

EFFICACY OF ITAX SYSTEM ON TAX ADMINISTRATION IN KENYA

BY

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DECLARATION

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

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DEDICATION

This project is sincerely dedicated to my loving Mum Mariam Barako, Dad-Barako Guyo and siblings: Rufo, Qaballe, Daki, Guyo for the unquantifiable support they also offered.

I could not have completed this research without constant encouragement from my colleagues and friends even if time may not allow me to mention you by names.

May the Lord God bless you all

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ABSTRACT

The success of the KRA largely hinges on the efficacy and efficiency of the newly introduced iTax system in increasing tax compliance and closing tax leakages through tax evasion. The iTax system was launched in October 2011 in a bid to increase efficiency and ensure better compliance with tax laws (KRA, 2014). The iTax system is a web-based application that gives taxpayers the convenience of filing returns and registering tax payments from the comfort of their homes or offices. The current system allows taxpayers to file returns and agency revenue, including Sugar Development Levy and Kenya Bureau of Standards. The broad objective of the study was to establish the efficacy of the itax system on tax administration in Kenya. A Correlation research design was undertaken in order to ascertain reliability of data collected to describe the relationship between the variables of interest in the study and consequently test the research hypothesis. This study collected secondary data. Secondary data was obtained from published material and information from other sources such as annual reports and published data. The research obtained quantitative data. Descriptive and inferential statistics were employed in data analysis with aid of the Statistical Package for Social Sciences (SPSS) package. Descriptive statistics included percentages and measures of central tendency (mean and standard deviation). Paired t-test was used as an inferential statistic. The collected data was analyzed through descriptive statistics. The study established that KRA's variability of the revenue return after itax implementation was 14.876 billion, while the variability of the revenue return during and before itax implementation was 7.907 billion and 13.4415 billion respectively. The study concluded that itax implementation led to an increase in the variability of the revenue return for the periods under study. It also concluded that the quarterly abnormal revenue volumes fluctuated before, during and after itax implementation, with the period after itax implementation experiencing sharp fluctuations. iTax actually has an effect to revenue collection as according to the t – tests there is significance in the correlation between tax collected before the itax implementation and after the itax implementation. This clearly indicates that itax implementation increases revenue collection. That in essence means that the itax system is efficient in tax administration in Kenya. Thus it is right to say that itax system is directly related to tax administration. Based on the findings and the analysis of the research done, it was recommended that more training and or marketing of the online system should be done by KRA to ensure that taxpayers who embrace the system increase. The government should also improve connectivity to enhance compliance among small taxpayers.

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LIST OF ABBREVIATIONS AND ACRONYMS

GDP - Gross Domestic Product

ITax - Integrated Tax

ITMS - Integrated Tax Management System

KRA- Kenya Revenue Authority

PAYE- Pay as You Earn

PIN- Personal Identification Number

RARMP- Revenue Administration Reforms Modernization Programme

SPSS - Statistical Package for Social Sciences

US- United States

VAT- Value Added Tax

TIN-Tax Identification Number

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Kenya's tax system has undergone more or less continual reform over the last twenty years. On the policy side, rate schedule have been rationalized and simplified, a new value-added tax introduced and external tariffs brought in line with those of neighbouring countries in East Africa. At the same time, administrative and institutional reforms have taken place. Most notable among these was the creation of the semi-autonomous Kenya Revenue Authority (KRA) in 1995, which centralized the administration of tax collection.

Kenya has the trappings of a modern tax system, including for example a credit-invoice VAT, a PAYE individual income tax with graduated but arguably moderate rates, and a set of excise taxes focused on the usual suspects (alcohol, cigarettes, gasoline etc). However, with up to 70 percent of GDP produced and possibly as much as 75 percent of labour employed in the informal sector, the ability of the tax system to raise sufficient revenue with minimal distortions is severely circumscribed. In such an environment, raising around one-fifth of GDP in tax revenue is likely to impose very large distortionary costs on the economy. Continued reform of both the policy instruments and administrative and enforcement capacity of the tax system is therefore imperative.

The responsibility of the government to finance public services lies therefore at the heart of taxation. Applying criteria of efficiency, fairness, and transparency to tax systems and the spending of government resources creates a virtuous circle of improving fiscal performance, good governance, fair distribution of public goods and services, and

ultimately strengthens state legitimacy. It promote compliance with Kenya's tax, trade, and border legislation and regulation by promoting the standards set out in the Taxpayers Charter and responsible enforcement by highly motivated and professional staff thereby maximizing revenue collection at the least possible cost for the socio-economic well being of Kenyans (KRA Annual Report, 2012).

To arrest this problem, many developing countries are making efforts to design systems of tax that are viable, productive and sustainable towards financing multi-government expenditures. According to Mahon (1998) theoretical level, tax reforms are initiated either following an economic crisis or as a response to international pressure. Consequently, tax reform involves the adoption of custom reforms aimed at meeting international demands.

1.1.1Tax Administration

Taxation is one of the important elements in managing national income, especially in developed countries and has played an important role in civilized societies since their birth thousands years ago. Tax is defined as ‘a compulsory levy, imposed by government or other tax raising body, on income, expenditure, or capital assets, for which the taxpayer receives nothing specific in return (Lymer and Oats, 2009). However, not all payments to government are considered tax payments: for example, charges, tolls and other levies are paid to obtain a specific service and are not strictly tax payments.

Tax administration should be effective in the sense of ensuring high compliance by taxpayers, and efficient in the sense that administrative costs are low relative to revenue collected. Good tax administration requires strong technical capacity by the

administrative agency but also a well-designed tax. The administrative agency should be able to identify and evaluate the effects of both current tax policies and tax policies under consideration, be able to simplify the current tax system if needed, within the economic and political spectrum, be aware of any law changes and emerging avoidance practices, and maintain a connection between the rule of law and tax administration.

1.1.2 iTax System

iTax launched in 2011 and implemented by Indian firm Tata, iTax replaces the online system previously used by KRA, which the public has complained about over its inefficiencies. The web-enabled system that seeks to make tax compliance a simple, quick and secure exercise is expected to bring down the cost of tax compliance in logistics, and help reduce interaction between staff and taxpayers, eliminating bribery claims. This is part of KRA's mission to attain global best practices in tax collection, and the taxman intended to benchmark against nations that have fully automated their systems, including the US.

iTax is an improvement of a previous online system by KRA called the Integrated Tax Management System (ITMS), rolled out in 2007, which failed to automate taxation and spawned serious customer dissatisfaction. KRA says that most taxpayers are locked out by inefficiencies and bureaucratic systems hence iTax. With the new system, taxpayers will be able to register, file returns, make payments and enquire about their status, while monitoring their accounts in real-time 24 hours a day, from the comfort of their homes or offices. The system eliminates rogue agents who swindle taxpayers by keeping outdated electronic registers of tax agents. To further cut down the cost of taxation, taxpayers will

be required to fill their returns offline by downloading the returns form, filling it and uploading it at their own convenience. The system has integrated more than 30 banks to ensure that most taxpayers are covered.

The system has simplified and quickened tax compliance and secured exercise, thus bringing down the cost of tax administration. The system has reduced interaction between KRA staff and taxpayers thus eliminating cases of bribery claims. Tax evasion creates horizontal inequity and, if opportunities for evasion are correlated with income, complicates the attempt to achieve vertical equity.

1.1.3 Tax Administration and iTax System

The benefits of an iTax System over submitting manual returns to the tax authorities' office are that the returns are uploaded directly to the income tax authorities' systems with negligible possibilities of human errors. iTax returns cost less to process when contrasted with a manual returns both regarding cost and time to the income tax authorities and also the citizen (Lemuria Carter, 2011).

Advancement in information and communication technology that the world continues to experience makes tax collection and administration a challenge for many authorities. Tax authorities have to maintain a modernized and responsive tax administration system so as to facilitate faster collection of taxes. An iTax System integrates the processes of registration, tax preparation, tax filing and tax payment. Taxpayers avoid the hassles of visiting the tax office and making long queues, because the returns are filed at their convenience. It is in this regard that several tax authorities have embraced the change and adopted an e-filing approach (Mandola, 2013).

An iTax system enables taxpayers to submit their tax returns electronically to the tax authorities (government) thus helping to prevent many mistakes which might occur by taxpayers in manual filing (Ramayah , 2013).

1.1.4 Tax Administration in Kenya

Kenya, like many other developing countries, seeks to apply the tax weapon so as to meet the objectives of raising enough revenue and ensuring that revenue is raised in ways that are equitable and that minimize the disincentive effects of taxation. The three main factors of production –labor, capital and land- are used in varying proportions in the productive process of the economy. The returns to these factors- wages, profits and rent – should therefore be taxed if the objectives of the tax policy are to be met. (KIPPRA. 2005).

In Kenya, the tax system has mainly concentrated on taxing individual income (Personal Income TaxPIT), profits (Corporate Income Tax-CIT) and goods and services (VAT, excise duties). However, for purposes of administrative feasibility as well as for political economy reasons, a tax on land has not yet been well developed in Kenya. The main challenges facing the taxation of factors of production in a low income country like Kenya includes structure of the economy, which makes it difficult to impose some taxes. The larger the size of the informal economy, the more challenging taxation becomes. Limited capacity in tax administration and poor quality of basic data to estimate optimal taxation, forecast revenues adequately, undertake micro-simulations and tax modelling (KRA, 2014).

1.2 Statement of the Problem

The success of the KRA largely hinges on the efficacy and efficiency of the newly introduced iTax system in increasing tax compliance and closing tax leakages through tax evasion. The iTax system was launched in October 2011 in a bid to increase efficiency and ensure better compliance with tax laws (KRA, 2014). The iTax system is a web-based application that gives taxpayers the convenience of filing returns and registering tax payments from the comfort of their homes or offices. The current system allows taxpayers to file returns and agency revenue, including Sugar Development Levy and Kenya Bureau of Standards. Taxpayers also have the option of viewing and downloading all their dealings with the taxman ranging from payments made to returns submitted. The iTax system has started on a good note in as far as increasing tax compliance is concerned. Currently, there are 1.6 million users of the system with 200,000 signing up in May. This figure is expected to increase as more taxpayers sign up with the KRA stepping up its awareness drive. The taxman has extended iTax support services to an additional 16 Huduma centres, bringing the total number to 22. This expansion has increased the KRA's presence to at least 13 counties with easy access to tax services. As with any new system, there have been numerous teething problems with the iTax system. First, there are two concurrent tax systems — manual and iTax systems — without either system recognising the other (KRA, 2014).

Kenya has proposed significant reforms to its current tax law in order to simplify tax administration and increase revenues. According to the Treasury (2011), the current compliance rate stands at about 55% due to distortion and tax leakages caused by exemptions and zero rating. Since there is a limit on foreign debts and grants with public

debt currently at 52.3 percent of GDP and any significant increase in this ratio may make the debts unsustainable for Kenya, therefore mobilising domestic tax revenue is key for more government spending.

Scholars have conducted various researches as pertains to tax reforms and administration. Despite all these reforms, there is still a major concern by the treasury as noted in the 2014/15 budget speech, International Monetary Fund (IMF, 2011), scholars (Karingi et al. 2005; Wawire, 2011; Mwalalobo, 2009; Moyi and Ronge, 2006; Nada and William, 2009; and Murithi and Moyi, 2003) among other economic players that custom reforms are not still generating revenue to their potential capacity. IMF (2011) observed that implementation of custom reforms could increase Kenya Revenue Authority's (KRA)'s revenue by an estimated Sh40 billion and removal of exemptions will make tax collection less complicated. Based on the above empirical studies among others, it was evident that little research has been done as pertains to the efficacy of the itax system on tax administration in Kenya. This study therefore sought to address this knowledge gap by answering the question: How efficient is the itax system on tax administration in Kenya?

1.3 Objectives of the Study

1.3.1 Main Objective

The broad objective of the study was to establish the efficacy of the itax system on tax administration in Kenya.

1.3.2 Specific Objectives

- i. To find out the effect of Itax system on cost reduction in tax collection in Kenya
- ii. To establish the effect of Itax system on revenue collection in Kenya

1.4 Significance of the Study

To the academicians, this study may contribute to the already existing literature on tax reforms in Kenya. In addition, the study may also stimulate further research on the area of taxation and in particular the rest of the individual taxes in Kenya.

The study may help in creating awareness with regard to tax reform process and how it has impacted the tax administration in Kenya.

To the government and policy makers, the study may provide the additional information that could be useful in policy formulation and implementation particularly in the area of tax reforms in Kenya to improve tax administration. This may eventually enable the government to reduce the fiscal deficit in the future.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This is a body of text that aims to review the critical points of current knowledge and/or methodology approaches on particular topics. Literature reviews are secondary sources and as such do not report any new or original experimental work (Cooper and Schindler, 2008). The purpose of this literature review was to look at what other researchers and scholars have written in the recent past regarding tax reforms with specific reference to tax and tax administration in Kenya.

2.2 Theoretical Literature

2.2.1 Classical Taxation Theory

Classical taxation theory has for a long time been of great significance in tax administration. According to this theory, the most important role of taxation is that of providing state revenues. The classical theory was founded by Adam Smith. In his book, "An inquiry into the Nature and Causes of the Wealth of Nations" Adam Smith defined the taxation system, specifying the major circumstances for its foundation and proposing four main taxation principles namely: Equity, determination, convenience and thrift of taxation administration. D. Ricardo and J Mills later on advanced his work. Proponents of the classical theory of taxation argued that the realization of taxation's main role of provision of state revenue could only be achieved on the basis of the principles of equity and justice. However, as economic relations became a bit complicated prompting the need for stringent state's regulation, classical theory views on the role of taxation changed in the course of many decades (Haakonssen, 2006).

2.2.2 Keynesian Taxation Theory

Keynes (2004) introduced Keynesian taxation theory in his book “The General Theory of Employment, Interest and Money,” in which he advocated for state interventions in the processes of market economy regulations. Keynes was of the view that fast economic development must be grounded on a market expansion and an accompanying increase in consumption. Therefore, state intervention is attained at the level of effective demand. A major assumption in Keynes theory is that economic growth is correlated to monetary savings only in the situations of full-employment. On the other hand, too much saving hamper economic development as they lead to an inactive form of income and are not invested in production. Subsequently, Keynes (2004) proposed that surplus savings must be deducted with the assistance of taxation. The state must therefore intervene with the intention of deducting income savings with the assistance of taxation in order to fund investments and cover state expenses. Keynes further contended that high level progressive taxation is essential and that low tax rates lead to reduced state revenues and as a result contributes to economic stability.

2.2.3 Neo-Classical Theory

Keynes theory was later on challenged by the neo-classical theory, developed by J. Mutta and A Laffere, which is of the view that the state is obliged to eliminate impediments to free market can and must regulate itself devoid of external intervention. Consequently, neo-classical theory differs from the Keynesian one and gives a moderately passive role to state regulation of economic processes (Mahon, 1998). Neo-classical theory proposed that a tax policy ought to be established on the following assumptions: taxes must be as small as possible and corporations should be granted significant tax exemptions. If not, a

high tax burden would deter economic activity and restrain the investment policies of corporations; this would lead to stagnation in economic development. The theory argues that a controlled taxation policy would let the market to provide freely for fast development and result to substantial expansion of the tax base.

Laffer advanced neo-classical taxation theory by establishing a quantitative relationship between progressive taxation and budget revenues, and developed the widely known “Laffer curve.” According to Laffer, an increase in the tax burden leads to an increase in state revenues only up to a level, where they start to decrease. The higher the tax rate, the higher the motivation for tax evasion. When the tax rate reaches a certain limit, entrepreneurship incentives are suppressed, the motivation for production expansion are reduced, taxable income decreases, and as a result, a part of the taxpayers will transfer from the legal to the shadow sector of the economy. Laffer considered that 30% of income is the maximum taxation rate that can be deducted for state budget purposes” (Marina and Danijela 2014).

2.3 Empirical Literature Review

Scholars, researchers and economists have always attempted to define and understand the term taxation. However, these groups of experts have not yet defined and standardized the meaning of tax and taxation (Erosa, Gustavo & Walter, 2009). The origin of the terms tax and taxation has always been a subject of controversy among economists and researchers. Scanty literature on this subject has attempted to trace the first known system of taxation to Ancient Egypt in around 3000 BC - 2800 BC in the first dynasty of the Old

Kingdom (McCluskey, William; Franzsen, & Riël, 2005). However, the critical forms that existed then have also compounded the controversy of taxation.

Anyanwu (1997) noted that taxation has three principal objectives, which are regulation of the economy and economic activities, raising of revenue for the government and controlling of income and employment. Revenue realizable from taxation depends on some factors but principally on the tax base and rate. Tax base refers to the specification of the minimum amount above which is taxable, while tax rate is the amount, which is levied per unit of base. Tax bases simply are those objects upon which tax revenue are derived (Mansfield 1973).

Tax system, therefore, should be consistent with over-all economic policy, which may include such objectives as favouring savings over consumption and raising private investment. Taxes no matter the type and how they are being administered bear effects on payer. Effects of taxation are the changes in the economy consequent upon tax imposition. Anyanwu (1997) contends that the presence of tax distorts the pattern of production, consumption, investment, employment and other similar patterns for good or for bad and these distortions are collectively viewed as the effects to taxation. Lewis (2005) observed that an effective and efficient tax administration system is integral to any country's well being.

Previous studies have measured the impact of GDP on tax revenues. For instance Osoro (1993) examined the revenue productivity implications of tax reforms in Tanzania. In the study, the tax buoyancy was estimated using double log form equation and tax revenue

elasticity using the proportional adjustment method. The argument for the use of proportional method was that a series of discretionary changes had taken place during the sample period, 1979 to 1989, making the use of dummy variable technique impossible to apply. Ariyo (1997) evaluated the productivity of the Nigerian tax system for the period 1970 - 1990. The aim was to devise a reasonable estimation of Nigeria's sustainable revenue profile. In the study, tax buoyancy and tax revenue elasticity were estimated. The slope dummy equations were used for the oil boom and Structural Adjustment Programmes (SAPs). It was found that on the overall, productivity level was satisfactory. Results indicated wide variations in the level of tax revenue by tax source.

Chipeta (1998) evaluated effects of tax reforms on tax yields in Malawi for the period 1970 to 1994. The study concluded that the tax bases had grown less rapidly than GDP. Kusi (1998) studied tax reform and revenue productivity of Ghana for the period 1970 to 1993. Results showed a pre-reform buoyancy of 0.72 and elasticity of 0.71 for the period 1970 to 1982. The period after reform, 1983 to 1993, showed increased buoyancy of 1.29 and elasticity of 1.22. The study concluded that the reforms had contributed significantly to tax revenue productivity from 1983 to 1993.

Twerefou et al. (2010) used the Dummy Variable Technique to control for the effects of the Discretionary Tax Measures on the time series data 1970 – 2007 to estimate the elasticity of the Ghanaian tax system. They found that the overall tax system in Ghana was buoyant and elastic in the long run, with overall tax elasticity estimated to be 1.03

Milambo (2001) used the Divisia Index method to study the revenue productivity of the Zambian tax structure for the period 1981 to 1999. The results showed elasticity of 1.15 and buoyancy of 2.0, which confirmed that tax reforms, had improved the revenue productivity of the overall tax system. However, these results were not reliable because time trends were used as proxies for discretionary changes and this was the study's major weakness. In Kenya, Ole (1975) estimated income elasticity of tax structure for the period 1962/63 to 1972/73. Tax revenue was regressed on income without adjusting for unusual observations. The results showed that the tax structure was income inelastic (0.81) for the period studied. The results also implied that Kenya's tax structure was not buoyant and therefore the country would require foreign assistance to close the budget deficit.

Njoroge (1993) studied the revenue productivity of tax reforms in Kenya for the period 1972/73 to 1990/91. Tax revenue was regressed on income after adjusting tax revenues for discretionary changes. The period of study was divided into two to make it easier to analyze the effects of tax reforms on revenues from various taxes. Income elasticity of total tax structure was found to be 0.67 for the period 1972 to 1981. This meant that the government received a decreasing share of rising GDP as tax revenues. The study concluded that from a revenue point of view, the system did not meet its target; hence it required constant review as the structure of the economy changes. However, according to Wawire (2011) the results could not be relied upon because the study never took into account time series properties of the data.

Adari's (1997) study focused on the introduction of value added tax (VAT) in Kenya that replaced sales tax in 1990. The study analyzed the structure, administration and performance of VAT. The estimated buoyancy and elasticity coefficients were less than unity implying a low response of revenue from VAT to changes in GDP. This suggested the presence of laxity and deficiencies in VAT administration. Wawire (2000) used total GDP to estimate the tax buoyancy and income-elasticity of Kenya's tax system. Tax revenues from various sources were re-gressed on their tax bases. Based on empirical evidence, the study concluded that the tax system had failed to raise necessary revenues. Muriithi and Moyi (2003) applied the concepts of tax buoyancy and elasticity to determine whether the tax reforms in Kenya achieved the objective of creating tax policies that made yield of more revenue.

2.4 Itax System and Tax Administration in Kenya

2.4.1 Taxpayer Registration

The registration module is used to register companies and individuals based on unique identification numbers. The registration module must be the first module in operation and taxpayer registration is the first process that should become operational. As explained, the gathering of data should be limited as much as possible and the update and verification of information must be possible from any module in the system. Multiple registrations are caused by negligence or by intent. Some taxes are related to thresholds or tax brackets, creating an incentive to minimize taxes by splitting some big businesses into several smaller units. Many tax authorities request that for motor vehicle registration the holder is registered under a PIN. This increases the number of registered persons tremendously and endangers the data quality, because the person concerned might register only with the

intent of completing the motor vehicle registration and might register for another business separately with different data (Musgrave, 2013).

Negligence will also create a lot of obstacles for accurate, usable data. The composition of names, consisting of first, middle and last name causes erroneous entries; missing birth dates make it difficult to differentiate between taxpayers with the same name. The goal of iTax is the registration of all taxpayers in the national database and the issuing of a national PIN for everybody. If the political will exists that all taxpayers or even all citizens should be registered under national PINs, incentives have to be created to encourage people to register with the national tax authorities. Also, many tax authorities do not register employees, because the salary tax (“Pay as You Earn“= PAYE) is a withholding tax paid by the employer. Normally, the employee then will not have the possibility to submit a tax declaration at the end of the year to claim back taxes (Mutua, 2012).

2.4.2 Assessment of Return Processing

The assessment module provides a set of tools for processing tax returns/ tax amendments for all domestic taxes, processing estimated assessments and processing all VAT returns and trader returns. Most of the assessments are Self Assessments where the return by the tax payer is accepted as official assessment. This applies for Value Added Tax (VAT), Pay as You Earn (PAYE), and withholding taxes on rent, capital gains, and dividends. Companies with a small profit or turnover are also subject to self-assessment. If a return is not submitted, an official estimated assessment will be issued by the system after due date. The assessment can be modified or amended in case of changes during a

tax year or based on new findings about the business of the taxpayer. iTax also offers the possibility to compare the tax submitted to KRA from the company which issued the invoice to the tax that was deducted by the recipient of the invoice (Mutua, 2012).

2.4.3 Taxpayer Account

The taxpayer account is the core of the system, which reflects comprehensive information about all tax payer activities. Additionally, specific taxes can be seen on separate tab folders. The time period to be displayed can be set, to allow customized printing of the account statement. The status of payments is indicated, so it can easily be observed which taxes have been paid and which payments are still missing. Also available are a revenue control account and a general ledger. These additional displays are necessary to comply with the control requests of the Finance Departments (Moyi et al., 2013).

2.4.4 Payments

Traditionally, taxes and fees are paid and collected in the revenue or treasury offices of the revenue authority. The cashier has to register the payment, the purpose of the payment and to issue a receipt. Payments are made using pay-in-slip, which carries the necessary information to book the payment against outstanding debits. In many countries, there is a tendency to abolish cash transactions and cashiers and to move all payment processes to commercial banks. At the commercial banks, the taxpayer pays cash to a specific account of the revenue authority. The drawback of this process is the complicated and error prone communication procedures between the taxpayer, the commercial banks, and the tax authority (Moyi et al., 2013).

Within iTax, these communications are greatly facilitated by using the same “Payment Posting” screen, for payments at the cashier and for payments at the commercial bank. One of the future areas for further development of iTax will be the integration of a mobile payment service in cooperation with mobile service providers. Taxpayers will then be able to effect payments (especially small amounts) through their mobile phones (Marina and Danijela, 2014).

2.4.5 Collection/Enforcement

Primarily, this module reconciles payments with assessment debits. After reconciliation has been completed, processes can be run to identify defaulters. “Defaulting” applies in cases of no submission of a return, late submission of a return, no payment, or late payment. The system will issue reminder letters, demand notices, and propose additional enforcement actions. Fines and interest for late and non-payment are also computed and charged to the defaulter’s account. The rules for imposing interest and penalties do not require adjustment in coding, but simply customization of parameters. The module includes functions for write-offs, if there is no way to recover tax arrears. ITax also offers features to arrange for payment through instalments (Marina and Danijela, 2014).

2.4.6 Reporting and Statistics

The iTax reporting module offers standardized reporting on a weekly, monthly, quarterly and yearly basis. Additional reports are available to compare actual tax collection with the revenue targets. A detailed collection report shows collection in each tax region for any given period. For further analysis of the reconciled revenue, receipts are broken down according to tax codes (Moyi et al., 2013).

2.4.7 Security Administration

Certain iTax modules are accessible only to specific security level groups. Each user belongs to a group that has a particular access level with permission to view or edit different data. Each group member may only use the files or displays associated with his or her work and capacity. This security concept can be modified to be more refined if needed, including the possibility to write-protect or display only certain input fields, depending on the security status. Security clearance is organized according to official capacity. Managers will have reading access only, assessors will only be able to enter and edit data in their field of activity, accountants will be able to monitor and supervise all payment activities. In addition to limiting possible user actions, all user activity is traced and logged for security audit purposes (Musgrave, 2013).

Tax rates and regulations change frequently, for example to compensate for inflation. The iTax module is designed in a way that legal tax changes and amendments can easily be incorporated into the system without having to change the program code. Additionally, the database stores the history of tax legislation. Thus, values and key variables of new tax laws can be integrated even before the new legislation comes into effect, without interfering with previous and ongoing computation functions (Moyi et al., 2013).

2.4.8 Itax Audit

The iTax module for audit and risk analysis supports the selection of audit cases by generating a list of taxpayers, sorted by risk allocation. Additionally, it supports generating the audit business plan. The system prepares a notice to the taxpayer and records the time needed for the audit as well as the audit results. To each audit a narrative

audit report can be attached. It also allows allocating human resources to audit cases. Final audit reports summarize the findings of an audit, including revenue retrieved, and show the time needed to resolve a case. The ability to handle objection and appeal cases is a useful function for an integrated tax administration system (Musgrave, 2013)..

2. 5 Chapter Summary

The literature reviewed clearly confirmed that a number of studies have been conducted on the tax system and tax reforms in Kenya (Karingi et al. 2005; Wawire, 2011; Mwakalobo, 2009; Moyi and Ronge, 2006; Nada and William, 2009; and Murithi and Moyi, 2003). All these studies have attempted to establish the contribution of tax reforms to revenue productivity in Kenya. In this study emphasis was put specifically on the itax system and tax administration in Kenya. The study sought to bridge the gap by attempting to find out the efficacy of the itax system on tax administration in Kenya.

The theoretical effect of taxation on investment is mediated by three considerations the gestation period, deference of projects and liquidity constraints and imperfections in the financial markets. Incidentally, investments can be determined by more than three factors. A comparison of effective average tax burdens for companies located in different jurisdictions (varying small and medium enterprises) is made (Spengel, 1995 & Jacobs and Spengel, 1996; Getekunst 2005, Hermann, 2006). The effective average tax burden is derived by simulating the development of a corporation over a certain period. According to this arrangement, the effective tax burden was the difference between the pretax and the posttax value of the firm at the end of the simulation period.

Referring to the tax rates, the calculations consider statutory linear as well as progressive tax rate structures. However, the author offers no data to support the argument he is making. In the absence of any supporting evidence there was no way of judging the validity or reliability of his conclusions and this seriously undermines the value of the work.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section gives a detailed analysis of the research design, target population, sampling technique, data collection instruments and procedures and data analysis.

3.2 Research Design

A Correlation research design was undertaken in order to ascertain reliability of data collected to describe the relationship between the variables of interest in the study and consequently test the research hypothesis. This was consistent with other previous researches that have successfully been analyzed using the same design and proven appropriately, Mpuga, (2004), Kimuyu and Omiti (2000) and Atieno (2001).

3.3 Data collection

According to Creswell (2002) data collection is a means of collecting information from the selected units of a study. This study collected secondary data. Secondary data was obtained from published material and information from other sources such as annual reports and published data.

3.4 Data Analysis

The research obtained quantitative data. Descriptive and inferential statistics were employed in data analysis with aid of the Statistical Package for Social Sciences (SPSS) package. Descriptive statistics included percentages and measures of central tendency (mean and standard deviation). Paired t-test was used as an inferential statistic. Collected data was analyzed through descriptive statistics. The paired samples t-test were used to determine if two means are different from each other when the two samples that the means are based on are taken from the matched individuals or the same individuals.

3.4.1 Event analysis method

Conducting an event study involves identifying an event of interest, estimating abnormal returns relating to the event and then testing the significance of the event. The event study is of importance because it can be used to evaluate the impact of company policies on firm value. The objective of the study was to examine the efficacy of iTax system on tax administration in Kenya. The metrics for tax administration in Kenya included cost reduction, and the revenue collection. The iTax system in Kenya was launched in the year 2011. The data on the metrics for tax administration covered two periods: the period before iTax (2009-2010) and period after iTax (2012-2013). The efficacy of iTax system on tax administration in Kenya was determined by the paired samples t-test by comparing means for the period before and after iTax.

3.4.2 Steps in Event analysis method

Campbell, Lo and MacKinlay (1997) outlined the first step for a typical event study as defining the event and the event window. This involves establishing what exactly the event is and determining the period the revenue collection and cost reduction are likely to be affected by the event. The second step is to establish the firm's selection criteria. This involves determining which firms to include in the data set and over which periods. It is then followed by calculating the normal and abnormal revenue. Normal revenue might be considered to be ex-post revenue that exists in the absence of significant events. However, significant events might cause securities to experience abnormal revenue. These excess or abnormal revenue are observed only for extremely short periods after new relevant information is realized when markets are efficient.

The fourth step is to estimate the parameters using the data available during the event. The model parameters include variables such as stock betas. The estimation window is typically the period prior to the event window but a “moving window” might include periods both before and after the event window. The event window is normally excluded from the estimation period so that parameters are not biased by the events. It is then followed by conducting tests. This involves defining the null and alternative hypotheses, determining the level of significance and afterwards testing the revenues. Finally, the last step is to interpret the results.

3.4.3. Analytical Model

Event study method was used to analyze the data. This was accomplished by use of Excel software. Normal or expected revenue was determined by use of the market model based on the ordinary least squares regression as follows:

$$E(R) = \alpha_i + \beta R_{mt}$$

Where: $E(R_i)$ = Normal revenue

R_{mt} = the return of market on day t

α_i, β_i = Estimation parameters based on the estimation window and calculated through regression analysis

The abnormal revenue was derived as follows:

$$AR_t = R_t - E(R)$$

Where:

AR_t = Abnormal revenue of at day t.

R_t = the actual revenue at day t.

t = the event day

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

The chapter presents data collected from secondary sources to meet the objective of the study which is to establish the the efficacy of the itax system on tax administration in Kenya.

4.2 Descriptive Statistics

The study made use of quarterly revenue performance of Kenya Revenue Authority for the event window consisting of 2 years before and 2 years after the event year. The event study methodology was used to assess if there was any abnormal revenue reaction to the implementation of itax. To analyze the revenue reaction to implementation of itax, the study computed the average Revenue Return Variability (RRV) which generally shows how variable (fluctuations in returns) the returns were before and after implementation of itax.

4.2.1 Revenue Returns Variability (RRV)

The study sought to establish the variability of the revenue return following the implementation of itax thus determine the revenue reaction.

The formula for measuring this was
$$\mathbf{RRV} = \frac{\mathbf{AR}^2_{it}}{\mathbf{V}(\mathbf{AR})}$$

RRV_{it} = Revenue Returns Variability of revenue i in time t.

AR²_{it} =Abnormal Return on revenue i at time t.

V (AR)=Variance of Abnormal Return during the implementation period

Abnormal return = $R_{it} - ER_{it}$, where R_{it} = actual return i at time t ; ER_{it} = Expected Return on security i at time t .

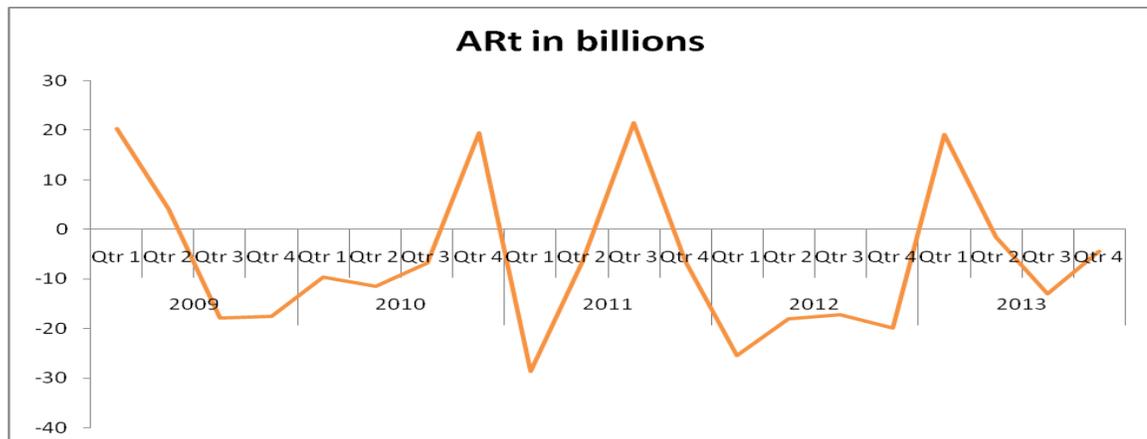
Table 4.1: Average Revenue Returns Variability

	Mean	Std. Deviation
After itax	14.876	8.11810
During itax	7.9068	11.17579
Before itax	13.4415	6.22936

Source: Author, 2015

From the findings, the lowest mean score according to revenue performance report for KRA's variability of the revenue return after itax implementation was 14.876 billion, while the variability of the revenue return during and before itax implementation was 7.907 billion and 13.4415 billion respectively. In addition, the standard deviation depicts a high variation in the variability of the revenue return before, during and after itax implementation. This implies that itax implementation led to an increase in the variability of the revenue return for the periods under study.

Figure 4.1 Abnormal Revenues (KRA)



From the findings, the cumulative quarterly abnormal revenue volumes reduce during the period of 2009 to late in the year 2010. It thereafter sharply increases through to mid-third quarter of 2010 after which it sharply decreases to the mid-fourth quarter late in the second quarter of the year 2011. The abnormal revenue volumes remain low through to the third quarter of 2012 upon which the abnormal revenue volumes increases substantially to the first quarter of 2013. Finally, the findings portray that the abnormal revenue volumes decrease from mid-first quarter through to the mid-second quarter and rise moderately to the fourth quarter of 2013. This depicts that the abnormal revenue volumes fluctuate before, during and after itax implementation, with the period after itax implementation experiencing sharp fluctuations.

4.3 Inferential Statistics

4.3.1 Cut – off Revenue Analysis Model

Relationship between Revenue Collection after Itax Implementation and Revenue Collected During the Itax Implementation

The study tested the relationship between revenue collection after itax implementation and revenue collected during the itax implementation. The findings are as presented below.

Table 4.2: Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 2013 Revenue Performance in billions	122.140	3	89.662	51.767
2011 Revenue Performance in billions	86.550	3	100.840	58.220
Pair 2 2012 Revenue Performance in billions	90.823	3	101.539	58.624
2011 Revenue Performance in billions	86.550	3	100.840	58.220

Table 4.3: Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	2013 Revenue Performance in billions & 2011 Revenue Performance in billions	3	.969	.159
Pair 2	2012 Revenue Performance in billions & 2011 Revenue Performance in billions	3	1.000	.011

The results indicate that the parametric Pearson correlation or ‘r’ value is significant in 2013 at .969 and the p-value (Sig) for the correlational coefficient is more than $p > .05$ and insignificant. In 2012 the Pearson correlation or ‘r’ value is significant at 1.000 and the p-value (Sig) for the correlational coefficient is less than $p < .05$ and significant.

Table 4.4: Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	2013 Revenue Performance in billions & 2011 Revenue Performance in billions	35.590	26.221	15.139	-29.547	100.727	2.351	2	.0143
Pair 2	2012 Revenue Performance in billions & 2011 Revenue Performance in billions	4.273	1.850	1.068	-.324	8.869	4.00	2	.0057

There is a significant relationship between 2013 Revenue Performance in billions & 2011 Revenue Performance in billions; 2012 Revenue Performance in billions & 2011 Revenue Performance in billions (M = 35.590; M = 4.273). However their respective standard deviations are 26.221 and 1.850 are very far apart statistically. Further with a 95% confidence interval the t-test statistic was 2.351 and 4.00 respectively with 2 degrees of freedom and associated P values = .0143 and .0057 respectively there is a relationship.

Relationship between Revenue Collection before Itax Implementation and Revenue Collected During the Itax Implementation

The study tested the relationship between revenue collection before itax implementation and revenue collected during the itax implementation. The findings are as presented below.

Table 4.5: Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 2010 Revenue Performance in billions	92.8387	3	88.79877	51.26799
2011 Revenue Performance in billions	86.5500	3	100.84037	58.22022
Pair 2 2009 Revenue Performance in billions	82.6813	3	54.87880	31.68429
2011 Revenue Performance in billions	86.5500	3	100.84037	58.22022

Table 4.6: Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 2010 Revenue Performance in billions & 2011 Revenue Performance in billions	3	.996	.057
Pair 2 2009 Revenue Performance in billions & 2011 Revenue Performance in billions	3	.946	.210

The findings indicate that the parametric Pearson correlation or 'r' value is significant in 2010 at .996 and the p-value (Sig) for the correlational coefficient is more than $p > .05$ and insignificant. In 2011 the Pearson correlation or 'r' value is significant at .946 and the p-value (Sig) for the correlational coefficient is more than $p > .05$ and insignificant.

Table 4.7: Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 2010 Revenue Performance in billions & 2011 Revenue Performance in billions	6.289	14.694	8.484	-30.213	42.791	.741	2	.036
Pair 2 2009 Revenue Performance in billions & 2011 Revenue Performance in billions	3.869	52.052	30.053	-133.174	125.437	.129	2	.009

There is a significant relationship between 2010 Revenue Performance in billions & 2011 Revenue Performance in billions; 2009 Revenue Performance in billions & 2011 Revenue Performance in billions (M = 6.289; M = 3.869). However their respective standard deviations are 14.694 and 52.052 are very far apart statistically. Further with a 95% confidence interval the t-test statistic was .741 and .129 respectively with 2 degrees of freedom and associated P values = .036 and .009 respectively implying that there is a relationship.

Relationship between Revenue Collection before Itax Implementation and Revenue Collected after the Itax Implementation

The study also tested the relationship between revenue collection before itax implementation and revenue collected after the itax implementation. The findings are as presented below.

Table 4.8: Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 2010 Revenue Performance in billions	92.8387	3	88.79877	51.26799
	2013 Revenue Performance in billions	122.1400	3	89.66244
Pair 2 2009 Revenue Performance in billions	82.6813	3	54.87880	31.68429
	2012 Revenue Performance in billions	90.8226	3	101.53920

Table 4.9: Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 2010 Revenue Performance in billions & 2013 Revenue Performance in billions	3	.987	.0103
Pair 2 2009 Revenue Performance in billions & 2012 Revenue Performance in billions	3	.951	.0199

As per the findings, the parametric Pearson correlation or 'r' value is significant in 2010 & 2013 at .987 and the p-value (Sig) for the correlational coefficient is less than $p < .05$ and significant. In 2009 and 2012 the Pearson correlation or 'r' value is significant at .951 and the p-value (Sig) for the correlational coefficient is less than $p < .05$ and significant.

Table 4.10: Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 2010 Revenue Performance in billions & 2013 Revenue Performance in billions	29.301	14.383	8.304	65.032	6.429	3.528	2	.0172
Pair 2 2009 Revenue Performance in billions & 2012 Revenue Performance in billions	8.141	52.141	30.104	137.667	121.385	.270	2	.0128

There is a significant relationship between 2010 Revenue Performance in billions & 2013 Revenue Performance in billions; 2009 Revenue Performance in billions & 2012 Revenue Performance in billions (M = 29.301; M = 8.141). However their respective standard deviations are 14.383 and 8.141 are very far apart statistically. Further with a 95% confidence interval the t-test statistic was 3.528 and .270 respectively with 2 degrees of freedom and associated P values = .0172 and .0128 respectively implying that there is a relationship.

4.4 Summary and Interpretation of Findings

The study established that KRA's variability of the revenue return after itax implementation was 14.876 billion, while the variability of the revenue return during and before itax implementation was 7.907 billion and 13.4415 billion respectively. In addition, the standard deviation depicts a high variation in the variability of the revenue return before, during and after itax implementation. Similarly, Osoro (1993) examined the revenue productivity implications of tax reforms in Tanzania. In the study, the tax

buoyancy was estimated using double log form equation and tax revenue elasticity using the proportional adjustment method. The argument for the use of proportional method was that a series of discretionary changes had taken place during the sample period, 1979 to 1989, making the use of dummy variable technique impossible to apply.

The study determined that there was a significant relationship between 2013 Revenue Performance in billions & 2011 Revenue Performance in billions; 2012 Revenue Performance in billions & 2011 Revenue Performance in billions ($M = 35.590$; $M = 4.273$). However their respective standard deviations are 26.221 and 1.850 are very far apart statistically. Further with a 95% confidence interval the t-test statistic was 2.351 and 4.00 respectively with 2 degrees of freedom and associated P values = .0143 and .0057 respectively there is a relationship. Likewise Kusi (1998) studied tax reform and revenue productivity of Ghana for the period 1970 to 1993. Results showed a pre-reform buoyancy of 0.72 and elasticity of 0.71 for the period 1970 to 1982. The period after reform, 1983 to 1993, showed increased buoyancy of 1.29 and elasticity of 1.22. The study concluded that the reforms had contributed significantly to tax revenue productivity from 1983 to 1993.

There was also a significant relationship between 2010 Revenue Performance in billions & 2011 Revenue Performance in billions; 2009 Revenue Performance in billions & 2011 Revenue Performance in billions ($M = 6.289$; $M = 3.869$). However their respective standard deviations are 14.694 and 52.052 are very far apart statistically. Further with a 95% confidence interval the t-test statistic was .741 and .129 respectively with 2 degrees of freedom and associated P values = .036 and .009 respectively implying that there is a relationship. This contrasts, Chipeta (1998) evaluated effects of tax reforms on tax yields

in Malawi for the period 1970 to 1994. The study concluded that the tax bases had grown less rapidly than GDP.

Finally, the study revealed that there was a significant relationship between 2010 Revenue Performance in billions & 2013 Revenue Performance in billions; 2009 Revenue Performance in billions & 2012 Revenue Performance in billions ($M = 29.301$; $M = 8.141$). However their respective standard deviations are 14.383 and 8.141 are very far apart statistically. Further with a 95% confidence interval the t-test statistic was 3.528 and .270 respectively with 2 degrees of freedom and associated P values = .0172 and .0128 respectively implying that there is a relationship. This is contrary to Milambo (2001) who used the Divisia Index method to study the revenue productivity of the Zambian tax structure for the period 1981 to 1999. The results showed elasticity of 1.15 and buoyancy of 2.0, which confirmed that tax reforms, had improved the revenue productivity of the overall tax system.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of findings

The success of the KRA largely hinges on the efficacy and efficiency of the newly introduced iTax system in increasing tax compliance and closing tax leakages through tax evasion. The study established that KRA's variability of the revenue return after itax implementation was a high of 14.876 billion compared to the revenue return during and before itax implementation. The study determined that there was a significant relationship between 2013 Revenue Performance in billions & 2011 Revenue Performance in billions; 2012 Revenue Performance in billions & 2011 Revenue Performance in billions.

There was also a significant relationship between 2010 Revenue Performance in billions & 2011 Revenue Performance in billions; 2009 Revenue Performance in billions & 2011 Revenue Performance in billions. Finally, the study revealed that there was a significant relationship between 2010 Revenue Performance in billions & 2013 Revenue Performance in billions; 2009 Revenue Performance in billions & 2012 Revenue Performance in billions.

Information technology (IT) tools can play an important role in tax administration modernisation. The electronic system for filing and paying taxes, if implemented well and used by most taxpayers, reduces operational costs for administering tax and increases tax compliance. It may also provide for a reduction of corruption, which is more likely to occur with in-person payments at tax offices.

5.2 Conclusion

Taxes are crucial for mobilising revenue to fund public services, infrastructure and other development and poverty reduction goals. Taxes are also crucial “for building the accountability of states to their citizens, and reduce inequality by redistributing wealth”. Tax administration and law enforcement institutions in Africa often suffer from high levels of corruption, making the collection and management of public resources very challenging. In fact, according to experts, weak and often corrupt revenue administration remains a fundamental barrier to effective and fair taxation and to building trust between government and citizens in many countries.

The study concluded that itax implementation led to an increase in the variability of the revenue return for the periods under study. It also concluded that the quarterly abnormal revenue volumes fluctuated before, during and after itax implementation, with the period after itax implementation experiencing sharp fluctuations. iTax actually has an effect to revenue collection as according to the t – tests there is significance in the correlation between tax collected before the itax implementation and after the itax implementation. This clearly indicates that itax implementation increases revenue collection. That in essence means that the itax system is efficient in tax administration in Kenya. Thus it is right to say that itax system is directly related to tax administration.

This could be attributed to the simplification, standardisation and harmonisation of tax procedures to reduce inefficiency within tax administration. Simpler and more streamlined processes to pay and collect taxes reduce tax officials’ discretionary power, increase predictability, lessening the burden for firms and individuals to comply and hence reduce the opportunities for corruption (Rahman 2009).

5.3 Recommendations for policy and Practice

Based on the findings and the analysis of the research done, it is recommended that more training and or marketing of the online system should be done by KRA to ensure that taxpayers who embrace the system increase. Internet is a key for effective implementation and administration of online tax system. The government should therefore improve connectivity to enhance compliance among taxpayers. The more taxpayers are brought on board to use the system, the more efficiency will be achieved in terms of tax administration and more taxes paid to the government.

Taxpayer services are one of the primary areas where corruption occurs in revenue administration. As mentioned, simpler and more reliable procedures, more transparent processes and fewer interactions between taxpayers and tax officials may help to reduce corruption and improve compliance. Moreover, incentives for corruption can be further reduced by improving tax-payers knowledge and awareness of their rights and obligations, reducing tax compliance costs and adopting customer orientation.

The majority of countries have focused on reforms that would more directly support revenue mobilisation, and less attention has been paid to strengthening internal investigations mechanisms. These however are essential to detect corruption and mismanagement within tax agencies as well as to act as deterrent for futures cases. If the risk of being caught increases, tax officials may reconsider getting involved in irrelevant schemes. For that, in addition to external audits, an independent and autonomous unit dedicated to monitoring and investigating corruption cases involving officials of the tax administration, staffed with a skilled and effective team is essential.

5.4 Limitations of the Study

This study had several limitations. First, it is possible that the nature of data from the audit reports is impacting the results in an unanticipated manner or limits the power of the tests to detect associations. This may be created by variation of statistical figures illustrating the key variables measurements.

It is possible that the statements do not indicate low or high tax administration efficacy. A control variable is a variable that is held constant in a research analysis. The use of control variables is generally done to check observed relationship between two variables if a direct one or indirect with intervening. The study did not use control variable specifications as specified by Richardson et al (2002). It is thus possible that lack of inclusion, cause alterations in interpretation.

Finally, the use of secondary data provided an opportunity to search for a more genuine and intrinsic relationship between the variables. This afforded the researcher the benefits of a greater focus on analyzing the available data more closely in a way that would enhance the achievement of the study objectives. However, selecting the right combination of variables to proxy for unobservable phenomena is always a problem in empirical quantitative research. However, in most quantitative investigations, the effects and methods of handling measurement error in the dependent variables have been well documented and efficient.

5.5 Suggestions for Further studies

Based on the findings, conclusion, recommendations and the limitations of the study, further research could be suggested to cover the following areas in order to corroborate the findings of this study and expand the knowledge in this area.

This study examined the efficacy of the itax system on tax administration in Kenya over a period of less than 5 years. There is a need for further studies to carry out similar tests for a longer time period. In addition, more variables depicting tax administration should be adopted to uphold the study's findings that indeed itax system influences tax administration.

Due to the importance of having high quality itax system, further studies should explore the areas that relate to itax system such as technology, staff training, and infrastructure. This will go along incorporating quality and independence of itax system.

Further, there is need for a study on how the size of a company influences the itax system as there is variation for various organizations based on the size. Further, a study should be conducted on the procedures followed during tax administration to see if all the Kenya Revenue employees follow the same procedures or a standard procedure is in place and adhered to.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION



UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
MBA PROGRAMME

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P.O. Box 30197
Nairobi, Kenya

DATE 15/09/2015

TO WHOM IT MAY CONCERN

The bearer of this letter GRACE GUYATU BARAKO

Registration No. DEI/71604/2014

is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.


PATRICK NYABUTO
MBA ADMINISTRATOR
SCHOOL OF BUSINESS



APPENDIX II: RAW DATA

		Rt in billions	E(R) in billions	ARt in billions
2013	Qtr 1	183.210	164.008	19.202
	Qtr 2	242.500	244.0919	(1.592)
	Qtr 3	253.490	266.5489	(13.059)
	Qtr 4	284.600	289.0492	(4.449)
	Total	963.800	963.6979	0.102
2012	Qtr 1	136.234	161.7308	(25.497)
	Qtr 2	202.756	220.7437	(17.988)
	Qtr 3	221.41	238.6876	(17.278)
	Qtr 4	240.1	260.0387	(19.939)
	Total	800.500	881.2008	(80.701)
2011	Qtr 1	129.825	158.530	(28.705)
	Qtr 2	177.196	183.729	(6.533)
	Qtr 3	191.6	170.006	21.594
	Qtr 4	208.739	215.154	(6.415)
	Total	707.360	727.419	(20.059)
2010	Qtr 1	139.258	148.807	(9.549)
	Qtr 2	152.700	164.138	(11.438)
	Qtr 3	150.548	157.355	(6.807)
	Qtr 4	190.528	170.898	19.630
	Total	633.034	641.198	(8.164)
2009	Qtr 1	124.022	103.603	20.419
	Qtr 2	136.800	132.567	4.233
	Qtr 3	131.147	148.996	(17.849)
	Qtr 4	142.434	160.035	(17.601)
	Total	534.403	545.201	(10.798)