

**EFFECT OF iTAX SYSTEM ON REVENUE COLLECTION OF
KENYA REVENUE AUTHORITY: A CASE OF LARGE
TAXPAYERS**

ANNRITA WANJIRU NJENGA

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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.

Annrita Wanjiru Njenga

HDB336-C016-5219/2016

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Signature

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Date

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

Dr Marion Nekesa

Kenya School of Revenue Administration (KeSRA)

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Signature

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Date

ACKNOWLEDGEMENT

I would like to dedicate this project to my family who offered their unending support during my studies and especially to my mother, without whom I would not have reached this far in my education.

DEDICATION

My utmost gratitude goes to my family and friends who offered their invaluable support towards the completion of this research proposal. More appreciation goes to my supervisor Dr. Marion Nekesa for her guidance which gave me the confidence to bear the thoroughness for quality work. I am indebted to you and without your assistance this research would not be complete.

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ACRONYMS

KESRA	Kenya School of Revenue Administration
AIA	Appropriations in Aid
FY	Financial Year
ICT	Information and Communication Technology
IT	Information Technology
ITMS	Integrated Tax Management System
KRA	Kenya Revenue Authority
LTO	Large Taxpayers Office
OECD	Organization for Economic Cooperation and Development
PIN	Personal Identification Number
TPB	Theory of Planned Behavior
TTM	Trans-Theoretical Model
VAT	Value Added Tax

DEFINITION OF TERMS

Information and Communication Technology

This are technologies that provide easy access to information through telecommunications, for this study the iTax technology is studied (Diebold, 2010).

Large Taxpayers

These are taxpayers whose annual turnover of above Kenya shillings seven and fifty million. The Large Taxpayers Office's primary function is to help clients meet their tax obligations, receive their rightful entitlements and comply with the Revenue laws (KRA,2012).

Tax Compliance

This is the timely filling and reporting of required tax information, the correct self-assessment of taxes owed, and the timely payment of those taxes without enforcement action (Allink and Kommer, 2010).

Efficiency

Technically efficiency is the ability to achieve the maximum attainable quantity of output from given inputs. The microeconomic concept of technical efficiency is based on the frontier production function which defines the maximum potential output which can be achieved by firms, given a specified mix of inputs and technology (Muturi and Kiarie, 2015)

Financial Peformance

Measuring the results of a firm's policies and operations in monetary terms. These results are reflected in the firm's return on investment, return on assets, value added (Magu, 2013).

ABSTRACT

The general objective of the study was to establish the effect of iTax system on revenue collection in Kenya Revenue Authority among Large Taxpayers in order to achieve the purpose of the study and to address the statement of the problem the study is guided by the following three specific objectives. To establish the effect of the adoption of electronic registration on revenue collection by the Kenya Revenue Authority on Large Tax Payers. To establish the impact of the adoption of iTax on efficiency of operation at Kenya Revenue Authority on Large Tax Payer. To find out the challenges of iTax adoption at the Kenya revenue authority when dealing with large tax payers. The success of the KRA adoption largely depends on the functionality of the service. The study established that KRA's revenue collection had an impact on iTax adoption. The research adopted a descriptive research design which was the most suitable method as it enabled the researcher to analyze the effect of technology adoption on tax compliance. The population of interest of the study consisted of 1,240 large taxpayers. The sampling frame consisted of the segmented taxpayers from the large taxpayers office department. The researcher adopted both stratified and random sampling techniques. The sample size consisted of 124 respondents to whom questionnaires were administered. The quantitative data collected was analyzed by the use of inferential statistics using SPSS and presented through regression and correlation analysis to determine the relation between the dependent and independent variables. The information was displayed by the use of tables where necessary. Descriptive statistic such as mean, standard deviation and frequencies was used to measure the central tendencies of the variables. The study concludes that iTax adoption of large taxpayers is influenced by revenue collection and efficiency. The study recommends continued seminars and training of tax payers on filling of returns.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

1.1.1 Global Perspective

Electronic tax administration systems have gained prominence in Sub Saharan Africa (SSA) in the 21st century. This has been spurred on by the need for improved efficiency and accountability in taxation systems, and inherently the adoption of information technology (IT) tax based systems (Organization for Economic Cooperation and Development (OECD, 2009). Population growth and demands for transparency in tax administration policy has further emphasized the need for better revenue collection systems and policy in East African countries (Khadka, 2015). Electronic tax systems are designed with a need to reduce cost of tax administration, ensure ease of compliance, and provide for accuracy and equity in tax administration.

Building a high level of compliance needs a wide range of technology especially with regards to computers and the internet, as well as effectiveness of tax administration to detect and punish the people who attempt to evade taxes. The need to enhance tax compliance has made tax departments to focus on the service they can provide to assist taxpayers in meeting their legal obligations. Such an approach, is viewed by the tax authorities view to enhance compliance given the view that taxpayers as clients rather than as potential objects of enforcement actions. As Jenkins (1996) noted, taxpayers who are well informed about their tax obligations and who are aware of the actions of the tax authorities to ensure compliance, tend to comply voluntarily. As the level of voluntary compliance goes up, the level of administrative congestions as a result of the use of informal channels to settle tax liabilities is greatly reduced. This approach ultimately reduces the total cost of tax administration.

Andarias (2006) while looking at the importance of technology established that, technology is considered as an efficient tool when properly used; otherwise it can also become a problem which needs to be solved, rather than the solution. Technology that has been widely used in tax administration comprises of computer, internet and software applications. Technology is considered to be only efficient when handled by well-trained personnel and embedded in the workflow of the organization. Good technology needs only be applied in tax administration if indeed it satisfies some basic principles which include; reducing life of tax, improving efficiency as well as reducing errors in

procedures, increasing multi-tasking levels of tax officers and facilitating taxpayers in complying with tax regulations (Fu et al., 2006). The element of reducing the „life-time of the tax“, proper technology needs to ensure that indeed the time period between the date a property or service become liable for tax and the payment of this tax or rate is reduced to the minimum. All technological advances used in automation processing, mass data processing as well as elimination of administrative challenges fall in this category.

A number of studies both locally and internationally have been done on the role Information Technology plays in Tax compliance. For instance Amitabh *et al.* (2009) did a study on the antecedents of paperless income tax filing by young professionals in India. The objective of this study was to study how young Indian professionals will adopt or behave towards paperless or online filing of tax returns with the aim of enhancing compliance. The regression analysis carried out found that the antecedents of young Indian professionals depended on the perceived ease of the tax system, personal innovativeness in information technology, relative advantage, performance of filing service, and compatibility. The implication of the findings to the current study is that for any online system to succeed whether for small, medium or large taxpayers' category there must be the ease of use, innovativeness and accessibility.

In Malaysia, Ling and Nawawi (2010) carried out a survey on Integrating ICT Skills and tax software in tax education. The respondents were the tax practitioners and the study aimed at establishing the necessary skills required by taxpayers to fully utilize a tax online system. The study found that three skills are needed by a taxpayer to interact well with technology based tax system namely, spread sheet software, word-processing software and e-mail. The findings of this study has got implications on the current study in that in analyzing the effectiveness of electronic filing system, one must not ignore the mandatory skills that would be users of the system need to have. Failure to consider such skills may make the intention of the system not to be realized as confirmed by Maede (2002). He confirmed that despite the heavy investment that the Malaysian tax authority put in new online system, only 20% of the targeted taxpayers were able to use it after three years of implementation. This was mainly attributed to lack of necessary user skills like computer literacy; however, taxpayer's behaviour also played a role.

1.1.2 Local Perspective

In 2014, the Kenya Revenue Authority (KRA) adopted a new electronic tax administration system known as *iTax*, thereby replacing manual filing of tax returns. This system was adopted to increase revenue collection, ease of filing and administration of taxes, and reduce costs of compliance while reducing the tax gap through eliminating cases of non-compliance. Since introduction of *iTax*, KRA has seen increases in tax revenue. This has grown by an average of 15% for the past 10 years. KRA collected ksh 1 trillion in revenue from taxes for the financial year (FY) 2014/2015. This excluded revenue from appropriations in aid (AIA) thus making an increase of 3.86% from FY 2013/2014 in which the authority collected ksh 963.8 billion (The National Treasury, 2015). According to mygov.ke (2016), revenue collection stood at ksh 1.1 trillion as at the end of April 2016. Despite this, KRA has failed to meet revenue targets set by the treasury. A study conducted by Institute of Certified Public Accountants of Kenya [ICPAK] (2015) states that the high targets have been set so as to meet increased expenditure requirements resulting from implementation of the 2010 constitution.

iTax is a web based automated system that integrates KRA's domestic tax administration processes. It offers a simple, swift and secure means of electronic taxpayer registration, e-filing, e-payment as well as back office functionalities for KRA's Domestic Taxes Department staff (Kenya Revenue Authority, 2016). It is an integrated tax system that interlinks the tax administration procedures with the aim of making it simpler for taxpayers to comply as well as easy and less costly tax administration. The 'i' in the word '*iTax*' stands for integrated; it intones self-assessment as the *modus operandi*. *iTax* usage will be measured by the number of active taxpayers using the system, in terms of filing returns and making payments.

iTax has several key components or modules which are centered around the taxpayer, who is identified using a unique personal identification number (PIN). These components are: Taxpayer registration which aids in the registration of taxpayers; assessment processing; account management module that gives information about the taxpayer; payment processing module that makes it possible for taxpayers to generate payment slips; collection and enforcement module that is useful in defaulter identification by matching assessments and payments; and reporting and statistics module that helps in revenue report compilation (KRA, 2016).

The intended purpose of iTax is to increase the speed of service delivery, enhance accountability and integrity through reduced opportunities for corruption, as well as reduce tax avoidance and evasion by utilizing its capabilities of electronic data matching and enhanced third party information, hence increased revenue collection (KRA, 2015). It does this by linking taxpayers to the revenue authority via an online platform whereby every taxpayer, be it a company or individual, has a unique identifier number known as a PIN (Personal Identification Number), which they can use to access and manipulate their tax details from anywhere in the world (Malonza, 2016). The World Bank in its seminal paper on doing business (2014) presents a case for electronic tax and payment systems. In the paper, the organization lists reduced costs and collection of quality and quantity data as a key benefit to tax authorities of implementing such systems (World Bank, 2017). Phillip and Poirier (2011) add that online tax administration makes filing of returns simpler thus reducing errors arising from manual systems.

Revenue collection has been defined as funds received by any organization (Gitaru, 2017). In the context of the KRA, it can be defined as the mandatory tax collections that are imposed on the citizenry. This involves collection of tax revenue from taxpayers through electronic or manual mechanisms. Sources of tax revenue are both from domestic, such as Income Tax and Value Added Tax (VAT); and customs e.g. import duty. Government also collect revenue from non-tax sources such as fees, penalties and appropriations in aid. Taxation is the largest source of revenue for the Kenya government, it accounts for over 95% of government ordinary revenue (KRA, 2015). This study will dwell on domestic tax collections, which will be measured in terms of the amount collected in Kenya shillings.

Revenue collected is important for fiscal policy and forms the source of government expenditure. In Kenya, KRA is mandated to collect revenue on behalf of the government. Since 2014, revenue collection in Kenya is done electronically through the iTax platform. This system was adopted to increase revenue collection, ease of filing and administration of taxes, and reduce costs of compliance while reducing the tax gap through minimizing cases of tax avoidance and evasion.

Since the commencement of modernization of tax systems, KRA has seen increases in tax revenue. This has grown by an average of 15% for the past 10 years. KRA collected Ksh.1 trillion in revenue from taxes for the financial year (FY) 2014/2015. This excluded

revenue from appropriations in aid (AIA) thus marking an increase of 3.86% from FY 2013/2014 in which the authority collected ksh 963.8 billion (The National Treasury, 2015). According to mygov.ke (2016), revenue collection stood at ksh 1.1 trillion as at the end of April 2016. Despite this, KRA has failed to meet revenue targets set by the treasury. A study conducted by ICPAK (2015) states that the high targets have been set so as to meet increased expenditure requirements resulting from implementation of the 2010 constitution. The study advises revision of tax policy in order to meet set revenue targets.

In the broad nature of being an electronic tax administration system, iTax is a necessary tool for state building. This is insofar as it is used as a tool to enhance revenue collection by furthering the tax reform agenda of the Kenya government for increased and efficient revenue collection (KRA, 2016). Barako (2015) writes that iTax is necessary in increasing efficiency in revenue collection and administration.

iTax is an efficient way of managing data thus improving revenue collection and transparency in fiscal administration by KRA as explained by Kipkemoi (2015). It is a fully integrated modular system that gives control over taxpayer data. This enhances compliance especially by medium and large taxpayers in Kenya and in essence revenue collection (Malonza, 2016). Ngigi (2015) concurs that iTax, as an integrated tax system, reduces instances of tax evasion by businesses in Kenya thus resulting in increased tax revenue collection. He further states that this is because once taxpayer data is captured, the system automatically flags businesses that are non-compliant in so far as filing of their tax returns. However, other Scholars such as Magu (2013) and Wasao (2014) infer that revenue collection in Kenya has increased not necessarily because of the introduction of iTax but also due to economic growth in the country, which has been at an annual average of 5% for the past 10 years (World Bank, 2017).

The Kenya Revenue Authority was established as an independent institution by an Act of parliament in 1995. It was previously a department under the treasury. It is headed by a Commissioner General who is appointed by the president of Kenya. The authority is charged with the collection of tax revenue in Kenya on behalf of the Kenya government. Its more specific purpose is to assess, collect, administer and enforce laws pertaining to tax revenue (KRA, 2009).

The authority operates in 5 regions namely Rift Valley, Western, Southern, Northern and Central regions of Kenya.

Each region is headed by a Regional Coordinator who has customs, domestic (medium and small taxpayers), domestic (large taxpayer's office), enforcement, technical and corporate support departments under their jurisdiction. Each region has a number of KRA service centres, known as stations, under its jurisdiction. The stations are headed by Station managers, who are responsible for the activities of the staff in the stations.

KRA has, in the recent years, undertaken tax reforms aimed at effective execution of its mandate against the backdrop of ambitious treasury targets. In 2004, the Revenue Administration Reform and Modernization Programme (RARMP) commenced at KRA with the objective of achieving a fully integrated tax administration. This resulted to the inception of the first online system known as integrated tax management system (ITMS) in 2008. Though ITMS was an online system, it did not fully automate the tax administration processes hence inefficient. For instance, the taxpayers were required to present electronically generated payment slips to KRA offices for capturing upon making payments i.e. the payment gateway was not linked with the banks. This mix of online and manual processes created the inefficiencies. These coupled with public outcry for simpler system, led to the conception of iTax idea in October 2011. iTax was introduced in 2013 with a pilot being done in partnership with large taxpayers, to assess system capability and stability before a country wide roll out in 2014 (ICPAK, 2015).

In Kenya, Memba, Gakure and Karanja (2012) posit that the informal sector is not only a provider of goods and services but also a driver in promoting competition, innovation and enhancing the enterprise culture which is necessary for private sector development and industrialization. They further argue that it is growingly economically important and should effectively respond to challenges of creating productive and sustainable employment opportunities, promoting economic growth and poverty eradication in the country. On the contrary to expectation, Waweru (2007) found collecting turnover tax from these businesses both a challenge and with dwindling revenues.

The Large Taxpayers Office (LTO) was formed as an operations unit in 1998 to provide one-stop shop services in the administration of Income Tax and VAT matters affecting large taxpayers. LTO's primary objective has been to promote efficient tax administration with the goal of achieving compliance at minimum cost to both taxpayers and Kenya Revenue Authority (KRA).

LTO was established as a fully-fledged department in the year 2006 with the sole purpose of administering Domestic Tax matters affecting large taxpayers (KRA,2018). In the framework, LTO is headed by a Commissioner whose mandate is as outlined below. LTO aims to improve services to Kenya's largest taxpayers by means of focused customer care informed through better interaction and consultation. In doing so LTO coordinates closely with its counterpart, the Domestic Revenue department, on all policy matters affecting the administration of Domestic Taxes (KRA,2018).

1.2 Statement of the Problem

The research problem is the need for improved efficiency and accountability in taxation systems that has heightened the clamour for modernization of tax systems across the globe, hence the increased adoption of electronic tax administration systems. Electronic tax systems, such as iTax, are computer based revenue collection platforms that do away with the need for manual registration, filing and processing of tax returns, refunds and other tax related services. Their ultimate goal is to increase revenue collection through reducing costs associated with compliance and minimizing tax leakages. They are designed to reduce physical contact between the tax administrator and the taxpayer in order to achieve the desired effect of reducing corruption. KRA achieved country-wide roll out of the iTax system in 2014, with the expectations of leveraging on this vital technology in eliminating its revenue deficits. Despite the introduction of iTax, KRA still continues to post revenues short of the treasury targets. For instance, in the financial year 2014/2015 the authority collected exchequer revenue of Kshs. 1,022 billion against the treasury target of Kshs. 1,065.8 billion (KRA, 2015).

KRA's revenue collection has grown at an average of 15% in the past 10 years. The revenue collected in FY 2013/2014 stood at Kshs. 963.8 billion, which was an increase of 20.4% over that of FY 2012/2013. In FY 2014/2015, the collection increased by 12.3% over that of the FY 2013/2014 (KRA, 2015). This has been attributed to the tax reforms and modernization programme that has been undertaken by KRA, hinging on the iTax platform which makes it possible for taxpayers to transact with KRA around the clock and in real time. However, this increase in tax revenue has not been enough to eliminate persistent shortcoming of revenue shortfalls experienced by KRA. The traditional last minute rush associated with manual return filing has not been avoided either, as is the

case in Western Region, with taxpayers still trooping into KRA service centres on deadline days for facilitation.

There is growing international interest in improving the ability of developing countries to collect domestic revenue. However, the evidence on the current capability of revenue authorities in developing countries to perform basic functions is mixed. Obtaining comparable evidence across countries is not straight-forward. A McKinsey benchmarking study of tax administrations in 2008–09 found that tax administrations in developing countries could collect an additional \$86 billion by improving the efficiency of their tax administrations (Dohrmann & Pinshaw, 2009).

Worldwide, taxpayers' resistance, underutilization and reluctance to use electronic filing system remain a great concern and still plague various tax agencies which are embracing electronic tax administration systems (East African Community Income Tax Authority, 2002). The importance of understanding and influencing taxpayer's acceptance of electronic filing system is critical, given the investment in technology and the potential for cost saving. Despite the increasing need to increase revenue collection and enforcement so as to provide public services, developing countries still face the challenges of low tax compliance and tax administration.

Various studies have been undertaken to study the effects of online systems on tax administration. For instance, Barako (2015) agrees that iTax is efficient in revenue collection. Other scholars such as Imam and Jacobs (2014) have proposed the introduction of electronic tax systems as a means of reducing revenue shortfalls resulting from corruption. Some of the studies note that supporting infrastructure such as internet connection, electricity and computers, as well as information technology literacy levels affect tax compliance, and hence revenue collection (Kiringa & Jagongo, 2017; Maisiba & Atambo, 2016; Shaupp *et al.*, 2010).

Muita (2010) Masters study thesis has also done a related study on the factors that influence adoption and use of e-filing system among Large Taxpayers in Kenya. The study examined the skills required by the users of e-filing, the technology required and the tax authority's preparedness in enhancing the adoption of tax compliance based technology. The study found that for e-filing to effectively take off in Kenya skills, infrastructure and a conducive business environment are needed.

However, other studies have argued that the increase in revenue collection in Kenya is not necessarily due to the introduction of iTax, but rather as a result of other factors such as the general performance of the economy (Magu, 2013; Wasao, 2014). Whereas these studies have sought to show the relationship between iTax and revenue collection, most of them have adopted a descriptive approach by determining factors encouraging or discouraging compliance (Muturi & Kiarie, 2015). In essence, few studies have taken a comparative view of revenue collection performance of KRA implementation of iTax. This study therefore seeks to analyze the impact of iTax adoption on performance of KRA.

1.3 General Objectives

The general objective of the study was to establish the effect of iTax system on revenue collection in Kenya Revenue Authority among Large Taxpayers

1.3.1 Specific Objectives

In order to achieve the purpose of the study and to address the statement of the problem, the researcher endeavoured to answer the following specific research objectives:

- i. To establish the effect of the adoption of electronic registration on revenue collection by the Kenya Revenue Authority on Large Tax Payers.
- ii. To establish the impact of the adoption of iTax on efficiency of operation at Kenya Revenue Authority on Large Tax Payers.
- iii. To find out the challenges of iTax adoption at the Kenya revenue authority when dealing with large tax payers.

1.4 Research Questions

- i. What are the effects of the adoption of electronic registration on revenue collection by the Kenya Revenue Authority on Large Tax Payers?
- ii. What is the impact of the adoption of iTax on efficiency of operation at Kenya Revenue Authority on Large Tax Payers?
- iii. What are the challenges of iTax adoption at the Kenya revenue authority when dealing with large tax payers?

1.5 Justification

1.5.1 Scholars

This study may be of importance to scholars by adding to the existing body of knowledge on leveraging technology in revenue collection. This is because it analyses the two variables of iTax and revenue collection from the context of Western Region, Kenya. In addition, the study may instigate further research on the thematic area of taxation.

1.5.2 Revenue Administrators

It may be of value to revenue administrators in assessing the impact of electronic tax administration systems on revenue collection in the western region of Kenya. This may enable administrators in this region, and in extension KRA as a whole, assess the revenue trends in this region before and after implementation of iTax. This may in turn result to better decision making.

1.5.3 Treasury Personnel

The study may also be of importance to the treasury personnel in policy creation, strategy formulation and implementation of electronic tax systems. It may offer insights into the contribution of iTax technology in revenue collection. This is in light of the fact that current tax policy is not robust enough to meet revenue targets set by treasury.

1.5.4 Researchers

The outcomes of the study will add to the body of knowledge to readers and researches seeking knowledge or pursuing the factors influencing the uptake of technology to access tax services and meet tax obligations required by the tax laws. The study will in essence lay a basis for further studies of adoption of technology in enhancing tax compliance. The findings of the study will also contribute to the existing body of knowledge and may form the basis for further research in the area of technology and tax compliance in Kenya.

1.6 Scope of the Study

This study focused on Kenya Revenue Authority in particular the Large Taxpayers Office. This is because the group tends to be more technology oriented and stresses on efficiency for better business performance. The population in this category was about 1240 taxpayers as indicated in the KRA database. The LTO was further segmented into eight sectors: Agriculture, Banks, Insurance, Wholesalers, Excise, Manufacturers, Oil and Services. Fortunately almost all Large Taxpayers have their head offices in Nairobi.

1.7 Limitations

In dealing with the scope, the researcher anticipates a number of limitations. First, there was no much conclusive research done in this field in Kenya. Therefore, there is a lack of local literature on this field and the relevance of previous research done outside Kenya has to be evaluated in order to gain a correct insight. The study also limited itself to Large Taxpayers in Kenya on the assumption that Large Taxpayers have already appreciated the significance of technology in enhancing tax compliance, while the compliance levels of Large Taxpayers as far as the use of technology is concerned is yet to be explored.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents a literature review by various scholars on adoption of iTax as a strategic finance tool in enhancing financial performance at Kenya revenue authority. In this chapter, the reader is provided with a review of literature relevant to the stated research questions, which are: To establish how adoption iTax as a strategic finance tool has enhanced revenue collection at Kenya revenue authority. To establish how adoption of iTax as a strategic finance tool has enhanced efficiency of operation at Kenya revenue authority. To establish how adoption of iTax as a strategic finance tool has minimised costs at Kenya revenue authority.

2.2 Theoretical Review

This study borrowed from the existing research. It was influenced by the following theories which have been put across by various scholars/ researchers with regard to people's behaviour when moving from manual to online systems or rather when embracing technology.

2.2.1 The Trans-Theoretical Model

The Trans-theoretical Model was developed by Prochaska and DiClemente in the 1970s. It involved studies that examine the experiences of smokers who quit on their own with those requiring further treatment to understand why some people were capable of quitting on their own. It was determined that people quit smoking if they were ready to do so. Thus, the Trans-theoretical Model (TTM) focuses on the decision-making of the individual and is a model of intentional change. The TTM operates on the assumption that people do not change behaviours quickly and decisively. Rather, change in behaviour, especially habitual behaviour, occurs continuously through a cyclical process. Based on this model it is expected that there is a delay to adoption of the system by taxpayers. The model suggests that it takes several steps for taxpayers to change their 'behavior' from manual to itax, non filing to filing.

2.2.2 The Theory Of Planned Behavior

The Theory of Planned Behavior (TPB) started as the Theory of Reasoned Action by Fishbone and Ajzen in 1985, it predicts an individual's intention to engage in a behavior at a specific time and place (Ajzen, 1985).. The theory was intended to explain all the behaviors over which people have the ability to exert self-control. The key component to this model is behavioural intent; behavioural intentions are influenced by the attitude about the likelihood that the behavior will have on the expected outcome and the subjective evaluation of the risks and benefits of that outcome. The TPB is comprised of six constructs that collectively represent a person's actual control over the behavior. The taxpayer's attitude towards iTax will facilitate the adoption. Otherwise, taxpayers with a negative attitude or prejudiced towards the system are unlikely to accept it. This model will thus demonstrate how perception affects iTax implementation (Ajzen, A theory of planned behaviour, 1991). The TPB states that behavioural achievement depends on both motivation (intention) and ability (behavioural control). It distinguishes between three types of beliefs behavioural, normative and control.

2.2.3 Diffusion Of Innovation Theory

Diffusion research examines how ideas are spread among groups of people. Diffusion goes beyond the two-step flow theory, centering on the conditions that increase or decrease the likelihood that an innovation, a new idea, product or practice, was adopted by members of a given culture. In multi-step diffusion, the opinion leader still exerts a large influence on the behavior of individuals, called adopters, but there are also other intermediaries between the media and the audience's decision-making. One intermediary is the change agent, someone who encourages an opinion leader to adopt or reject an innovation (Infante, Rancer, & Womack, 1997).

Innovations are not adopted by all individuals in a social system at the same time. Instead, they tend to adopt in a time sequence, and can be classified into adopter categories based upon how long it takes for them to begin using the new idea. Practically speaking, it's very useful for a change agent to be able to identify which category certain individuals belong to, since the short-term goal of most change agents is to facilitate the adoption of an innovation (Rogers, 2003). Adoption of a new idea is caused by human interaction through interpersonal networks. If the initial adopter of an innovation discusses it with two members of a given social system, and these two become adopters

who pass the innovation along to two peers, and so on, the resulting distribution follows a binomial expansion. Expect adopter distributions to follow a bell-shaped curve over time (Rodgers, 1983). This model relates to adoption of itax since if one tax payer tries out the new system and finds it beneficial, then he/she is able to convince others and the numbers will grow exponentially.

2.3 Empirical Review

2.3.1 Effect of Adoption Of electronic registration On Revenue Collection

Revenue collection has been defined as funds received by any organization (Gitaru, 2017). In the context of the KRA, it can be defined as the mandatory tax collections that are imposed on the citizenry. This involves collection of tax revenue from taxpayers through electronic or manual mechanisms. Sources of tax revenue are both from domestic, such as Income Tax and Value Added Tax (VAT); and customs e.g. import duty. Government also collect revenue from non-tax sources such as fees, penalties and appropriations in aid. Taxation is the largest source of revenue for the Kenya government, it accounts for over 95% of government ordinary revenue (KRA, 2015). This study will dwell on domestic tax collections, which will be measured in terms of the amount collected in Kenya shillings. Revenue collected is important for fiscal policy and forms the source of government expenditure. In Kenya, KRA is mandated to collect revenue on behalf of the government. Since 2014, revenue collection in Kenya is done electronically through the iTax platform. This system was adopted to increase revenue collection, ease of filing and administration of taxes, and reduce costs of compliance while reducing the tax gap through minimizing cases of tax avoidance and evasion.

Since the commencement of modernization of tax systems, KRA has seen increases in tax revenue. This has grown by an average of 15% for the past 10 years. KRA collected Ksh.1 trillion in revenue from taxes for the financial year (FY) 2014/2015. This excluded revenue from appropriations in aid (AIA) thus marking an increase of 3.86% from FY 2013/2014 in which the authority collected ksh 963.8 billion (The National Treasury, 2015). According to mygov.ke (2016), revenue collection stood at ksh 1.1 trillion as at the end of April 2016. Despite this, KRA has failed to meet revenue targets set by the treasury. A study conducted by ICPAK (2015) states that the high targets have been set so

as to meet increased expenditure requirements resulting from implementation of the 2010 constitution. The study advises revision of tax policy in order to meet set revenue targets.

iTax is an efficient way of managing data thus improving revenue collection and transparency in fiscal administration by KRA as explained by Kipkemoi (2015). It is a fully integrated modular system that gives control over taxpayer data. This enhances compliance especially by medium and large taxpayers in Kenya and in essence revenue collection (Malonza, 2016). Ngigi (2015) concurs that iTax, as an integrated tax system, reduces instances of tax evasion by businesses in Kenya thus resulting in increased tax revenue collection. He further states that this is because once taxpayer data is captured, the system automatically flags businesses that are non-compliant in so far as filing of their tax returns. However, other Scholars such as Magu (2013) and Wasao (2014) infer that revenue collection in Kenya has increased not necessarily because of the introduction of iTax but also due to economic growth in the country, which has been at an annual average of 5% for the past 10 years (World Bank, 2017).

A number of studies, both local and international, have been done linking IT to revenue collection in one way or another. Among the international studies is that conducted by Floropoulos *et al* (2010) on the success of taxation information systems in Greece. They sought to look at the constructs of user satisfaction, usefulness and quality of service as measures of success of information systems in tax administration. A sample of employees in the Greek tax authority was taken. Their study found that information systems enhance efficiency in tax administration and improved quality of services offered by Greek tax authorities.

Chen (2010) carried on a study on the impact of antecedents of quality on the satisfaction of taxpayers with online tax system in Taiwan. He made use of hierarchical factor analysis to support evidence of user satisfaction in online tax filing systems. The study found that information and system quality to be the key factors in determining user satisfaction in online tax systems.

Azmi *et al* (2016) made use of questionnaires to determine factors influencing adoption of e-filing tax systems by small and medium size businesses in Malaysia. The study made use of technology acceptance model to gauge perceived risk of adoption of e-filing systems. Samples were taken from the Malaysian public who were taxpayers. Study findings showed that a mixture of regulatory requirements and system complexity and

compatibility were the main drivers to adoption of such systems. Germany and Seelmann (2011) did a study on the benefits of a computerized integrated system for taxation (iTax). They found out that iTax system has cost saving and service improvement effects induced by e-Government. Despite the increasing need to raise the level of revenue collection and enforcement so as to provide public services, developing countries still face the challenges of low tax compliance. This leads to frequent tax reforms aimed primarily at closing short-term revenue gaps (Bird & Zolt, 2003).

Revenue system modernization improves the ability of an organization to collect more revenue with minimal costs. An electronic system for filing and paying taxes, like the iTax system, if implemented well and used by most taxpayers, benefits both tax authorities and taxpayers. For tax authorities, electronic filing lightens the workload and reduces operational costs – such as the costs of processing; storing and handling tax returns (Gekonge & Atambo, 2016). To meet the 2014/15 target of a record Sh1.18 trillion, KRA had to raise collections by over 20 per cent through new efficient measures that heavily relied on the introduction of iTax system (KRA, 2015).

Gidisu (2012) did a study on the automation system procedure of the Ghana Revenue Authority on the effectiveness of revenue collection using a case study of Customs Division. Gidisu (2012) established a positive impact of automation system usage and the cost of tax administration, automation and effectiveness of revenue collection. In The KRA sixth corporate plan is guided by the authority's ability to leverage technology to enhance service delivery and promote compliance. The success of KRA in its core mandate of revenue collection largely hinges on the efficacy and efficiency of the newly introduced iTax system in increasing tax compliance and sealing tax leakages occasioned by tax evasion. Electronic tax system was introduced by Kenya Revenue Authority to increase financial collection, administration, avail services to the tax payers all the time from anywhere, reduce costs of compliance and improve tax compliance. However, tax compliance levels remain low and tax collections are below the targets set by Kenya Revenue Authority (Atambo & Gekonge, 2016).

Local studies have also been conducted on iTax and revenue collection. Otieno *et al* (2013) studied the impact of information systems on revenue collection of local authorities in Kenya. In a survey of 1942 taxpayers and 165 tax officials, they found a high efficacy between such systems and increased revenue collection. A high correlation

was specifically observed between internal control systems and revenue collection at 0.97. They however observed change management was necessary to ensure full implementation of information systems due to resistance among local authority staff.

Barako (2015) conducted a study on the efficacy of iTax on tax administration in Kenya. The study collected secondary revenue data and made use of correlational research design to establish a relationship between the variables under study. The study concluded there is a significant correlation between the revenue collected and implementation of iTax. Therefore, Barako concluded that iTax is efficient in revenue collection.

Maisiba and Atambo (2016) looked into efficiency in revenue collection in Uasin Gishu County using electronic tax systems. The study made use of a case study and data was collected from a sample of 102 respondents using questionnaires. The study found that despite revenue personnel being well trained on e-filing system in Kenya, there were still inherent challenges affecting adoption of iTax in Kenya. These challenges were centered on ease of use of the system by taxpayers and low computer literacy levels prevalent in the country as antecedents to full adoption of electronic tax administration systems in Kenya. They recommended civic education be conducted by the KRA to increase efficacy of the system.

Tax compliance in Kenya is greatly affected by voluntary filing as observed by Kiringa and Jagongo (2017) in their study on the effects of iTax on tax compliance in Makueni county of Kenya. A sample size of 316 taxpayers in the county was taken. Questionnaires were used to collect data on the impact of iTax on tax compliance in this area. They found that iTax system has been adopted rapidly in Kenya. However, they recommended that the KRA conduct awareness to ensure 100% compliance.

2.3.2 Impact of Adoption of iTax on Efficiency of Operation at Kenya Revenue Authority

Kenya Revenue Authority's domestic taxes department has revamped the existing integrated tax management system to a new one dubbed iTax that will allow employees to see their ledgers showing their pay as you earn remittances unlike before when this information was not readily available. Apart from the obvious benefit of not having to receive manual tax returns or manage queues at KRA offices for provision of services, the new system sends a user confirmation upon successful payment registration, electronic return filing and actual tax payments (Coastweek Newspapers Limited, 2015) Transfer

mispricing is robbing Kenyan workers and citizens of access to good public education, health care, transport services and a clean environment, which the government can only provide through proper revenues. Both local and Multinational companies explore transfer mispricing to avoid paying tax to the government. For example an Indian based multinational company utilized this loophole to avoid paying Kenya government nearly US\$11 million (EUR8 million) in corporate income tax, part of a larger set of tax disputes with government authorities (Pascal, 2014).

Electronic tax system is the system that has been developed to replace the current KRA Online 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 (Waweru, 2013).

According to Kun, *et al* (2008), for a long time, government services have been regarded as synonymous with bureaucracy in both developing and industrialized countries. The tenets of Weberian bureaucracy include such factors as organized hierarchy, development of standardized and impersonal procedures, formal division of labor and responsibility, and emphasize efficiency in all procedures. All countries have bureaucratic state mechanisms; and while many commercial organizations are strongly inspired by the tenets of bureaucracy, their efficiency varies widely.

Whatever the level of efficiency of the bureaucracy, the availability of computers to people from all walks of life has brought them better and more convenient access to public services. Additionally, through the Internet and computer technology, governments can provide services in the original positive sense of Weberian bureaucracy. In other words, the government can facilitate public service offerings in a truly standard, impersonal, efficient, and convenient manner for both service provider (the government) and service recipient (the citizens). In some cases a government agency can also be a service recipient of an e-government service. In economic terms, the ability of citizens to access government services anytime, anywhere helps to mitigate the transaction costs inherent in all types of government services (Kun, et al, 2008).

According to Harold (2011), computer generated returns, transmitted electronically, generally are easier to process than paper returns; since the information on the forms doesn't have to be keyed in, number by number, by IRS staff into the Service's computers

hence there is less chance of errors. Electronic transmittal is instantaneous, bypassing the frustrating vagaries of the postal system and the client receives confirmation within a day or two that the return not only was received by the IRS, but was received accurately. However, from an American experience, electronic tax systems' biggest advantage, from the taxpayer's point of view, is that it shortens the time for refunds from an average of 12 weeks to about 3 weeks. Refunds can even be deposited directly into taxpayers' bank accounts.

As an added incentive, some vendors that provide electronic filing services for tax preparers also offer a service in which clients due a tax refund can apply for an immediate bank loan equal to the expected IRS check. As a result, a client could receive the refund (less bank and preparer fees) within three days of the filing (Harold, 2011). Different literatures points out ICT use to be extremely beneficial; Mugisha, (2001) attests that, the use of ICT enhances timely access to accurate and relevant information, which is a prerequisite for good planning, programming, implementation as well as monitoring and evaluation which forms the key component in development; Suluo, (20013) shows that, ICT use has lead to high level organizational growth; and yet Crede,(2008) reveals two facts, first; ICT has the capacity to increase productivity and create more cost effective output with the same or less inputs and second; Development of ICT applications for business use alter the approach organizations function and eventually, improve their services as well as products. What these scholars are trying to emphasize is that; the spread of ICT use in various sectors brings new opportunities for economic growth and development. New organization design, new markets, new products and improved services are been created which brings with them new sources of revenue.

There has been several studies concerning the electronic tax payments across the globe, Seelmann, Lerche, Kiefer and Lucante (2011) did a study Benefits of a computerized integrated system for 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. They concluded that Computerization of tax and revenue authorities can contribute to reaching the goal of good (financial) governance. It improves accountability and transparency of the revenue authorities. Nevertheless, while reforming and modernizing the tax system is an essential part of improving domestic resource mobilization, such a reform will be sustainable only in

conjunction with more profound changes in the administrative and political structure of a state.

Sagas, Nelimalyani and Kimaiyo (2015), did an assessment of the impact of electronic tax register on revenue collection by Kenya Revenue Authority western region, Kenya. 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 (2009) did a study on the revenue productivity and some administrative factors of the Kenyan tax system for the period 2001–2008. The result of this study came up with buoyancy estimates of the total tax system as 1.26 while elasticity was 1.27. The study thus concluded that the tax system in general was both elastic and buoyant implying that tax reforms had greatly improved productivity. Discretionary tax measures had a very small effect on tax productivity implying improved efficiency.

Wawire (2000) did a study on the tax buoyancy and income-elasticity of Kenya's tax system. Tax revenues from various sources were regressed on their tax bases. The study concluded that the tax system had failed to raise necessary revenues. However, the shortcomings of the study were that it never considered other important determinants of tax revenue, for instance the unusual circumstances that could have affected tax. It also never disregarded tax revenue data by source hence it was difficult to say which tax bases contributed more to the exchequer. Finally, it never considered the time series properties of the data used.

Muriithi and Moyi (2003) did a study on the productivity of Kenya's tax structure in the context of the tax reforms focusing on pre and post reform period. In the study, they assessed the buoyancy and elasticity of individual taxes and the overall tax system. Their findings suggested that tax reforms had a positive impact on the overall tax structure and on the individual tax handles, even though the impact of the reforms was not always uniform. The reforms had a bigger impact on direct taxes than on indirect taxes, suggesting that revenue leakage is still a major problem for indirect taxes. Even though the current study adopted model used by Muriithi, it differs from their study in some dimension. First, this study used data of since 1963–2010. Second, nominal figures were

converted to real figures. Finally this study considered stationary of a time series data and the data regressed for the whole period of the study.

Lastly, 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. 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. It is a change agent for accelerated growth and poverty reduction in Nigeria and the whole of African continent at large. The major recommendation from their study was that necessary laws and regulations have to be passed by the appropriate authorities to reduce or abolish import taxes on information technology hardware such as computers, Servers, printers, biometric scanners and other devices.

On filing, scholars and researchers have looked on the relationship between electronic filing and other factors in taxation including efficiency, revenue collection, work load reduction and many more. For instance, Kuznetsova (2010) investigated the factors that affect diffusion of tax return filing online (e-return) in Finland. Basing their studies on the Diffusion of Innovations theory, Bass Diffusion Model and Service Process Analysis he discovered that the diffusion of e-return is dependent on such variables as perceived attributes of e-return system, interpersonal communication channels, performance of related services, and extent of Tax Administration's promotion efforts.

Another study by Anna Yusniza (2009) looked at the relationship of perceived risk and its facets within the technology acceptance model (TAM) within the tax e-filing context in Malaysia. They based their study on the argument that e-government is becoming increasingly more important in today's world due to its effectiveness and applicability in various areas. Tax e-filing is one of the e-government services that have been adopted by many developed countries today where the public has to discharge their responsibility to the government via online tax filing. And that despite the rapid adoption of tax e-filing in many countries, researchers have argued that it is yet to establish an integrated system

that is reliable, especially in developing countries due to high perceived risk by the public. They concluded that many of these risk facets will be significant. Among the risks that could possibly be significant are performance risk, psychological risk, time risk and privacy risk.

Past studies have shown that taxpayers tend to e-file near the tax deadline and this may lead to system crashes if the e-filing system is not tailored to accommodate this trend. Psychological and time risks could possibly be prevalent for taxpayers who are not IT literate, they may find themselves frustrated or anxious if a lot of time is spent learning about the e-filing system and then find that the system does not function as they had hoped it would. Privacy risk may possibly be a significant risk for e-filing adoption; this is because e-filing involves the transmission of taxpayers' confidential information through the Internet. Recommendations included a fact that risk reducing strategies could be formulated to encourage e-filing adoption such as improved security features for the user interface. The risk reducing strategies could be developed to cater to the facets of risk that are the most prevalent in e-filing adoption.

In his study titled *Influencing Tax Compliance in SMEs through the Use of ICTs* Lubua (2014) argued that Revenue collection is an important determinant of the economy of any country. The adequacy of government revenues allows the government to support its operations ranging from administrative activities, infrastructure constructions and service provision. The study aimed to show how e-transparent services address the challenge of voluntary tax compliance by SMEs in the republic of Tanzania. The study observed the following factors to influence voluntary compliance: Awareness of tax laws, business experience, the integrity of employees, low frequency of visitation by tax officers and training needs. Recommendations read that the revenue authority must use relevant ICT tools to positively promote these factors; as the result, the position of taxpayers to voluntarily file their tax returns will be enhanced.

Amitabh et al. (2009) did a study on the antecedents of paperless income tax filing by young professionals in India. The objective of this study was to study how young Indian professionals will adopt or behave towards paperless or online filing of tax returns with the aim of enhancing compliance. The regression analysis carried out found that the antecedents of young Indian professionals depended on the perceived ease of the tax system, personal innovativeness in information technology, relative advantage,

performance of filing service, and compatibility. The implication of the findings to the current study is that for any online system to succeed whether for small, medium or large taxpayers' category there must be the ease of use, innovativeness and accessibility.

Wamathu (2013) studied the effects of electronic taxation on financial performance of audit firms in Kenya. From the finding the study found that there has been timely filing of returns since inception of i-Tax, there has been a reduction in audit period due to introduction of i-Tax respondents were quite knowledgeable, system failure when login were less, i-Tax was user manual friendly , i-Tax system was reliable and that I-tax was not user friendly, i-Tax system cost effective, i-Tax system was cost effective and respondent were aware of that i-Tax system was electronic cash register and electronic signature device. She recommended that there is need for the Kenya Revenue Authority to invest on technology in order to reduce the system failure as the study revealed that system failure affects system logins. System failure discourages use of technology.

Muita (2010) in her MBA thesis has also done a related study on the factors that influence adoption and use of e-filing system among Large Taxpayers in Kenya. The study examined the skills required by the users of e-filing, the technology required and the tax authority's preparedness in enhancing the adoption of tax compliance based technology. The study found that for e-filing to effectively take off in Kenya skills, infrastructure and a conducive business environment are needed.

2.3.3 Challenges of iTax Adoption at the Kenya Revenue Authority

According to Lubua (2014), employees play a vital role in ensuring that the revenue authority collects its tax from clients at the right time. They also ensure that clients have the right knowledge of business taxation. Low integrity to employees is reported to significantly affect efforts by the revenue authority toward improving revenue collection. To a large extent, the use of ICTs in the Tanzanian revenue authority has addressed the challenge of corruptive behaviour by employees. In areas such as custom department, clients are able to conduct own assessments. However in domestic revenue there is a low usage of ICTs. Clients depend on employees for assessment and this assessment depends on employees' rational ability and integrity.

In Bangladesh, Aminuzzaman (2010) conducted a study about Public Service Delivery among Local Authorities in Bangladesh and found that some of the critical institutional challenges facing public service delivery include limited manpower and resources. The

study did not focus on revenue authorities and the public service delivery they offer. Sarshar and Moores (2006) conducted a study in the UK and found that lack of strategic awareness, lack of capacity, poor performance monitoring and poor coordination processes were major challenges that hindered public service delivery.

In Malaysia, Ling and Nawawi (2010) carried out a survey on Integrating ICT Skills and tax software in tax education. The respondents were the tax practitioners and the study aimed at establishing the necessary skills required by taxpayers to fully utilize a tax online system. The study found that three skills are needed by a taxpayer to interact well with technology based tax system namely, spread sheet software, word-processing software and e-mail. The findings of this study has got implications on the current study in that in analysing the effectiveness of electronic filing system, one must not ignore the mandatory skills that would be users of the system need to have. Failure to consider such skills may make the intention of the system not to be realized as confirmed by Maede (2002). He confirmed that despite the heavy investment that the Malaysian tax authority put in new online system, only 20% of the targeted taxpayers were able to use it after three years of implementation. This was mainly attributed to lack of necessary user skills like computer literacy; however, taxpayer's behaviour also played a role.

Muita (2010) did a related study on the factors that influence adoption and use of e-filing system among Large Taxpayers in Kenya. The study examined the skills required by the users of e-filing, the technology required and the tax authority's preparedness in enhancing the adoption of tax compliance based technology. The study found that for e-filing to effectively take off in Kenya skills, infrastructure and a conducive business environment are needed.

Dowe (2008) argued that the basic prerequisites for implementing successful e-filing and e-payment systems are:

- (1) A reliable and accessible internet service.
- (2) Cooperative financial institutions.
- (3) An IT oriented public
- (4) Adequate financing to set up the appropriate infrastructure in tax offices.

Ideally the setting of an e-filing and e-payment system should form part of a comprehensive IT design, development and implementation strategy. The implementation process for electronic tax systems begins with the development of a strategic business plan – documenting the ideas and actions, desired outcomes and the time frame for each component, taking into account the strengths and weaknesses of the tax administration and environmental opportunities and threats. The plan should also document the implementation strategy including the implementation approach. Many countries have taken a gradual approach by allowing voluntary e-filing and e-payment for select segments of the taxpayer base, e.g. individuals or companies only, in the initial stages to allow for live testing of the system. After testing is complete filing becomes mandatory for some taxpayers, e.g. companies (Dowe, 2008).

Sheikh (2015) explains that as with any new system, there have been numerous teething problems with the electronic system. First, there are two concurrent tax systems — manual and iTax systems without either system recognizing the other. Taxpayers are also receiving demand emails from the Integrated Tax Management System. This is bound to create discrepancies in taxpayers' records, especially with regards to payment of tax obligations as well as submitting returns. For instance, in the current setup, if a taxpayer pays taxes manually, the iTax system will not recognize the payment. Instead, the system automatically calculates penalties and interest on the perceived “missed” tax payments thereby leading to potential disputes between the KRA and the taxpayer. Second, the iTax system lacks historical records of taxpayers. Its record keeping is a “going forward” type in that it only stores tax records of taxpayers from the time of registering for iTax onwards (Sheikh, 2015).

A number of studies both locally and internationally have been done on the role Information Technology plays in Tax compliance. For instance a study of South Korea and Turkey on User evaluation of tax filing web sites was done by Lee et al. (2013), to compare the design and the complexity of the web sites and the ease with taxpayers are able to 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. On the other hand, South Korean system was considered less complex but few taxpayers were using it as expected. Having in place an electronic tax filing system is one thing, but being able to be used by taxpayers is another thing. This has influence on

the current study in a way that the tax website ease of usage must be considered before such a system is rolled out to taxpayers. Other factors to be considered should also be the capacity of the system and the efficiency (Lee et al., 2013).

Amitabh *et al.* (2009) did a study on the antecedents of paperless income tax filing by young professionals in India. The objective of this study was to study how young Indian professionals will adopt or behave towards paperless or online filing of tax returns with the aim of enhancing compliance. The regression analysis carried out found that the antecedents of young Indian professionals depended on the perceived ease of the tax system, personal innovativeness in information technology, relative advantage, performance of filing service, and compatibility. The implication of the findings to the current study is that for any online system to succeed whether for small, medium or large taxpayers' category there must be the ease of use, innovativeness and accessibility.

In Uganda, Akello (2014) reported that there are challenges such as intermittent power supply and Internet outages but says the tax body has made contingency plans to ensure that the system is operational 24/7. First, the e-Tax is hosted on a central server at their Kampala headquarters, which means that it's not affected by power or network outages even when power or the Internet is off in some parts of the country. The electronic filing process still confuses a lot of people because the web portal has many features and yet most people cannot understand some tax terms.

Boone identified computer access, type of access and level of compatibility as factors influencing the adoption of e-filing in United States (Boone, 2012). Using an online survey distributed to 1000 taxpayers within 8 different states, he confirmed the hypothesis that the greater an individual's access to computers at home or in the office, the more likely it is that the individual will file taxes online, as had been proposed by Bandura (Bandura, 1986). The same study further proved that individuals with high speed internet connections are equally likely to file their returns online. With regard to cost of internet access, Boone's study also revealed that individuals for whom cost of internet is a factor are less likely to file online.

Carter and Shaupp's study in 2011 proposed a model of e-file diffusion integrating acceptance factors and personal factors to assess the impact of adoption, trust and optimism on e-file utilization echo Coetzee and Eloff's proposal that Trust of the Internet (TOI) is also a salient predictor of e-service utilization (Eloff, 2005). This suggests that

users will consider attributes of the e-service provider and characteristics of the Internet before using an electronic government service (Carter, 2011).

Awadhi's (2009) study revealed that more than half of the participants of their study claimed that any online e-government service needs to be easy to use if they are to be used by those with little internet experience (Awadhi, 2009). This suggests and confirms that the greater an individual's internet experience, the availability and access to internet facilities, the easier it would be for him or her to learn and use e-government services. In this case of this study, Morris and Awadhi's conclusion would be interpreted to mean that the greater a taxpayers' internet experience in terms of availability and access to internet facilities, the easier it would be and more likely that the taxpayer would choose to learn and consequently use ITMS as an e-filing system. According to Abdul Ambali (Ambali, 2009), the fact is that the gaps in IT infrastructure can affect people's retention to continue using the system provided by the government. Above all, the findings of his study in identifying the factors and ground issues in e-filing system show that users must perceive the technology somehow useful, easy and friendly as well as security guaranteed. His paper also suggests that more IT infrastructures and other incentives should be provided to encourage the public to use the system. The same paper raises a valid concern with regard to government staff, and in this regard, the revenue agency staff, that an effective capacity building program for the staff that can help facilitate readiness of the people to use the system, if e-filing is to become a successful policy program. Thus, the agency's staff must play effective roles to respond to the public perceptual complaints about the e-filing system (Ambali, 2009).

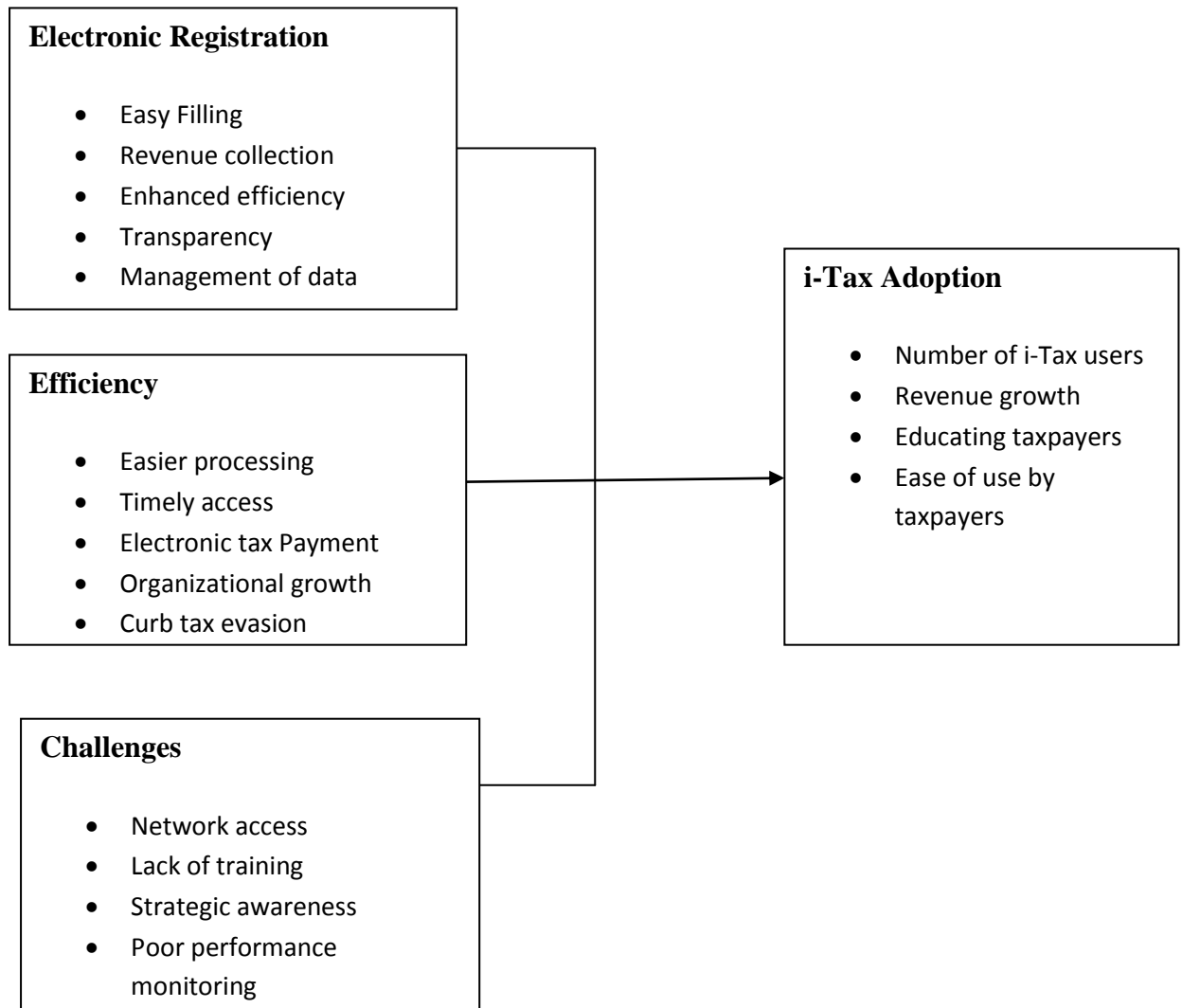
Closer home, Kangave attests that some of the filing methods used in Canada as a measure of improving tax administration, for example, may be expensive for Uganda's taxpayers. Internet services, for example, are still very expensive and there are still high levels of illiteracy. Even more, many literate Ugandans do not have access to computers (Kangave, 2005). This is a scenario which many taxpayers in Kenya can relate to and it was the aim of this study to investigate the extent to which access to internet as well as the cost of accessing the same influences the adoption and use of the e-filing system put in place by K.R.A.

2.4 Conceptual Framework

The electronic taxation conceptual framework components comprise of dependent and independent variables.

Independent Variables

Dependent Variables



2.5 Critique of the study

There is growing international interest in improving the ability of developing countries to collect domestic revenue. However, the evidence on the current capability of revenue authorities in developing countries to perform basic functions is mixed. Obtaining comparable evidence across countries is not straight-forward. Worldwide, taxpayers' resistance, underutilization and reluctance to use electronic filing system remain a great concern and still plague various tax agencies which are embracing electronic tax administration systems. A number of studies both locally and internationally have been done on the role Information Technology plays in Tax compliance. The findings to the current study is that for any online system to succeed whether for small, medium or large taxpayers' category there must be the ease of use, innovativeness and accessibility. Despite the increasing need to increase revenue collection and enforcement so as to provide public services, developing countries still face the challenges of low tax compliance and tax administration.

2.6 Chapter Summary

This chapter presents literature review based on research questions and theory that this study will be anchored. Chapter three will discuss research methodology. This will entail the research design used, the population of study, the sample drawn, data collection tool and procedures as well as the data analysis methods used in this study.

2.7 Research Gap

While researchers have made great contributions on effect of taxation on performance of firms, contextual gap exist where none of the research has focused on the sensitivity of the effects of taxation to contextual factors that determine firm's financial performance. Whereas literature reviewed indicate studies that have sought to show the relationship between iTax and revenue collection, most of them have adopted a descriptive approach by determining factors encouraging or discouraging compliance. Very few studies have taken a comparative view of revenue collection performance of KRA implementation of iTax. This study therefore seeks to analyze the impact of iTax adoption on performance of KRA. Therefore the proposed study will evaluate distinct components of determinants of financial performance of KRA in regard to large tax payers and make different attributions depending upon which component is being evaluated

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter explains in depth the research methodology to be applied in this study. It describes and elucidates the research design, target population, sampling procedures and sample size, research instruments, data collection and analysis procedures the study adopted.

3.2 Research Design

The research adopted a descriptive research design. It involves either identifying the characteristics of an observed phenomenon or exploring possible correlations among two or more phenomena. In every case descriptive research examines a situation as it is. It does not involve changing or modifying the situation under investigation nor is it intended to determine cause and effect relationships. Strategies include sampling, making observations and interviews that take on very different forms when we want them to yield quantitative data (Copper and Schindler, 2010).

According to Zikmund and Babin (2012), a descriptive design includes use of observation studies, correlational research, developmental designs, and survey research. All of these approaches yield quantitative information that can be summarized through statistical analyses. Some of the main advantages of using survey designs to collect primary raw data from respondents is the ability to accommodate large sample sizes and generalizing of results. The ability to distinguish small differences between diverse samples groups, ease of administering and recording questions and answers, increased capabilities of using advanced statistical analysis and abilities of tapping into latent factors and relationships. The researcher believed that this was the most suitable method to analyze the effect of technology adoption on tax collection among large taxpayers.

3.3 Population

The population forms a basis from which the sample or subjects for the study is drawn, Cooper and Schindler (2014). The population of interest for the study will consist of Large Taxpayers in Kenya who currently total 1,240 as indicated in Table 3.1 Below.

Table 3.1: Population Distribution of Large Tax Payers

Sector	No. of Taxpayers
Agriculture	119
Wholesalers	127
Banks	93
Insurance	65
Domestic Excise	101
Manufacturers	198
Government Bodies	143
Construction	120
Service	135
Oil & Transport	139
Totals	Totals 1,240

3.4 Sampling Frame

According to Schindler and Cooper (2014), a sampling frame comprises of a list of people from which the researcher uses to obtain information about the study. The sampling frame defines a set of elements from which a researcher can select a sample of the target population. Because a researcher rarely has direct access to the entire population of interest in social science research, a researcher must rely upon a sampling frame to represent all of the elements of the population of interest. Generally, sampling frames can be divided into two types, list and non-list. Examples of list frames include a list of registered voters in a town, residents listed in a local telephone directory, or a roster of students enrolled in a course. A sampling frame includes a numerical identifier for each individual, 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 sampling frame consisted of segmented taxpayers from the Large Taxpayers Office Department.

3.5 Sample and Sampling Technique

Sampling techniques are considered to be the strategies used by researchers in the statistical sampling process (Cooper & Schindler, 2014). The researcher used both

stratified and random sampling techniques. The LTO taxpayers were first stratified into ten sectors which included Insurance, Banks, Wholesalers, Agriculture, Domestic Excise, Government, Construction, Oil and Transport, Service and Manufacturers. After the stratification, random sampling was then used to pick a sample from each stratum. The adoption of the sampling technique was used to ensure fair and objective distribution of the population for better representation.

A sample size is the number of individuals in a group under study. Saunders et al. (2014) noted that it is important to calculate the precise minimum sample size required and the calculation is based on the level of confidence in the estimate. The margin of error that can be tolerated and the proportion of responses expected to have some particular attribute.

According to Mugenda and Mugenda (2003), a sample size 10-30% is sufficient. The researcher applied the rule of thumb and a sample size of 10% was picked from the entire population of 1,240. In order to achieve objective representation of the entire population, the percentage of each sector to the entire population will be calculated and be arrived at by randomly picking a definite number depending on the numerical strength of the sector to the population of the study. As a result, a sample size of 124 was arrived at as shown on Table 3.2 below.

Table 3.2: Sample Size

Sector	No. of Taxpayers	Sample Size (10%)
Agriculture	119	12
Wholesalers	127	13
Banks	93	9
Insurance	65	7
Domestic Excise	101	10
Manufacturers	198	20
Government Bodies	143	14
Construction	120	12
Service	135	14
Oil & Transport	139	14
Totals	Totals 1,240	124

3.6 Data Collection Instruments

In data collection, the researcher should describe the major method(s) for collecting data from the subjects (Cooper & Schindler, 2014). In this study the main data collection method that was used was questionnaires. The questionnaire contained both open ended and close ended questions. Questionnaires are preferred because they are a very effective method of data collection in that they allow respondents to give much of their opinions pertaining to the researched problem. The questionnaires used a scale from strongly agree to strongly disagree. The questionnaires were administered to the personnel who handle taxes in the sampled taxpayers. The 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 only be used for the research purposes. This was done in order to enhance the response rate of the large taxpayers.

3.5 Data Collection Procedure

Five respondents were used to pilot test the research questionnaire to remove any obstacles. These respondents were picked randomly among the Large Taxpayers. The researcher then confirmed that the data collected answered the research question. The researcher personally distributed the questionnaires and gave the respondents at least one week to fill and return them. For the respondents who were far away and could not be easily accessed the researcher sent the questionnaires via email. To ensure validity of the data the researcher was able to utilize the Cronbalch alpha in SPSS to determine the validity of each variable.

3.8 Pilot Study

The questionnaire was pilot tested with an equivalent of 10 % of the sample size which is 12 participants. The questionnaire was piloted among firms listed as large tax payers.. The problems encountered during pilot testing was addressed by making adjustments to the questionnaire before administering it on the whole study sample.

3.9 Data Analysis

Data analysis is the process of analyzing, cleaning, transforming, and modeling data collected in a research. Data analysis methods used in the study included quantitative techniques (Cooper & Schindler, 2014). Data was coded according to different variables of the study for ease of data entry and interpretation. The descriptive statistical tool, Statistical Package for Social Sciences (SPSS) and excel applications was used to help the researcher describe the data and this was through descriptive analysis of means, standard deviations, and frequencies.

The quantitative data collected was analyzed by the use of inferential statistics using SPSS and presented through regression and correlation analysis to determine the relation between the dependent and independent variables. The information was displayed by use of tables where necessary. Descriptive statistic such as mean and standard deviation was also used to measure the central tendencies of the variables.

CHAPTER FOUR: RESEARCH FINDINGS AND ANALYSIS

4.1 Introduction

This chapter presented the research findings on the effect of iTax on revenue collection of Kenya Revenue Authority amongst Large Taxpayers.

The study sought to examine the effect of iTax on revenue collection of Kenya Revenue Authority amongst Large Taxpayers. It was guided by three main objectives; effect of the adoption of electronic registration on revenue collection by the Kenya Revenue Authority on Large Tax Payers. To establish the impact of the adoption of iTax on efficiency of operation at Kenya Revenue Authority on Large Tax Payer. To find out the challenges of iTax adoption at the Kenya revenue authority when dealing with large tax payers.

4.1.1 Response Rate

The research issued a total of 124 questionnaires and a total of 100 were filled and returned giving a response rate of 81 % and this was considered sufficient for the study as indicated in Table 4.1

Table 4.1: Response Rate

Variable	Frequency	Percentage
Filled and returned	100	81
Non-response	24	19
Total	124	100

4.2 Demographic Analysis

4.2.1 Respondents Education

Analysis of the respondents' education levels revealed that post graduate degree holders were 5%, undergraduate holders accounted for 18%, diploma holders were 42%, while those with O level qualification were 35%, as indicated to Figure 4.1. This implied that the respondents were literate enough to understand and comprehend the questionnaires; in addition the institution has employees with the right education to ensure prosperity of the organization.

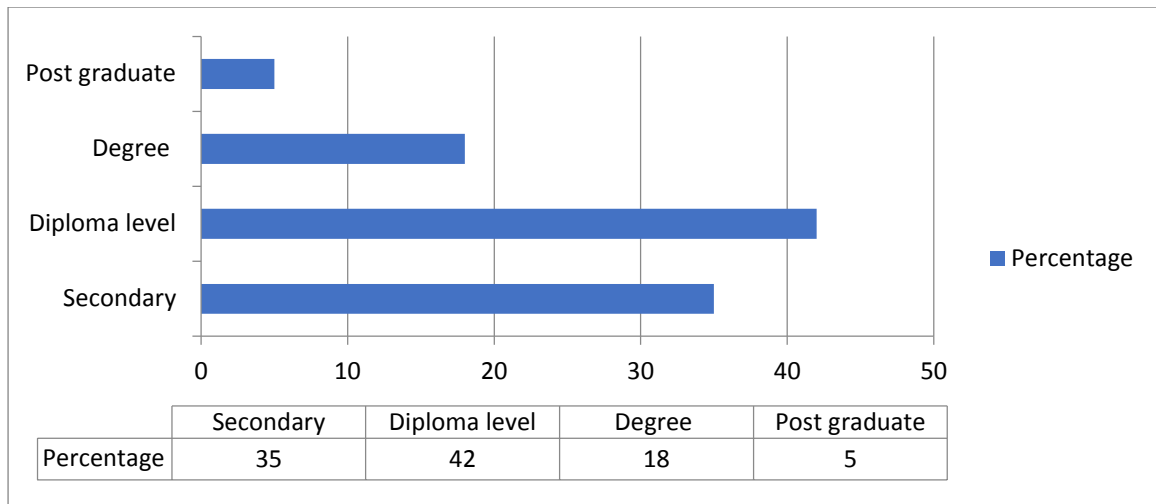


Figure 4.1: Respondents Education

4.2.2 Industry

Analysis of the sector revealed that manufacturing firm were the majority and accounted for 15%, government bodies had 14% representation, oil and transport sector had 13% representation, construction firms had 12% representation findings also show that agriculture and banks had 9% representation, while agriculture and banks had 7% representation while wholesalers and insurance had 7% representation, service sector had 8% while domestic excise had 6% as indicated in Figure 4.2.

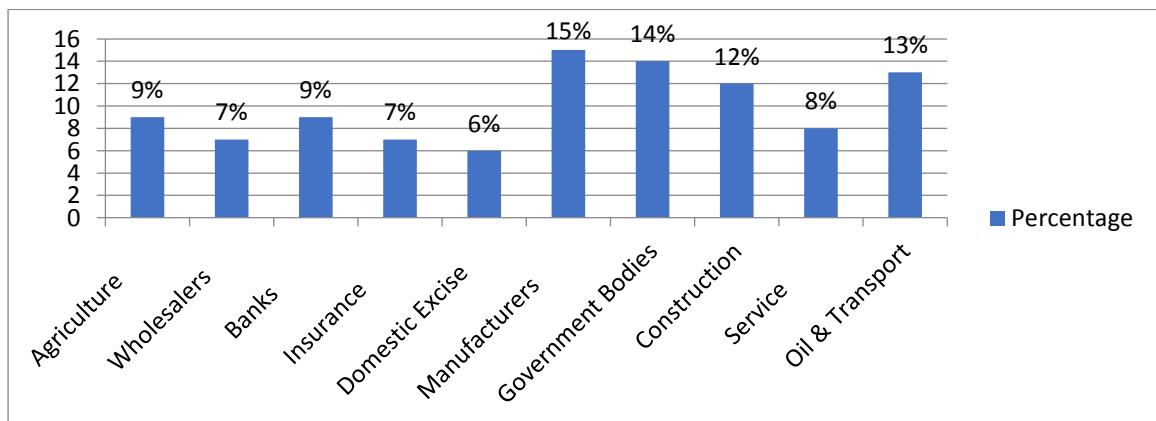


Figure 4.2: Industry

4.3 Effect of Adoption of iTax on Revenue Collection

A Likert scale data was collected rating the views in a scale. The mean results are therefore given on a scale interval where a mean value of up to 1 is an indication of strongly disagree; 1.1 – 2.0 is disagree; 2.1 – 3.0 is neutral, 3.1 – 4.0 is agree and a mean value of 4.1 and above is an indication of strongly agree. The study therefore established

that most respondents strongly agreed that iTax system has increased revenue collection by a mean of 4.27 and a standard deviation of .723), it was also strongly agreed that iTax has also made it very easy to file and the administration of taxes by a mean of 4.30, and a standard deviation of .905). The study also show that majority were in strong agreement that iTax system has reduced costs of compliance through minimizing cases of tax avoidance and evasion mean 4.42, standard deviation .912). In addition, they also strongly agreed that information systems enhance efficiency in tax administration and improved quality of services offered by a mean of 4.40 and a standard deviation of 1.119 and it was also strongly agreed that iTax offers the users an efficient way of managing data thus improving revenue collection by a mean of 4.12 and standard deviation of 1.037. It was however agreed that iTax system has also increased revenue collection by a mean of 3.98 and a standard deviation of .953) as shown in Table 4.2

Table 4.2: Effect of Adoption of electronic registration on Revenue

Variable	N	Mean	Std. Deviation
iTax system has increased revenue collection	100	4.27	.723
iTax system has made filing and administration of taxes easier	100	4.30	.905
iTax system has reduce costs of compliance through minimizing cases of tax avoidance and evasion.	100	4.42	.912
information systems enhance efficiency in tax administration and improved quality of services offered.	100	4.40	1.119
iTax offers an efficient way of managing data thus improving revenue collection	100	4.12	1.037
iTax system has increased revenue collection	100	3.98	.953

4.4 Impact of iTax Adoption on Efficiency of Operation

A Likert scale data was collected rating the views in a scale. The mean results are therefore given on a scale interval where a mean value of up to 1 is an indication of strongly disagree; 1.1 – 2.0 is disagree; 2.1 – 3.0 is neutral, 3.1 – 4.0 is agree and a mean value of 4.1 and above is an indication of strongly agree.

The study show that it was agreed that computer generated returns transmitted electronically are easier to process than paper returns by a mean of 3.82 and a standard deviation of 1.266, it was also agreed that the use of ICT enhances timely access to accurate and relevant information by a mean of 3.77 and a standard deviation of 1.090. Study also shows that majority agreed that ICT use has lead to high level organizational growth by a mean of 4.10 and a standard deviation of .927. There was however an agreement that ETR machines have helped to curb cases of tax evasion by a mean of 3.54 and a standard deviation of 1.123. The study also revealed that respondents agreed that e-file near the tax deadline lead to system failure by a mean of 3.59 and a standard deviation of 1.138 and majority were uncertain whether diffusion of e-return is dependent on the extent of Tax Administration’s promotion efforts by a mean of 2.55 and a standard deviation of 1.403.

Table 4.3: Impact of iTax Adoption on Efficiency of Operation

Variable	N	Mean	Std. Deviation
Computer generated returns transmitted electronically are easier to process than paper returns	100	3.82	1.266
use of ICT enhances timely access to accurate and relevant information	100	3.77	1.090
ICT use has lead to high level organizational growth	100	4.10	.927
ETR machines have helped to curb cases of tax evasion	100	3.54	1.123
e-file near the tax deadline and this may lead to system crashes if the e-filing system	100	3.59	1.138
Diffusion of e-return is dependent on the extent of Tax Administration’s promotion efforts.	100	2.55	1.403

4.5 Challenges of iTax Adoption

A Likert scale data was collected rating the views in a scale. The mean results are therefore given on a scale interval where a mean value of up to 1 is an indication of strongly disagree; 1.1 – 2.0 is disagree; 2.1 – 3.0 is neutral, 3.1 – 4.0 is agree and a mean value of 4.1 and above is an indication of strongly agree.

Majority agreed that employees ensure that the revenue authority collects its tax from clients at the right time by a mean of 3.93 and standard deviation of .795). Majority also

agreed that there is a lack of strategic awareness on iTax adoption by a mean of 3.89 and a standard deviation of .737. Similarly, there was an agreement that if poor performance monitoring and poor coordination processes hinder public service delivery by a mean of 3.39 and a standard deviation of .931. Majority strongly agreed that individuals with high speed internet connections are equally likely to file their returns online by a mean of 4.21 and standard deviation of 1.157. Majority were neutral that employees have ensured that clients have the right knowledge of business taxation by a mean of 2.85 and standard deviation of 1.029.

Table 4.4: Challenges of iTax Adoption

Variable	N	Mean	Std. Deviation
employees ensure that the revenue authority collects its tax from clients at the right time.	100	3.93	.795
Employeed have ensured that clients have the right knowledge of business taxation.	100	2.85	1.029
There is a lack of strategic awareness on iTax adoption.	100	3.89	.737
Poor performance monitoring and poor coordination processes hinder public service delivery.	100	3.39	.931
Individuals with high speed internet connections are equally likely to file their returns online	100	4.21	1.157
employees ensure that the revenue authority collects its tax from clients at the right time.	100	4.74	.441

4.6 Adoption of iTax

The study revealed that majority strongly agreed that e-filing system is a beneficial idea by a mean of 4.44 and a standard deviation of .625). Similarly, they also admitted that in comparison to the manual system of tax registration and submission of tax returns, I find the online service efficient by a mean of 4.53 and a standard deviation of .822. The study also show that K.R.A has put in place enough measures to ensure that taxpayers know how to file their tax returns online by a mean of 4.12 and a standard deviation of .795.

Table 4.5: Adoption of iTax

Variable	N	Mean	Std. Deviation
I believe the e-filing system is a beneficial idea	100	4.44	.625
In comparison to the manual system of tax registration and submission of tax returns, I find the online service efficient.	100	4.53	.822
K.R.A has put in place enough measures to ensure that taxpayers know how to file their tax returns online.	100	4.12	.795

4.7 Inferential Statistics

4.7.1 Correlation

A Pearson correlation was done to establish the relationship between iTax adoption and other factors and the findings revealed that there was a positive relationship between iTax adoption and revenue collection ($r=0.676$, $p<0.01$), efficiency ($r=0.575$, $p<0.01$). There was however a negative correlation between iTax adoption and the challenges encountered ($r=0.550$, $p<0.01$). It also revealed a significant correlation between career growth and Job security ($r=-0.182$, $p>0.05$), Therefore it was concluded that use of iTax in revenue collection, and efficiency of iTax positively and significantly influenced iTax uptake as shown in Table 4.6

Table 4.6: Correlation

		ITAX	Revenue Collection	Efficiency	Challenge
ITAX	Pearson Correlation	1			
	Sig. (2-tailed)				
Revenue Collection	Pearson Correlation	.676**	1		
	Sig. (2-tailed)	.000			
Efficiency	Pearson Correlation	.575**	.428**	1	
	Sig. (2-tailed)	.000	.000		
Challenge	Pearson Correlation	-.182	-.038	.426**	1
	Sig. (2-tailed)	.069	.707	.000	
	N	100	100	100	100

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

4.7.2 Regression Analysis of iTax Adoption on Revenue Collection

The research analyzed the relationship between the dependent variable (iTax adoption) against revenue collection. The results showed that adjusted R^2 value was 0.457 hence 45.7% of the variation in Revenue collection was caused by variations in iTax adoption as illustrated in Table 4.7

Table 4.7: Model Summary of iTax Adoption on Revenue collection

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F	df1	df2	Sig. F Change
1	.676 ^a	.457	.451	.41394	.457	82.396	1	98	.000

a. Predictors: (Constant), revenue collection

4.7.2.1 Anova of iTax Adoption on Revenue collection

ANOVA analysis results of the regression iTax Adoption and Revenue collection was done at 95% confidence level, the F critical was 83.396 and the P value was (0.000) therefore below 0.05 this implied that it was statistically significant and can be used to assess the association between iTax Adoption and revenue collection as illustrated in Table 4.8

Table 4.8: Anova of iTax Adoption and Revenue collection

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.118	1	14.118	82.396	.000 ^b
	Residual	16.792	98	.171		
	Total	30.910	99			

a. Dependent Variable: ITAX

b. Predictors: (Constant), revenue collection

4.7.2.2 Coefficients of iTax Adoption and Revenue collection

The regression equation illustrated in Table 4.9 established that taking revenue collection into account and other factors held constant iTax adoption improved by 0.703 units. This implied that a unit change in revenue collection would lead to a 0.703 change in iTax adoption.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

$$Y = 1.378 + 0.703 X_1 + .41394$$

Where:

Y is the dependent variable (iTax adoption)

β_0 is the regression constant;

β_1 coefficients of independent variables;

X_1 is revenue collection, and ε is the error term.

Table 4.9: Coefficients of iTax Adoption and Revenue collection

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	1.378	.332		4.155	.000
	revenue collection	.703	.077	.676	9.077	.000

4.7.3 Regression Analysis of iTax Adoption and Efficiency

The research analyzed the relationship between the dependent variable (iTax adoption) against efficiency. The results showed that adjusted R^2 value was 0.331 hence 33.1% of the variation in iTax adoption was explained by the variations in iTax efficiency as illustrated in Table 4.10

Table 4.10: Model Summary of iTax Adoption and Efficiency

Model	R	Adjusted R Square	Std. Error of the Estimate	Change in R Square	Change Statistics			Sig. F Change
					F Change	df1	df2	
1	.575 ^a	.331	.45942	.331	48.448	1	98	.000

a. Predictors: (Constant), efficiency

4.7.3.1 Anova of iTax Adoption and iTax Efficiency

ANOVA analysis results of the regression iTax Adoption and efficiency was done at 95% confidence level, the F critical was 48.488 and the P value was (0.000) therefore below 0.05 this implied that it was statistically significant and can be used to assess the association between iTax Adoption and efficiency as illustrated in Table 4.11

Table 4.11: Anova of iTax Adoption and iTax Efficiency

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.226	1	10.226	48.448	.000 ^b
	Residual	20.684	98	.211		
	Total	30.910	99			

a. Dependent Variable: ITAX

b. Predictors: (Constant), efficiency

4.7.3.2 Coefficients of iTax Adoption and iTax Efficiency

The regression equation illustrated in Table 4.12 established that taking efficiency into account and other factors held constant itax adoption improved by 0.570 units. This implied that a unit change in efficiency would lead to a 0.570 change in iTax adoption.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

$$Y = 2.082 + 0.570 X_1 + .45942$$

Where:

Y is the dependent variable (iTax adotion)

β_0 is the regression constant;

β_1 coefficients of independent variables;

X_1 is efficiency, and ε is the error term.

Table 4.12: Coefficients of iTax Adoption and iTax Efficiency

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.082	.331		6.293	.000
	Efficiency	.570	.082	.575	6.960	.000

4.8 Discussion

The general objective of the study was to establish the effect of iTax On Financial Performance Of Kenya Revenue Authority amongst Large Taxpayers. In order to achieve the purpose of the study and to address the statement of the problem, the researcher endeavored to answer three specific research objectives: To establish the effect of the adoption of iTax on revenue collection by the Kenya Revenue Authority on Large Tax Payers. To establish the impact of the adoption of iTax on efficiency of operation at Kenya Revenue Authority on Large Tax Payer To find out the challenges of iTax adoption at the Kenya revenue authority when dealing with large tax payers.

The findings revealed that iTax system has increased revenue collection and has made filing and administration of taxes very easy. The study also show that iTax system has reduced costs of compliance through minimizing cases of tax avoidance and evasion, in addition, information systems enhance efficiency in tax administration and improved quality of services and iTax offers an efficient way of managing data thus improving revenue collection. A Pearson correlation done to establish the relationship between iTax adoption and other factors revealed that there was a positive relationship between iTax adoption and revenue collection ($r=0.676$, $p<0.01$),

The study show that computer generated returns transmitted electronically are easier to process than paper returns, and use of ICT enhances timely access to accurate and relevant information. Study also show that ICT use has lead to high level organizational growth. There was however a slight agreement that ETR machines have helped to curb cases of tax evasion. The study also revealed that e-file near the tax deadline lead to system failure and majority disagreed that diffusion of e-return is dependent on the extent of Tax Administration's promotion efforts. A Pearson correlation done to establish the relationship between iTax adoption and other factors revealed that there was a positive relationship between iTax adoption and efficiency ($r=0.575$, $p<0.01$).

Majority agreed that employees ensure that the revenue authority collects its tax from clients at the right time. It was also disagreed that employees have ensured that clients have the right knowledge of business taxation. However, majority agreed that there is a lack of strategic awareness on iTax adoption. Similarly majority have agreed that individuals with high speed internet connections are equally likely to file their returns online.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

The chapter has presented the findings from the data, draws conclusions and suggests recommendations on the effect of iTax on revenue collection of Kenya Revenue Authority amongst Large Taxpayers.

The study sought to examine the effect of iTax on revenue collection of Kenya Revenue Authority amongst Large Taxpayers. It was guided by three main objectives; effect of the adoption of electronic registration on revenue collection by the Kenya Revenue Authority on Large Tax Payers. To establish the impact of the adoption of iTax on efficiency of operation at Kenya Revenue Authority on Large Tax Payer. To find out the challenges of iTax adoption at the Kenya revenue authority when dealing with large tax payers.

5.1.1 Effect of The Adoption of Itax on Revenue Collection by the Kenya Revenue Authority on Large Tax Payer

iTax system has increased revenue collection and eased filling and administration of taxes. Floropoulos *et al* (2010) on the success of taxation information systems in Greece. They sought to look at the constructs of user satisfaction, usefulness and quality of service as measures of success of information systems in tax administration. A sample of employees in the Greek tax authority was taken. Their study found that information systems enhance efficiency in tax administration and improved quality of services offered by Greek tax authorities.

Chen (2010) carried on a study on the impact of antecedents of quality on the satisfaction of taxpayers with online tax system in Taiwan. He made use of hierarchical factor analysis to support evidence of user satisfaction in online tax filing systems. The study found that information and system quality to be the key factors in determining user satisfaction in online tax systems.

iTax system has reduced costs of compliance through minimizing cases of tax avoidance and evasion. Azmi *et al.*, (2016) made use of questionnaires to determine factors influencing adoption of e-filing tax systems by small and medium size businesses in

Malaysia. The study made use of technology acceptance model to gauge perceived risk of adoption of e-filing systems. Samples were taken from the Malaysian public who were taxpayers. Study findings showed that a mixture of regulatory requirements and system complexity and compatibility were the main drivers to adoption of such systems.

Germany and Seelmann (2011) did a study on the benefits of a computerized integrated system for taxation (iTax). They found out that iTax system has cost saving and service improvement effects induced by e-Government. Despite the increasing need to raise the level of revenue collection and enforcement so as to provide public services, developing countries still face the challenges of low tax compliance. This leads to frequent tax reforms aimed primarily at closing short-term revenue gaps (Bird & Zolt, 2003).

It was also revealed that use of information systems has enhance efficiency in tax administration and improved quality of services offered, this has increased increased revenue collection. Revenue system modernization improves the ability of an organization to collect more revenue with minimal costs.

An electronic system for filing and paying taxes, like the iTax system, if implemented well and used by most taxpayers, benefits both tax authorities and taxpayers. For tax authorities, electronic filing lightens the workload and reduces operational costs – such as the costs of processing; storing and handling tax returns (Gekonge & Atambo, 2016). To meet the 2014/15 target of a record Sh1.18 trillion, KRA had to raise collections by over 20 per cent through new efficient measures that heavily relied on the introduction of iTax system (KRA, 2015).

Local studies have also been conducted on iTax and revenue collection. Otieno *et al* (2013) studied the impact of information systems on revenue collection of local authorities in Kenya. In a survey of 1942 taxpayers and 165 tax officials, they found a high efficacy between such systems and increased revenue collection. A high correlation was specifically observed between internal control systems and revenue collection at 0.97. They however observed change management was necessary to ensure full implementation of information systems due to resistance among local authority staff.

5.1.2 Impact of the Adoption of iTax on Efficiency of Operation at Kenya Revenue Authority on Large Tax Payer

Use of computer generated returns transmitted electronically are easier to process than paper returns and as such this enhances timely access to accurate and relevant information. According to Kun, *et al* (2008), for a long time, government services have been regarded as synonymous with bureaucracy in both developing and industrialized countries.

The tenets of Weberian bureaucracy include such factors as organized hierarchy, development of standardized and impersonal procedures, formal division of labor and responsibility, and emphasize efficiency in all procedures. Whatever the level of efficiency of the bureaucracy, the availability of computers to people from all walks of life has brought them better and more convenient access to public services.

Additionally, through the Internet and computer technology, governments can provide services in the original positive sense of Weberian bureaucracy. In other words, the government can facilitate public service offerings in a truly standard, impersonal, efficient, and convenient manner for both service provider (the government) and service recipient (the citizens).

In some cases a government agency can also be a service recipient of an e-government service. In economic terms, the ability of citizens to access government services anytime, anywhere helps to mitigate the transaction costs inherent in all types of government services (Kun, et al, 2008).

ICT use has lead to high level organizational growth. According to Harold (2011), computer generated returns, transmitted electronically, generally are easier to process than paper returns; since the information on the forms doesn't have to be keyed in, number by number, by IRS staff into the Service's computers hence there is less chance of errors. Electronic transmittal is instantaneous, bypassing the frustrating vagaries of the postal system and the client receives confirmation within a day or two that the return not only was received by the IRS, but was received accurately.

However, from an American experience, electronic tax systems' biggest advantage, from the taxpayer's point of view, is that it shortens the time for refunds from an average of 12 weeks to about 3 weeks. Refunds can even be deposited directly into taxpayers' bank accounts.

There has been several studies concerning the electronic tax payments across the globe, Seelmann, Lerche, Kiefer and Lucante (2011) did a study Benefits of a computerized integrated system for 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.

They concluded that Computerization of tax and revenue authorities can contribute to reaching the goal of good (financial) governance. It improves accountability and transparency of the revenue authorities. Nevertheless, while reforming and modernizing the tax system is an essential part of improving domestic resource mobilization, such a reform will be sustainable only in conjunction with more profound changes in the administrative and political structure of a state.

Sagas, Nelimalyani and Kimaiyo (2015), did an assessment of the impact of electronic tax register on revenue collection by Kenya Revenue Authority western region, Kenya. 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.

5.1.3 Challenges of iTax Adopion

Review of the challenges revealed that employees ensure that the revenue authority collects its tax from clients at the right time despite a lack of strategic awareness on iTax adoption. According to Lubua (2014), employees play a vital role in ensuring that the revenue authority collects its tax from clients at the right time. They also ensure that clients have the right knowledge of business taxation. Low integrity to employees is reported to significantly affect efforts by the revenue authority toward improving revenue collection.

To a large extent, the use of ICTs in the Tanzanian revenue authority has addressed the challenge of corruptive behaviour by employees. In areas such as custom department, clients are able to conduct own assessments. However in domestic revenue there is a low usage of ICTs. Clients depend on employees for assessment and this assessment depends on employees' rational ability and integrity.

In Bangladesh, Aminuzzaman (2010) conducted a study about Public Service Delivery among Local Authorities in Bangladesh and found that some of the critical institutional challenges facing public service delivery include limited manpower and resources. The study did not focus on revenue authorities and the public service delivery they offer. Sarshar and Moores (2006) conducted a study in the UK and found that lack of strategic awareness, lack of capacity, poor performance monitoring and poor coordination processes were major challenges that hindered public service delivery.

In Malaysia, Ling and Nawawi (2010) carried out a survey on Integrating ICT Skills and tax software in tax education. The respondents were the tax practitioners and the study aimed at establishing the necessary skills required by taxpayers to fully utilize a tax online system. The study found that three skills are needed by a taxpayer to interact well with technology based tax system namely, spread sheet software, word-processing software and e-mail.

The findings of this study has got implications on the current study in that in analysing the effectiveness of electronic filing system, one must not ignore the mandatory skills that would be users of the system need to have. Failure to consider such skills may make the intention of the system not to be realized as confirmed by Maede (2002). He confirmed that despite the heavy investment that the Malaysian tax authority put in new online system, only 20% of the targeted taxpayers were able to use it after three years of implementation. This was mainly attributed to lack of necessary user skills like computer literacy; however, taxpayer's behavior also played a role.

It was also disagreed that employees have ensured that clients have the right knowledge of business taxation. Sheikh (2015) explains that as with any new system, there have been numerous teething problems with the electronic system. First, there are two concurrent tax systems manual and iTax systems without either system recognizing the other.

Taxpayers are also receiving demand emails from the Integrated Tax Management System. This is bound to create discrepancies in taxpayers' records, especially with regards to payment of tax obligations as well as submitting returns.

For instance, in the current setup, if a taxpayer pays taxes manually, the iTax system will not recognize the payment. Instead, the system automatically calculates penalties and interest on the perceived "missed" tax payments thereby leading to potential disputes between the KRA and the taxpayer. Second, the iTax system lacks historical records of taxpayers. Its record keeping is a "going forward" type in that it only stores tax records of taxpayers from the time of registering for iTax onwards (Sheikh, 2015).

5.3 Conclusion

The study concludes that the iTax system has increased revenue collection and eased filling and administration of taxes.

iTax system has reduced costs of compliance through minimizing cases of tax avoidance and evasion in addition, use of information systems has enhance efficiency in tax administration.

It has improved quality of services offered; this has increased revenue collection in the county.

The study also concludes the use of computer generated returns transmitted electronically is easier to process than paper returns and as such this enhances timely access to accurate and relevant information. ICT use has lead to high level organizational growth, failure to do returns on time lead to system failure.

KRA employees have ensured that revenue authority collects its tax from clients at the right time even though they face major setbacks such as lack of strategic awareness on iTax adoption by taxpayers.

5.4 Recommendations

Management Recommendations

Based on the above conclusions the study recommends that there should be continued seminars and training of taxpayers on filling of returns. Members should be encouraged to undergo voluntary tax registration and tax fillings in a timely manner to avoid any inconveniences which will eventually lead to increase in tax revenue collected

Policy Recommendations

Since the study concluded that revenue collection and i-Tax system efficiency has had a positive influence on i-Tax adoption as was shown in the regression analysis, this study recommends that the policy makers should take relevant measures to ensure full implementation of the system, this can be done through continuous marketing and training where need be.

5.5 Areas for Further Research

Extensive studies should be done to establish the effect of iTax on financial performance of Kenya revenue authority amongst large taxpayers in other counties, this will enable for comparison and generalization of the findings. More studies also ought to be done with KRA officers as the target population to establish if indeed, iTax has increases revenue collection.

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APPENDIX I: INTRODUCTION LETTER

August 4th, 2017

Annrita Wanjiru Njenga

P.o Box 1734-20117

Nairobi, Kenya

Dear respondent,

This is a research project submitted in partial fulfillment for the award of post graduate diploma in tax law and administration of the Jomo Kenyatta University of Agriculture & Technology in conjunction with Kenya School of Revenue Administration to assess the EFFECT OF iTAX SYSTEM ON REVENUE COLLECTION OF KENYA REVENUE AUTHORITY: A CASE OF LARGE TAXPAYERS

Therefore, kindly complete the attached questionnaire with as accurate information as possible. This research will be used entirely for academic purposes while observing utmost confidentiality.

Your assistance is highly appreciated. Thank you in advance.

Yours faithfully,

Annrita Wanjiru Njenga

APPENDIX II: QUESTIONNAIRE

(Please tick in the appropriate box)

1) Highest level of education of the respondent:

- | | | | |
|----------------------|--------------------------|------------------------|--------------------------|
| Primary school level | <input type="checkbox"/> | Secondary school level | <input type="checkbox"/> |
| Diploma level | <input type="checkbox"/> | Degree | <input type="checkbox"/> |
| Postgraduate level | <input type="checkbox"/> | | |

2) Industry

- | | | | |
|-----------------|--------------------------|-------------------|--------------------------|
| Agriculture | <input type="checkbox"/> | Manufacturers | <input type="checkbox"/> |
| Wholesalers | <input type="checkbox"/> | Government Bodies | <input type="checkbox"/> |
| Banks | <input type="checkbox"/> | Construction | <input type="checkbox"/> |
| Insurance | <input type="checkbox"/> | Service | <input type="checkbox"/> |
| Domestic Excise | <input type="checkbox"/> | Oil & Transport | <input type="checkbox"/> |

Section A: Effect of Adoption of Electronic registration On Revenue Collection

Indicate the extent to which you agree with the following statement (Strongly Agree -5, Agree -4, Neutral-3, Disagree -2, Strongly Disagree-1)

Variable	1	2	3	4	5
iTax system has increased revenue collection					
iTax system has made filing and administration of taxpayers easier					
iTax system has reduce costs of compliance through minimizing cases of tax avoidance and evasion.					
Information systems enhance efficiency in tax administration and improved quality of services offered.					
iTax offers an efficient way of managing data thus improving revenue collection					
iTax offers transparency in fiscal administration					

SECTION B: Impact of Adoption of i-Tax on Efficiency of Operation

Indicate the extent to which you agree with the following statement (Strongly Agree -5, Agree -4, Neutral-3, Disagree -2, Strongly Disagree-1)

Variable	1	2	3	4	5
Computer generated returns transmitted electronically are easier to process than paper returns					
use of ICT enhances timely access to accurate and relevant information					
ICT use has lead to high level organizational growth					
ETR machines have helped to curb cases of tax evasion					
e-file near the tax deadline and this may lead to system crashes if the e-filing system					
Diffusion of e-return is dependent extent of Tax Administration's promotion efforts.					

SECTION C: Challenges of iTax Adoption at the Kenya Revenue Authority

Indicate the extent to which you agree with the following statement (Strongly Agree -5, Agree -4, Neutral-3, Disagree -2, Strongly Disagree-1)

Variable	1	2	3	4	5
Employees ensure that the revenue authority collects its tax from clients at the right time.					
Employeed have ensured that clients have the right knowledge of business taxation.					
There is a lack of strategic awareness on iTax adoption.					
Poor performance monitoring and poor coordination processes hinder public service delivery.					
Individuals with high speed internet connections are equally likely to file their returns online					

SECTION D: i-Tax Adoption

Indicate the extent to which you agree with the following statement (Strongly Agree -5, Agree -4, Neutral-3, Disagree -2, Strongly Disagree-1)

Variable	1	2	3	4	5
I believe the e-filing system is a beneficial idea					
In comparison to the manual system of tax registration and submission of tax returns, I find the online service efficient.					
K.R.A has put in place enough measures to ensure that taxpayers know how to file their tax returns online.					

Thank you for your Response

APPENDIX III: LIST OF COMPANIES

A P A INSURANCE LIMITED	ELGON CHEMICALS LIMITED
ABERCROMBIE AND KENT KENYA LIMITED	EQUATOR BOTTLERS LTD
ACACIA FUND LIMITED	FARMERS CHOICE LTD
ACCURATE STEEL MILLS LIMITED	FIDELITY COMMERCIAL BANK LIMITED
ADA ENTERPRISES LIMITED	GEMINIA INSURANCE CO. LTD
AFRICA MERCHANT ASSURANCE COMPANY LTD	GENERAL MOTORS EAST AFRICA LIMITED
AFRICAN DISTILLERS LIMITED	GUARDIAN BANK LIMITED
AFRICAN MARINE & GEN ENGINEERING COMPANY LIMITED	H YOUNG & CO (E A) LTD
AFRICAN SAFARI AIRWAYS LTD	HEMINGWAYS RESIDENTIAL DEVELOPMENT COMPANY LIMITED
AFRICAN SAFARI CLUB LIMITED	HOT POINT APPLIANCES LTD
AHMED NOORMOHAMED ISSAK HARDWARES LTD	HOTEL SAPPHIRE LIMITED
AIR CONNECTIONS LIMITED	HOUSING FINANCE CO OF KENYA
AKAMBA PUBLIC ROAD SERVICES LTD	ILARA DAIRIES
ALAN DICK & COMPANY (EAST AFRICA) LIMITED	INSTEEL LIMITED
ALBA PETROLEUM LIMITED	INVESTMENT & MORTGAGES LIMITED
ALL PACK INDUSTRIES LTD	JEWEL PLAZA LIMITED
ALLIANCE HOTELS LTD	JUBILEE INSURANCE CO LTD
ALPHA FINE FOODS LIMITED	KENPOLY MANUFACTURERS LIMITED
AMAZON MOTORS LIMITED	KENYA BREWERIES LIMITED
AMIRAN KENYA LIMITED	KENYA BUREAU OF STANDARDS
ANWARALI AND BROTHERS LIMITED	KENYA BUS SERVICES LIMITED
AON MINET INSURANCE BROKERS LIMITED	KENYA CIVIL AVIATION AUTHORITY
APOLLO INSURANCE COMPANY LIMITED	KENYA MEDICAL RESEARCH INSTITUTE
ARISTOCRAT CONCRETE LIMITED	KENYA NUT CO LTD
ASHBHU SECURITIES LIMITED	KENYA REVENUE AUTHORITY
ASL LIMITED	LIBERTY ASSURANCE COMPANY LIMITED
ASSOCIATED VEHICLE ASSEMBLERS LIMITED	LIMURU TEA CO LTD
ATHI RIVER MINING LTD	LION OF KENYA INSURANCE CO LTD
BAHARINI OIL SUPPLY SURVICES LTD	LONGVIEW LIMITED
BAKEX MILLERS LTD	LARGO INVESTMENTS LIMITED
BAMBURI CEMENT LIMITED	MABATI ROLLING MILLS LIMITED
BAMBURI SPECIAL PRODUCTS	MAGADI SODA CO LTD
BEIERSDORF EAST AFRICA LIMITED	MAISA DISTILLERS
BEIERSDORF EAST AFRICA LIMITED	NAIVASHA SELF SERVICE STORES LIMITED
BESTFOODS KENYA LIMITED	NAMPAK KENYA LIMITED
BESTFOODS KENYA LIMITED	SAFARICOM LIMITED
BIA BORA DISTRIBUTORS LIMITED	SASINI TEA & COFFEE LTD
BIDCO OIL REFINERIES LTD	SAVINGS & LOAN KENYA LTD
BLOCK MANAGEMENT LIMITED	SPIN KNIT LIMITED
BLOCK HOTELS LIMITED	SPINNERS & SPINNERS LTD
BOBMIL INDUSTRIES LTD	SIMBA COLT MOTORS LTD

BOOTH EXTRUSIONS LIMITED	SOFTA BOTTLING COMPANY LIMITED
BROOKSIDE DAIRY LTD	SUNMATT LIMITED
BROADWAY BAKERS LTD	SAVINGS & LOAN KENYA LTD
BUSINESS FORMS & SYSTEMS LTD	SUPER FOAM LTD
CAPITAL FISH (K) LIMITED	SYNGENTA EAST AFRICA LIMITED
CAPWELL INDUSTRIES LTD	TUSKER MATTRESSES LTD
CARTON MANUFACTURERS LIMITED	TAUSI ASSURANCE CO LIMITED
CENTRAL GLASS INDUSTRIES LIMITED	TEA MANUFACTURERS & SUPPLIES LTD
CIVICON LIMITED	TELKOM KENYA LIMITED
COLGATE PALMOLIVE (EA) LTD	TETRA PAK (K) LIMITED
COPY CAT LIMITED	TEXT BOOK CENTRE LTD
CORPORATE INSURANCE CO LTD	THE ARK LIMITED
DAYLIFF HOLDINGS LTD	TONONOKA HARDWARE LTD
DEL MONTE KENYA LIMITED	THIKA COFFEE MILLS LIMITED
DOCUMENT HANDLING (EAST AFRICA) LIMITED	THE STANDARD LTD
DODHIA PACKAGING LTD	UNITED MILLER LIMITED
DOMINION ENGINEERING WORKS LTD	UKAY ESTATE LIMITED
EAST AFRICAN SEA FOOD LIMITED	UZURI FOODS LIMITED
EGERTON UNIVERSITY	UNGA LTD
ELDORET EXPRESS LIMITED	UNILEVER KENYA LIMITED
ELGEYO SAW MILLS (K) LTD	VALENTINE GROWERS LIMITED