had a positive correlation to VAT compliance

These findings are also supported by a study conducted by Okiro (2015) which found that the e-payment system significantly influenced revenue collection performance by the Nairobi City County Government positively, such that increased adoption of e-payment system increases revenue collection performance. The study further revealed that the revenue collection

performance in the Nairobi City County increased considerably after introduction of e-payment system in revenue collection

5.2.4 VAT Compliance

Finding shows that the respondents strongly agreed with the fact the real time update of taxpayer ledger account has increased chances of accuracy and transparency with regards to VAT tax payment hence increasing revenue collections with a mean score of 1.1135. Since implementation of the iTax system and making VAT online filing and payment mandatory, there has been a significant increase of VAT compliance. The system has enabled KRA DTD staff to identify the loopholes with regard to under declaration, underpayment and raising additional assessment. In the financial 2016/2017 VAT collection improved with a bigger margin compared to the other types of taxes. The findings indicate that 22.9% of tax compliance is attributed to a combination of the three independent factors investigated in this study (e-registration, e-filing, and e-payment).

In the KRA 2016-2017 financial year revenue report consumption taxes exhibited strong performance with VAT growing at 21.2%. VAT has exhibited strong growth for the fourth consecutive year with annual growth averaging 21.5% between 2012/13 and 2016/17. The strong performance is attributed to enhanced compliance measures which, among others, include the expansion of the withholding VAT framework. Besides, key sectors including construction and telecommunications showed robust growth in VAT performance underlining continuing resilience of the Kenyan economy

5.3 Conclusions

The study was conducted to investigate the impacts of iTax system on VAT compliance in KRA. The findings revealed that there was a significant impact on the of e-registration, e-filing, and e-payment on VAT compliance. Electronic tax payments of taxes have improved taxpayer's tax accountability, reduced loopholes for tax evasion and timely payment of taxes due. Similarly, the related literature also resonates with this fact that online systems have contributed significantly to improving revenue collections, both globally and locally. iTax system has increased the number of taxpayers filing their tax returns. Online submission of tax data has improved taxpayer's records management through iTax. Some of the suggestions made like improving the tax system speed and availability, especially during the due dates, educating taxpayers on how to use the tax system, sealing some of the loop holes of under declaring sales and generally enhancing payment gateway will a long way in helping KRA to increase revenue collection

5.4 Policy Recommendations

5.4.1 Recommendation on e-Registration and VAT Compliance

From the findings e-registration will be fully effective if measures to mobilize and motivate tax payers to register online. Elaborate civic education should be conducted in the research area and beyond to ensure that the general public is aware of the new tax system, how to use it and if not able to, taxpayers should be advised where they can get assistance. iTax system should be linked with other government system such as registrar of company so that one register for a business as they register on iTax.

Kenya Revenue Authority should enhance internet connectivity in the rural areas to foster growth in online tax registration, tax return filing and online tax remittance. This can be done by building strategic alliances with telecommunication firms. The registration process should be made much simpler and easier as some of the people operating the business are not techno savvy. Having a tax payer forum in social gathering where their opinion leaders spearhead is the best approach to reach this group.

5.4.2 Recommendation on e- filing and VAT Compliance

From the research finding, it is evident that filing process is still cumbersome. The system should be made simpler for the users. Proper monitoring should be initiated and prompt communication should be done in case taxpayers are not filing on the right time or when they under declare their tax liability. Tax clinics should be carried out more often at their convenient time to improve tax payer's awareness. The iTax system should also be enhanced to ensure the system is working through out.

KRA should further simplify the VAT filing process to ensure more taxpayers are tax compliant. The auto populated(prefilled) VAT return should be introduced by linking taxpayers accounting systems and the iTax system by use of Application Programming Interfaces (APIs). This will require close collaboration between the tax administration and the affected taxpayers. Simplifying the iTax system will encourage voluntary compliance, while at the same time sending the message that efforts to improve and enhance the system are a priority

5.4.3 Recommendation on e-payment and VAT Compliance

Kenya Revenue Authority and treasury should develop a payment gateway that integrates tax system and other payment systems such as Integrated Financial Management System (IFMIS) in order to improve tracking of tax payments and seal possible tax evasion loop holes.

KRA management should focus on taxpayer facilitation through a robust system of customer relationship management, efficient complaints resolution and ensuring that more resources are invested in user friendly online tax systems in order to realize long term benefits. KRA should launch a simpler method of payment for example, using USSD code and a simpler mobile payment for VAT payments.

KRA in partnership with commercial banks and other players in the banking and financial sector should introduce the payment of taxes using debit or credit cards. Use of these cards will give taxpayers a faster, easier way to pay taxes. The necessary infrastructure must also be put into place, to support the online tax payment processes so as to minimize system down times, especially during due dates when taxpayers are rushing to beat deadlines

5.5 Suggestions for Further Studies

Similar studies should be done in other regions in the country and the results of the findings be compared for more accurate generalization. There is a need for a study to be conducted on the effect of tax on VAT compliance in other KRA stations and other tax obligations such as rental income and Turnover Tax. There is a need for further research on the contribution of e-registration, e-filing, and e-payment and revenue collection.

A further study is necessary to investigate the factors affecting effective implementation of online tax systems as a strategy for enhancing tax compliance in Kenya. There is need therefore to carry out a study on the challenges experienced with the use of the iTax system in order to overcome and improve the system as a whole with a view of enhancing even further the delivery of services by the revenue authority.

There is a need for another study to be conducted to entire population with either individual PIN or company PIN. There is also a need to replicate the study in other Counties in Kenya for external validity and generalization of the results

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APPENDIX I: QUESTIONNAIRE

PART A: General Information

1. Please indicate the position of respondent in the Authority
 Officer Supervisor Assistant Manager Manager
 Other (Please specify).....

2. How long have you worked in KRA?
 Less than a year 1-5 years 6-10 years 11-15 years 16-20 years More than 20 years

3. What is the name of your work section or department?
 Taxpayer Services Compliance Debt Policy others (Please specify).....

4. How frequently do you assist taxpayers to use the KRA electronic Tax Services?
 Very Frequently Frequently Occasionally Rarely

PART B: e- registration

Statements	1	2	3	4
iTax has enabled KRA to monitor taxpayer’s e-registration details and identify inconsistencies				
iTax system has enabled to tax payers to amend their e-registration details to incorporate VAT obligation when need arise				
Since introduction of iTax system the number of VAT e-registration has tremendously increased				
VAT registration on iTax has enabled staff to generate a report of the number of tax payers with VAT obligation and are not filing or paying their tax due				
Registration of VAT is simple and easy on iTax hence this has encouraged voluntary compliance.				

1. What recommendations would you suggest improving registration process to enhance VAT revenue collection?

.....

PART B: e- filing

2. Please indicate your level of agreement with the following statements regarding the Online VAT tax return Filing process on a scale of 1 -4 where 1-Strongly Agree, 2 Somewhat Agree, 3- Somewhat Disagree, and 4-Strongly Disagree

Statements	1	2	3	4
Filing of VAT return is simple and easy for tax payers interact with				
iTax system has enabled KRA to authenticate taxpayer VAT e-returns and assess VAT tax liabilities				
e-Filing VAT using iTax system has reduced the number of taxpayers visiting the KRA premises to be assisted in filing VAT return				
e-Filing VAT using iTax system has enabled KRA to identify VAT defaulters and enforce payment measures				
E-Filing VAT using iTax has encouraged voluntary compliance among tax payers				

3. What recommendations would you suggest improving filing process to enhance VAT compliance?

.....

PART C: e- Payments

4. Please indicate your level of agreement with the following statements regarding the e-Payment process on a scale of 1 - where 1-Strongly Agree, 2 Somewhat Agree, 3- Somewhat disagree, and 4-Strongly Disagree.

Statements	1	2	3	4
iTax has enabled KRA officers to raise additional assessment with regards to VAT e-payments				
iTax has enabled taxpayers to see real-time transactions and e-payments details in taxpayer’s ledger account and act accordingly				
Electronic VAT e-Payment has enabled tax payers to file and pay using their mobile phones				
iTax has enabled KRA officers to raise additional assessment with regards to VAT e-payments				

Electronic generation of payment slip has reduced chances of evading payment of tax				
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5. What recommendations would you suggest improving payment process to enhance VAT compliance?

.....

PART E: VAT Tax Compliance

Statements	1	2	3	4
It is much easier to amend PIN details and maintain accurate records on iTax system				
Since iTax was introduced I have been filing on time				
I always declare the right amount of tax due when filing on iTax system since the system cannot accept anything underdeclared				
Electronic generation of payment slip has reduced chances of evading payment of VAT tax				
Real time update of taxpayer ledger account has increased chances of accuracy and transparency with regards to VAT tax payment				

Please indicate any other comments and suggestions that can improve the use of iTax system to improve tax VAT compliance

.....

