THE EFFECT OF TAX COMPLIANCE STRATEGIES EXPENDITURE ON GOVERNMENT TAX REVENUE IN KENYA

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DECLARATION

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DEDICATION

This thesis is dedicated to my wife Hildegard, Our son Arshavin and daughters Angel and Kimberly for their moral support while I was undertaking this research. All the time I spent away from you was not in vain and the sacrifice has yielded fruits.

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ABSTRACT

This study endeavored to establish the effects of tax compliance strategies expenditure on government tax revenue. The specific objectives of the study were to: establish the effect of tax payer education expenditure on tax revenue, determine the effect of improved tax payer services expenditure on tax revenue, and assess the effect of law enforcement expenditure on tax revenue as well as determine the effect of technology adoption expenditure on tax revenue. The study was pegged on three theories namely; the economic deterrence theory, fiscal exchange theory and the regulatory compliance theory. Revenue data between 1980 and 2015 was used in the study. Ordinary Least Squares technique (OLS) was employed to establish the long run relationship between expenditure on taxpayer education, tax payer services, expenditure on law enforcement and adoption of technology on government tax revenues. Breusch-pagan test was used to test for heteroscedasticity and multi-collinearity, Variance Inflation Factor method was used. The study tested for serial autocorrelation since the data was of time series nature. The Jarque-Bera test was also conducted to test normality for the error term. Impulse response and variance decomposition were used to test the relation between tax compliance strategies expenditure and tax revenue. Further, the relationship between variables was established through correlation analysis. The results of the study show that the expenditures by the tax authority on the use of technology, law enforcement and the tax payer education were statistically significant in explaining the variations in tax revenue. The relationship between the three expenditures and revenue is positive, which implies that as the tax authority increases its expenditure on law enforcement, technology or on tax payer education, it is expected that tax revenue will grow. Contrary to these findings is the fact that the expenditure of the tax authority on improved tax payer services is not significant in explaining the variations in tax revenue.

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LIST OF ACRONYMS AND ABBREVIATIONS

CRA: Commission on Revenue Allocation

GDP: Gross Domestic Product

GOK: Government of Kenya

ITEP: Institute of Taxation and Economic Policy

KNBS: Kenya National Bureau of Standards

SAS: Self-Assessment System

SMEs: Small and Medium Enterprises

TAM: Technology Acceptance Model

TMP: Tax Modernization Program

VAR: Vector Auto Regression

VAT: Value Added Tax

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter presents the background to the study, the statement of the problem, study objectives and the research questions. Furthermore, the chapter highlights the scope of the study, justification of the study, significance of the study, limitations of the study and finally the operational definitions of terms.

1.2 Background to the study.

Marina *et al.,* (2002) asserts that the sole and realistic way of mobilizing resources to meet public expenditure on goods and services required by the citizenry is taxation. But this is not entirely the case since some third world countries have alternative sources of revenue besides taxation like user fees and licenses levied on services provided by government ministries, departments and state agencies, including proceeds from the disposal of public assets and denationalization of ‘ailing’ state corporations. Furthermore, a number of emerging economies rely heavily on external funding as an alternative source of income (Barnett and Grown, 2004).

Generating revenue locally is given precedence by many nations in sub-Saharan Africa (Drummond *et al.,* 2012). Raising revenue enables many governments in developing countries achieve financial superiority, avail basic state amenities to its people, lower dependency on external support which in most cases has strings attached and diversify sources of revenue. On the contrary, tax avoidance and evasion in the local scene has hampered the growth of domestic tax base (IMF 2011). Even with the increasing and persistent world-wide challenge of tax non-compliance (McKerchar and Evans 2009), it is evident that most developing economies especially in the sub-Saharan Africa are the worst affected (Cobham 2005; Fuest and Riedel 2009). Masinde and Makau, (2010) assert that taxes are crucial in budgetary projections of an economy and one of the major reasons why taxes are levied is to raise revenue for economic management and allocation of resources for economic stabilization. Numerous interventions in the form of administrative initiatives have been put in place in the past by the Kenyan Government to enhance revenue generation. Among the interventions implemented to boost tax revenue was self-assessment systems (SAS) in the year 1992. The aim of the strategy was to enhance voluntary compliance, ease the complexity involved in evaluating tax returns and make the process of raising tax revenue more effective (cut down the cost of collecting tax revenue) (Masinde *et al*,. 2010). Even with the various tax management changes, the degree of adherence to revenue collection regulations has remained minimal. A study carried out by KRA, KIPPRA and the ministry of finance, based on 1999/2000 statistics showed that the amount of Value added tax remitted was minimal at 55% and the compliance on self-assessment tax returns through lodgment was 65% (Makau *et al*,. 2010).

Handling the perennial challenge of tax nonpayment demands for the tax authorities to clearly identify the elements that contribute to an individual's tendency to fulfill or fail to honor his or her tax obligations. Unfortunately, not much is understood concerning the dynamics of tax compliance in third world economies (Andreoni *et al.*, 1998; D'Arcy 2011; Fjeldstad and Semboja 2001). The tax compliance challenge has two main approaches the first is derived from economic rationality that is based on economic analysis and the second approach concerns with issues of behavior and borrows heavily from ideas and research findings in other fields like psychology and sociology (OECD, 2004). These two approaches are often perceived to provide alternative explanations on tax compliance (Valeria, 2004).

According to Jamel and Michael (2001) the economic approach gives economic variables that influence the behavior of tax compliance such as financial constraints that points to the relationship between tax liability and compliance behavior of the tax payer. If the tax liability is within the tax payer's ability, there is a high likelihood of voluntary compliance (Alligahm and Sandmo, 2004). Tax is the main form of raising government revenue by the Kenyan government which it requires to provide public amenities to its population. From the 1990s, Kenya achieved a significant growth in tax collection in nominal terms constituting about 24% of its GDP (Kenya Economic Report, 2013) making it possible for the state to cater for 60% of its budget (Kenya Economic Report, 2013). Machogu and Amayi (2013) noted that the debates around tax policies and public participation in decision making were a crucial public concern, to individual business enterprises and to the whole economy because of the varied effects on each of the entities. Consequently, tax related inequalities emanate from differences in the structure and performance of the tax system and therefore it is the responsibility of the state to institute a just and fair tax regime for balanced distribution of income and welfare services to its citizens. Additionally, the other significant indicators of a just and fair tax regime are simplicity, adequacy and neutrality. The promulgation of the new constitution in Kenya in 2010 has brought about a two tier system of governance; the national and 47 county governments (GOK, 2010).

The new constitution accords the central government the responsibility of levying both direct taxes (Income and corporate taxes) as well as indirect taxes (VAT, excise and customs duty). Income tax forms about 40% of the total tax revenue raised by the national government over last 10 years, followed by Value Added Tax at 28%. Approximately 20% of the economically active work force bears the burden of paying the income taxes such as PAYE which has raised fairness related issues besides the fact it is regarded as the most progressive tax arrangement (Karingi *et al.*, 2005). Alternatively the county governments are mandated to levy property rates, entertainment levies and any other taxes by an Act of parliament (Parliament Budget Office, 2010). Both the central and devolved units of government may levy service charges. The county governments have limited powers to tax and raise revenues in a manner that does not contravene and prejudice the provisions of the national economic policies as well as economic engagements within the county and should not hinder the free flow of goods, services, capital or labour. The equitable distribution of national revenue raised by both the central and county governments is regulated by the recommendations of the Commission for revenue allocation (Institute of Taxation and Economic Policy (ITEP), 2011).

According to Okello (2001) the government should consider widening the tax bracket in its tax reforms agenda instead of relying on tax credits and deductions like tax reliefs as a means to achieving fairness in tax administration. This can be achieved by instituting high tax rates for upper income tax brackets alongside the adjustment of tax bands to limit salary increments that are responsive to inflationary pressures without necessarily pushing the citizen's income to higher tax bands. However, Masinde and Muyundo (2012) note that corporate income tax is based on a fixed rate of 30% on net profits for local corporate entities as opposed to personal income tax that is based on a graduated tax scale structure. But those firms operating in the informal sector evade paying tax and this raises equity concerns even after the government introduced turnover tax to net such entities. That initiative has not been significantly successful raising the question as to whether the tax incentive regime should be revised in order to meet the main aim of enhancing investment and reducing revenue loss by the government (Mankiw, 1998).

Achieving improved tax compliance requires sustained and long range reform efforts based on very strong organizations and prudently managed Kenya Revenue Authority as well as having in place a collection system that is robust (e.g., payment and withholding systems) with regard to establishing a tax administration system that has the capacity to enforce registration, filing, payment, debt collection, audit, provide relevant and necessary services to tax payers, and processing of appeals) (Marina and Kilis, 2002). To ensure that the penalties are imposed as required, disputes resolved amicably and sufficient powers are vested on the tax agencies, the legal framework and the judiciary should play a major role. This coupled with increased use of information and communications technology plays an important role in tax compliance management by facilitating collection of information relating to third parties on their business activities, the use of electronic invoices to achieve monitoring and verification of transactions on a real time basis and analysis business risks (KNBS, 2011). Different countries and regions have adopted different strategies to achieve improved tax compliance. The differences are justified by the different stages of development, diverse administrative capacities and different non-compliance scopes. Therefore no single solution to tax compliance problem exists for all countries. The reforms implemented should be structured to fit the different circumstances of each country. The third world countries have however shown greater potential of achieving tax revenue growth by implementing tax compliance reform initiatives (GOK, 2010).

The allocation towards economic development from the total national budget in the financial year 2009/10 increased from 27.7% to 30.2% in the fiscal year 2011/12 but dropped slightly to 27.4% in the year 2013/14. The government of Kenya also planned for development financing allocations for all the 47 counties in the 2012/13, 2013/14 and 2014/15 fiscal years in line with the broad government objective of assigning more resources to infrastructure development and encourage private investments to create a firm foundation for high economic growth and development as outlined in the Vision 2030 which forms Kenya's long-term development agenda (Kenya Economic Report, 2013).

According to Masinde and Makau, (2010), taxes play an important role in the budget of any economy and one of the main reasons why the government imposes taxes is to generate income to manage the economy and redistribute resources. Over the years, the Kenya government has undertaken various revenue administration reforms aimed at enhancing revenue collection. One of the measures that have been implemented in order to increase revenue collection in Kenya was the introduction of self-assessment systems (SAS) in 1992. The objectives of this system was to increase voluntary compliance, reduce tax authorities‟ burden of assessing tax returns and increase tax collection efficiency (reduce tax collection costs) (Masinde *et al.,* 2010). However despite various administrative reforms, levels of tax compliance have remained quite low. A survey conducted by KRA, KIPPRA and the Treasury, based on 1999/2000 data revealed that

VAT payment compliance was as low as 55% while return lodgment compliance was 65% (Makau *et al.*, 2010).

Several important revenue measures were included in the 2014/15. Such measures ranged from revision of the Excise and Income tax Acts, increased taxes on iron and steel products, enhanced and better tax administration, more specifically in relation to value Added Tax and changes to the Income Tax Act to curb tax avoidance by international firms operating in Kenya. The reforms initiated and effected in September 2013 reflected the full year effects of value Added Tax reforms that led to increased revenues as well as the impact of the measures that led to the incorporation of the land lord into the tax base. The measures were expected to contribute about 1.3% of GDP in 2014/15 (GOK, 2015). Aggregate tax revenue as a percentage of the GDP was expected to average 22% in the subsequent two fiscal years whereas total expenditure and net lending were to remain above 30%, and the overall budget deficit was to continue to be above 8% of the GDP (Odero, Kipyego and Reeves, 2015: 2).

1.2.1 Tax Compliance Strategies.

Tax compliance is a major problem for many tax authorities and it is not easy task to persuade taxpayers to comply with tax requirements even though tax laws are not always precise‟ (James and Alley 2004).The definition of tax compliance in its most simple form is usually cast in terms of the degree to which taxpayers comply with the tax law (James 1999).However, like many such concepts, compliance is seen as a continuum of definitions. One suggestion is that the degree of non-compliance may be measured in terms of the „tax gap‟. This represents the difference between the actual revenue collected and the amount that would be collected if there was 100% compliance (James, 1999).

All revenue authorities are generally required to achieve as good a compliance outcome as possible (i.e., to maximize the overall level of compliance with the tax laws). For this purpose, they are appropriated a finite level of resources, meaning that careful decisions are required as to how and in what ways those resources are to be applied to achieve the best possible outcome in terms of improved compliance with the tax laws. Directly related to this issue is the critical matter of deciding the priorities for compliance action and the specific actions to be taken (Jamel and Michael, 2001). The primary goal of a revenue authority is to collect the taxes and duties payable in accordance with the law and to do this in such manner that will sustain confidence in the tax system and its administration. The actions of taxpayers, whether due to ignorance, carelessness, recklessness, or deliberate evasion as well as weaknesses in a tax administration, mean that instances of failure to comply with the law are inevitable. Therefore, tax administration should have in place strategies and structures to ensure that non-compliance with tax law is kept to a minimum (Gardiner, 2001).

Jackson (2013) argues that improving tax compliance requires long-term reform efforts, beginning with strengthening the organization and management of the revenue agency, implementing robust collection systems (e.g., payment and withholding systems) and building capacity in core tax administration functions (registration, filing and payment enforcement, debt collection, audit, taxpayer services, and processing of appeals). Keen *et al.* (2013) argue that reform of the legal framework and judiciary is also often required to ensure that the necessary powers, penalty regimes, and dispute resolution processes are in place. Increasingly, information and communications technology is playing a critical role in compliance management (e.g., through automatic gathering of third-party information as a by-product of natural business processes; use of electronic invoices to facilitate real-time transaction monitoring and verification; and analysis of revenue risks).

Reform priorities to improve tax compliance differ across countries and regions, reflecting variations in stages of development, administrative capacity, and scope of tax abuse. One size does not fit all, so reforms need to be tailored to each country's circumstances. The relatively wider tax gaps and lower revenue productivity of developing and emerging economies generally suggest potential for bigger revenue yields from compliance improvement initiatives. For these countries, getting the fundamentals of revenue administration in place (especially taxpayer service operations and effective audit and enforcement) should be the first step (Machogu&Amayi 2013).According to the Tax Justice Network Africa, (2011) a taxpayer compliance program is a high level plan which brings together in a single document a description of the most significant compliance risks identified in the tax system and sets out the broad detail of how the revenue agency intends to respond to those risks. It does not attempt to cover every aspect of a revenue agency's operational activities. Compliance programs are commonly structured around major taxpayer segments (e.g., large businesses, medium-size enterprises, small and micro enterprises, and individuals) and address compliance risks relevant to these segments (Spitzer, 2003).

While sound legislation is the cornerstone of achieving a good compliance outcome, it is nevertheless often a costly response to any given non-compliance situation. As a consequence, consideration of the external legislative context represents an attempt to look at existing legislation in action in an effort to identify weaknesses and threats that may need to be addressed or mitigated through administrative practices. The role of the authority is to operate within the law. Whilst recommending changes to legislation does represent a legitimate compliance approach for revenue authorities, this guidance note concentrates on administrative rather than legislative solutions (Tanzi& Zee, 2000).

Revenue authorities throughout the world operate within socio-political contexts. From time to time, governments will place obligations upon authorities that might not have otherwise represented a compliance risk worthy of administrative intervention. These additional obligations nevertheless form part of the context within which the authority must operate and represent a very real impost on resource allocation and usage that must be managed. Public opinion represents an important consideration for revenue authorities. The regard in which an authority is held within the community has a direct impact not only upon the community attitude towards compliance but also upon the ability of the revenue authority to successfully administer the taxation system and upon the morale of revenue agency staff (Tax Justice Network Africa, 2011).

Spitzer (2003) explains that in a world of limited resources, the manner in which a compliance risk is to be addressed must be taken into consideration. This is not only because of the need to spread resources to achieve a balanced programme of compliance activity but also to ensure that the manner of treatment is acceptable to community standards. The costs of compliance to the community need to be commensurate with the level of compliance risk exposure if the county is to be able to meet its global objectives of collecting the revenue in a manner that sustains community confidence. Community standards and the potential impact of compliance obligations are aspects of the operating context that a county management must clearly understand in order to frame an effective compliance treatment programme.

Jackson (2013) argues that improving tax compliance requires long-term reform efforts. This may begin with strengthening the organization and management of the revenue agency, implementing robust collection systems (e.g., payment and withholding systems) and building capacity in core tax administration functions (registration, filing and payment enforcement, debt collection, audit, taxpayer services, and processing of appeals). Keen *et al.,* (2013) argue that reform of the legal framework and judiciary is also often required to ensure that the necessary powers, penalty regimes, and dispute resolution processes are in place. Increasingly, information and communications technology are playing a critical role in compliance management (e.g., through an automatic gathering of third-party information as a by-product of natural business processes; use of electronic invoices to facilitate real-time transaction monitoring and verification; and analysis of revenue risks).

Nicoleta (2011) in his study says that tax noncompliance is a substantive universal phenomenon that transcends cultural and political boundaries and takes place in all societies and economic systems. There are many studies that explain the behavior of tax compliance in a more realistic situation. They focus on the determinants of tax compliance, respectively on economic and non-economic factors. Tax non-compliance is an area of concern for all government and tax authorities, and it continues to be an important issue that must be addressed. Regardless of time and place, the main issue faced by all tax authorities is that it has never been easy to persuade all taxpayers to comply with the regulations of a tax system. In contrast to the majority of employed people - who in many countries are paid net salaries with taxes being deducted at source –residential estate investors often need to self-assess and self-report their income and pay taxes "out of their pocket." Residential estate investors not only pay their income tax but need to take account of various types of business taxes such as corporate tax, property taxes, and payroll taxes; they need to collect sales taxes such as VAT; and they need to withhold taxes such as personal income taxes in the case of having at least one employee (Christensen *et al.*, 2001).

Jayapalan (2003) asserts that the key objective of the tax agency is to levy taxes and other fees as required by the law and do to it in a way that aims to achieve and maintain the confidence of the tax regime and its management. However, cases of noncompliance with tax regulations by the tax payers, either because of lack of information, laziness, recklessness, or by willingly evading, and also loopholes in a tax arrangement are unavoidable. Consequently, any administration of tax is required to put in place mechanisms and policies that make it hard for any attempt to avoid adherence to the tax regulations difficult and unachievable. The fundamental role of a tax agency (and vested interest) is to ensure that taxpayers and other stakeholders are well aware of their requirements as dictated by the tax laws of the country (Gardiner, 2001). Taxpayers on their side have a crucial and essential responsibility to fulfill in order to meet their obligations, because in many occasions they in a better position to understand it is their duty to follow the tax laws in its entirety (Siti, Normala Sheik & Obid, 2007).

While individual responsibilities rested upon a taxpayer are bound to change from a single taxation duty to another and from one tax mandate to the other, a minimum of four general classes of requirements are possible to prevail for all the taxpayers, irrespective of the tax jurisdiction. ‘Adherence' to a greater proportion will depend on the degree to which a taxpayer fulfills these expectations. Failure by the taxpayers to adhere to the requirements may then be taken to mean lack of compliance. Although, degrees of non-compliance are varied (Burrows, 2013).similarly, individuals expected to pay tax may fundamentally meet their requirements, but adherence may still have clear concerns stemming from varied interpretations and understanding of the tax laws. In such circumstances, failure to clearly understand the tax regulations presents a dimension of risk that can only be dealt with either by amending the law or finding alternative ways in which the law will be enforced (Alligahm and Sandmo, 2004). Tax agencies are allocated a fixed amount of resources, fundamentally clearly less than the required to enhance total percentage compliance by all taxpayers as tax obligations keep on surging high. This implies that effective tax management should be about maximizing collections as required by the tax laws in the manner that enhances public confidence in the revenue collection agency and in a way that provides a just and correct working of the tax system. Consequently, tax collection agencies need a formulae or technique for the effective and balanced mode of distributing resources at their disposal. However, this is not a clear-cut assumption with regard to tax and tax compliance (Machogu and Amayi, 2013). The main goal of tax management could be in relation with maximizing revenue collections as per the tax requirements and raising the degree of voluntary compliance in a manner that fosters the integrity of the tax system, but the approach to attaining this may not be.

Efficiency relies heavily on creativity and cooperation in learning the market, environment, identifying differences and coming up with strategies (Dicleson & Hadjimanolis, 2008). Governments avail different services to their population that include education, sanitation, security, roads, health care, water, and social security especially for care of the elderly, among others. The provision of this goods and services can only be achieved by the governments collectively using taxes and the other alternative sources of income as stated earlier on. Fundamentally, taxes are obligatory levies that may not necessarily be in return for benefits from government provisions to its (GOK, 2010). It is significant to understand that, honoring tax requirements should not be in anticipation for immediate and correspondent service in return. The rationale for paying taxes is that an individual person cannot afford to pay for a service they use fully and therefore it is the responsibility of governments to administer and raise taxes to finance the provision of public goods and facilities for the benefit of the citizens (Karingi *et al.*, 2005).

1.2.2 Tax compliance and tax revenue

According to ITEP (2011), a great proportion of revenue authorities have digressed from the traditional tax management assessment regimes where all or to a larger extent tax reports are scrutinized or examined as a precondition for before being issued to the taxpayers. The regime of choice of late is the self-evaluation and adjustment mechanism that bases its confidence on the taxpayer's own initiative to adhere to their tax obligations to subscribe to the tax register, maintain up to date records, submit accurate tax returns and honour their tax liabilities with minimum or without the intervention of a tax body. Article 209 of the Constitution of Kenya 2010 prescribes the right to levy taxes or accumulate revenue for both the central government and the devolved units of governance (GOK, 2011). The distribution of the tax collection authority between the two levels of government is meant to respect and enhance the spirit of devolution, whose structure makes it possible for the central government to have greater mandate over a bigger portion of taxes with substantial revenue base. Specifically, the central government is particularly in charge of imposing income tax, excise duties, VAT, and customs (GOK, 2010).

About 20% Kenya's tax income-to-GDP ratio from the year of 2010 has been the best in standards by regional comparisons; this is far above the tax-to-GDP ratios in Tanzania (17.4% in the fiscal year 2013/14) and Uganda (13% in fiscal year 2013/14). The economic short fall (including foreign aid) was approximately 5% of the gross domestic product running over the financial periods of 2011/12 and 2012/13, growing up to 5.6% from 4.0%, respectively. This development remained constant besides the adoption of new and advanced systems and structures to operationalize the 2010 supreme law in Kenya (the constitution), both at the central government level as well as among the 47 devolved units of government, that has made it necessary for the state to expand its expenditure; and increased demands by government employees to have their basic pay and other employment allowances (Odero, Reeves & Kipyego, 2015: 12).

The taxpayers' belief and tendency to comply is always a consequence of a number of elements of compliance that finally affect taxpayer's attitude. The conditions that affect adherence to tax requirements and failure to voluntarily honour tax obligations by individual taxpayers are not uniform among different economies and also are different from one tax entity to (Kirchler, 2007). These range from taxpayer attitude towards the tax regime and the tax collection agency (Ambrecht, 1998) group pressures and or individualized practices; taxpayer awareness regarding the workings of the tax system/tax regulations (Silvani, 1992; Le Baube, 1992).Including other benefits such as motivational incentives (Feld, Frey and Targler, 2006) and coercive forms like fines (Allingham and Sandmo, 1972); high penalties in case of non-compliance (Slemrod, 1992; Le Baube, 1992);implementation activities that include regular tax audits; possibility of non-compliance discovery; variance across social cultures; preconceived behaviour regulation (Furnharn, 1983); norms/ morals by the tax paying agents and tax administrators; fairness of the revenue regimes; population dynamics and composition elements like gender, age, literacy levels and the level of revenue (Murphy, 2004) and the dependency on informers.

Adherence to tax obligations has gradually developed and grown into a major field of focus for studies in social and financial psychology. This concept has been looked at and tackled from a variety of standpoints leading to the understanding of the varied aspects of behavioral attitudes by the tax payers. Attitudes of a tax payer have been determined, current cultural practices defined and the lay philosophies held by people with regard to fulfilling their yearly tax liabilities and declarations examined (Kirchler, 2007). Experimental findings point to the fact that adherence to taxation requirements has resulted in higher and rising levels of government revenue and verification reports and a generally encouraging decline in the overall tax rates based on yearly tax returns. Tax liability payment will also be highly efficient when the tax payer anticipate improvement in provision of welfare amenities paid for by the tax revenue with any change in percentage penalties appearing to cause minimal impact on tax liability payment tendency (Almet *et al.*, 1992). To conclude, there seems to be a range of alternative tax regulation elements superior to the normal routine of implementation activities that the state can put in place to realize and even exceed the expected or projected level of adherence with the tax collection and administration conditions. Essentially, a number of these fundamental strategies (increased fines) may to a greater extent fail to trigger any increase in the levels of compliance to tax requirements.

It recommended that the state pursues alternative measures in its quest to improve on the level of tax efficiency and effectiveness (Alm *et al.,* 1992). Therefore, the administration of coercive measures such as fines and other non-compliance costs should be encouraged to minimize further delayed payment of the tax liabilities. It therefore follows that tax audits by tax management agencies should be considered necessary and compulsory, specifically when non-compliance is detected or suspected to have been committed by the tax paying entity be ignorantly or intentionally. The concept non-compliance has always been emphasized by the policy changes geared to punish, such as the regular tax audits and percentage fines (Alm, McClelland, Schulze, 1992). Unfortunately, the theoretical instrument employed could not extensively predict and give a comprehensive account of the taxpayer reluctant attitude and more often refusal to comply with tax payment. Several empirical studies to explain the complex and unpredictable tendency of adherence to tax regulations in more genuine circumstances have been carried out. These studies concerned themselves with the elements that influence compliance or levels of non-compliance. This could be respectively on economic and non-economic elements. Non-financial elements, initially assumed by early economic proponents, are now considered in crucial in helping the understanding of the adherence to tax regulations through the use of an economic structure (Smith and Stalans, 1991). These economists have considered a number of non-economic determinants, that range from the general willingness to honor liability for government provisions, general education, tax attitude, etc. (Hyun, 2005)

1.3 Statement of the Problem.

Efficient self-assessment structures are reinforced by a controlling approach that identifies that voluntary compliance will be optimized through an appropriate balance of taxpayer education and assistance, simple laws and procedures, and risk-based verification programs. Article 209 of the Constitution of Kenya (2010) outlines powers to impose taxes or raise revenue by the national government (GOK, 2011). In particular, the national government is solely responsible for imposing income tax, value added tax, customs duties and excise taxes. The justification for this is that the central government needs to retain the ability to redistribute national resources and stabilize the economy which is the key objectives of tax systems.

The relatively wider tax gaps and lower revenue productivity of developing and emerging economies that contribute to galloping budget gaps can be reduced if implemented tax reforms incorporate effective tax compliance strategies to help raise more tax revenue (Odero, Reeves and Kipyego, 2015). However, the link between these tax compliance strategies and the level of tax revenue has not been established in Kenya. This is the knowledge gap that this study attempts to fill.

1.4 Objectives of the Study

1.4.1 The Broad Objective

The broad objective of the study was to establish the effects of tax compliance strategies on the level of tax revenue in Kenya.

1.4.2 Specific Objectives

The broad objective is broken down into the following specific objectives:

i. To establish the effect of taxpayer education expenditure on the level of tax revenue in Kenya,
ii. To establish the effect of law enforcement expenditure on the level of tax revenue in Kenya,
iii. To determine the effect of technology adoption expenditure on the level of tax revenue in Kenya,
iv. To determine the effect of taxpayer services expenditure on the level of tax revenue in Kenya.

1.5 Research Questions

The study was guided by the following research questions:

i. What is the effect of taxpayer education expenditure on the level of tax revenue in Kenya?
ii. What is the effect of law enforcement expenditure on the level of tax revenue in Kenya?
iii. What is the effect of technology adoption expenditure on the level of tax revenue in Kenya?
iv. What is the effect of taxpayer services expenditure on the level of tax revenue in Kenya?

1.6 Scope of Study

The study was based on country wide data covering the period between 1980 and 2015 and was to focus on the effect tax compliance strategies expenditure on revenue performance in Kenya.

1.7 Justification of the Study

The Kenyan government and the tax agency have always put in place systems and arrangements to guarantee realization of higher tax revenue through enhanced tax compliance. This has been through efforts such as: provision of tax payer education, law enforcement, adoption of technology and improved tax payer services. This study aims to ascertain the existing link between this efforts and level of tax revenue.

1.8 Significance of the Study

The recommendations of the study will be of great assistance to the government and tax payers. The government of Kenya will be able to know the factors which can influence voluntary tax compliance and establish ways of implementing taxpayer friendly strategies so as to enhance tax collection. The tax payers in the country will appreciate the need to voluntarily comply and meet their tax obligations to avoid penalties and enhance their government's ability to meet its civic obligations. The government will also be able to establish ways of promoting voluntary tax compliance among its citizens and thus reduce the cost of tax collection and increase the tax revenue so as to reduce the budget deficit.

1.9 Limitations of Study

The study envisaged situations where management of the government agencies could withhold information for fear of the intended motive of the inquiry. However, the researcher endeavored to fully explain the purpose of the investigation to anyone who had reservations.

1.10 Operational Definition of Terms

Tax Compliance: This refers to adherence to the administrative rules of lodging and paying taxes on time. This includes compliance with the reporting requirements, procedural rules and regulations. This entails filing tax returns on time, reporting all the income and claiming the right deductions and where taxes are due making tax payments on time.

Tax Rates: Tax rates refer to the rate at which a business or person is taxed on income. It also refers to the rate of tax on goods and services.

Tax Audits: This is the activity carried out by any revenue agency to establish if the true value of tax liability has been paid by the tax paying entity.

Tax Revenue: yearly revenue collected by the tax agency from persons or entities on whom tax levies are imposed.

Fines and Penalties: A fine or penalty is a levy imposed on an individual for failing to willingly honor his or her obligations as per the tax regulations.

Tax incentives: A tax incentive is a benefit meant to entice and encourage voluntary compliance by taxpayers with aim of boosting levels of tax revenue to be realized.

Tax evasion: Are the illegal and intentional actions taken by individuals to avoid adherence to their tax liability obligations. This involves: underreporting, falsification of documents, failing to totally submit tax returns among other efforts meant to deny the tax authority the power to determine the true tax burden for the entity.

Tax incentives: A tax incentive is an aspect of the tax code designed to incentivize, or encourage a certain type of behavior.

Residential Estate: Refers to land plus anything permanently fixed to it, including buildings, sheds and other items attached to the structure.

Tax avoidance: Refers to the legally recognized reduction in tax liabilities by practices that take the full advantage of the tax code, such as income splitting and postponement of taxes.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical literature review and the empirical review of the study variables.

2.2 Theoretical Literature Review

Despite the fact that taxation is used to enhance equity in the distribution on national resources, in Kenya, it is mainly used to facilitate the sharing function and also to ensure economic stability. Karingi *et al.,* (2005: 27) argues that Kenya as an economy has gradually grown from a small tax producing economy in the 1980s. During this period, the annual aggregate tax income expressed as a ratio of the Gross Domestic Product (GDP) which is financially considered as an indicator of the strength of the economy, ranged at 19.7% to the prevailing rate of approximately 24%. This growth has been achieved because of a series of economic reforms popularly termed as the Tax Modernization Programme (TMP) beginning the 1994/95 fiscal years to the present. The taxable capacity index between the financial years 1991/92 - 2010/11 has followed a uniform trend of increase, in real terms (GOK, 2011).

With regard to the county structure, the Constitution permits for the enactment of a Revenue Fund for every devolved unit of governance, ‟ this fund shall receive all tax payments or moneys generated by or on behalf of the lower government levels, excluding any other receipts exceptionally excluded through parliamentary legislation" (Okello, 2001:13). Expenditures of this reserves or resources for the county governments can only be through authorization by the county assembly legislation. However, this must get approval by controller of the national budget. Additionally, the central government is mandated to levy income tax, value added tax, excise duties and any other charges on external trade and internal trade dealings (GOK, 2011).

ITEP (2011) in its extensive contributions suggests that in each fiscal period, more than 15% of all revenue raised by the central government should be distributed to the devolved units of governance. This recommendation is strengthened by the implementation of the new 2010 constitution. Presently, the national income stands at Kshs1.5 trillion ($17.65 billion), implying that share to the county governments is approximately projected to be around Kshs 203 billion ($2.4 billion). To achieve this objective, a formula for distributing this revenue has been developed by the Commission on Revenue Allocation (CRA) and which has received approval by the national assembly. According to this arrangement, county governments are assigned 45 percent of this revenue on the basis on their population, 20 % on the basis of the prevailing poverty index and 8 per cent on geographical size (CRA, 2011). Additionally, all devolved government units uniformly receive a share of 25 % of the total national income. Marginalized or disadvantaged county governments benefit from an equalization kitty, which aims to accelerate their level of economic growth and development as a strategy to keep a breast with the other counties (ITEP, 2011). Given this analysis, the central government, therefore, has a responsibility to ensure that tax compliance is sufficient to enhance optimal tax revenue

2.2.1 Economic Deterrence Theory

The proponents of the economic deterrence theory argue that a taxpayer's behaviour is determined by factors that include the rate of tax, anticipated benefits of avoidance to honor tax obligations and the possibility of discovery and associated penalties for evasion attract punitive costs (Allingham and Sandmo 1972; Becker 1968). The implication of this is that if discovery is possible and punitive measures are extreme, a small percentage of a given tax paying population will be willing to avoid honoring their obligations. In the Contrary to this position, if tax audit possibilities are low and attributed fines are weak, the projected rate of voluntary tax evasion will be quite high. This model therefore predicts considerable nonconformity with the tax requirements. Even though, this formulation has been questioned for extensively advocating for the coercive motivation to adherence, instead of the standard norm of consensus (Sandmo 2005) there exist sufficient prove to back the significance of the deterrence approaches as a remedy to low levels of compliance (McKerchar & Evans 2009). For instance, the dread of being apprehended, or the possibility of discovery, has occasionally been proved in some situations to be an efficient approach to trigger truthful behaviour. Additionally, this philosophy is founded on the idea that, deterrence from voluntarily engaging in a wrong will be accelerated once an individual realizes that net penalty of committing a crime overshadows the attributed positive reward of the crime itself. This assumption is based on the notion that each tax payer is well informed of the dissimilarity between just and unjust plus the penalties related to wrong or criminal behaviour. The founders of the economic deterrence model assert that individuals willingly decide to observe or go against the regulations considering the anticipated benefits and disbenefits of their actions.

Fines and penalty rates may substitute each other due to their multiplicative linkages as long as neither of them is set to zero (Kirchler et al 2007). Higher fines simply make evading taxes more hazardous for taxpayers and should deter them from evasion. Empirically, the deterrent effect of fines could not always be supported. The observed effects were weaker than expected and some studies even suggest that an increase of penalties can have undesirable effect and result in more tax avoidance (Kirchler et al, (2007). Alma et al., (2012) supports the evidence that fines do affect tax compliance though the impact was virtually zero. Friedland *et al.,* (2008) compliance was strongly affected by the amount of fines than by audit probabilities. Several studies however found no support for the deterring effects of fines since it was weak (Andreoni, 2008). Some of the findings suggest that a policy based on deterrence is effective only in combination with frequent Audits (Kirchler *et al.*, 2007).

Another argument to investigate these compliance costs is that high tax rates and complex tax legislations can induce fraud. Earlier research (Franzoni, 2008) concluded that companies will create a kind of resentment against authorities who impose too high levies and too complex tax systems. This will incentivize (illegal) tax avoiding systems because of the high financial advantages and the low condemnation rates (Franzoni, 1998). In addition, because of the complexity of the system, the companies often need to rely on external tax professionals who by means of sophisticated tax avoidance engineering will minimize tax payments (Franzoni, 2008). Finally, the general introduction of the VAT regime in almost all countries has raised interest in identifying and quantifying the impact of the new system on tax compliance costs (Evans, 2003). Acknowledging the fact that high compliance costs diminish competitiveness of the country in terms of taxation attractiveness, public services have become increasingly interested in ways to simplify their tax legislation systems.

The Deterrence formulation, one of the models based on economic principles, was developed by Allingham and Sandom (2012) who improved on the anticipated value model of unlawful action advanced by Becker (2008) to the taxation concept. This school of thought integrates the understanding of an economically normal taxpayer who will voluntarily avoid paying tax as long as the expected returns from non-compliance are higher to the anticipated consequence of getting apprehended. Allingham and Sandom (2012) suggested an important economic deterrence concept on the basis of the expected utility function of the individual who avoids paying taxes. This formulation integrates a number of features. To start with, the taxpayer experiences some degree of risk distaste, the greater risk averse the tax paying agent is, and the lesser likelihood that he/she voluntarily avoids to pay his or her tax obligations.

Secondly, the tax paying agent requires to have an understanding about the taxation regime to calculate the possibility of being discovered and the magnitude of the costs likely to be in the defaulting is detected. According to this arrangement, the taxpayer chooses the aggregate of taxes to submit to the tax management authority. In the process of this determination, the tax paying agent aims to optimize anticipated value which refers to the aggregate of the utility value of each outcome weighted by the probability that the particular result occurs. The formulation confirms that when the level of detection is significant, the tendency to underreport is deterred and that greater rates of the comparative tax gives way to minimum levels of reported revenue. The overall assumption of the economic deterrence theory is that adherence to tax laws relies fundamentally on tax audit and penalty. Implications of this assertion are that taxpayers will honor their tax obligations because of the fear of sanctions. To conclude, the theoretical ideologies of monetary restriction have also been extensively accepted by tax managements in the process of formulating implementation plans that are fundamentally based on punishments and the fear of getting detected and apprehended.

2.2.2 Fiscal Exchange Theory.

The proponents of the fiscal exchange theory assert that the occurrence of expenditures by the government a recipe to encourage greater adherence to tax obligations and that state can enhance voluntary submission by availing amenities that people favor in a highly effective and manageable fashion (Cowell and Gordon 1988; Levi 1988; Tilly 1992; Moore 2004; 1998). Alm *et al.,* (1992) noted that tax compliance rises with (perceptions of) the abundance of goods and services of public interest. Accordingly, taxpayers majorly look at the direct benefit for using their resources to pay tax; this may be through provision of public goods and services (quid pro quo). This model interprets the process of taxation and the provision of goods and services of public interest in the form of a contractual connection that binds the government through its tax management authority and the tax paying agents (Moore 2004). Citizens of a country and organizations may voluntarily honor their tax obligations because they appreciate the benefits of the amenities availed by the state, they recognize that their tax remittances are significant by either helping to fund provision of public utilities that include goods and services or by motivating other citizens to voluntarily participate in tax payment (Fjeldstad and Semboja, 2001). The anticipated progressive rewards or incentives are likely to enhance the possibility of voluntary compliance by the taxpayers; this will be with minimal or zero coercion. Irrespective of the fact that a number of taxpayers may not be able to determine the actual benefit of the provisions by the government as rewards for their tax payment commitment, it is possible to be able to argue that taxpayers elicit overall impressions and feelings with respect to their own and others' improved conditions of exchange with their state (Richupan1987). Therefore, it is significant to have a general assumption that taxpayer attitude towards tax compliance is influenced by his/her fulfillment or failure to achieve fulfillment with regard to his/her conditions of interaction with the state. Finally, when the regime of taxation is seen as being unfair and unjust, fraud may, at least partly, be viewed as a concerted effort by the tax paying agent to alter his conditions or preference to transact with the government. This fiscal exchange principle has attracted great interest as a center of focus and is satisfactorily developed theoretically. Empirical prove necessary to authenticate the theory is, however, unclear (D'Arcy 2011: 5-6).

In conclusion, this model proposes that, attitudes of the members of any civilization are always influenced by existence of fixed elements that bear their origin from particular environments and stream from a well-established and structured manner. The tendency to fulfill a certain behavior will always depend on the fact that the individual has a purpose towards that behavior (behavioral intention).This intention or objective on its part is dependent upon on three fundamental conditions: the attitude of the individual towards the behavior, subjective values and perceived behavioral control. The three elements too are said to be influenced by behavioral beliefs, normative beliefs and control beliefs. The fiscal exchange model thus, bases its subject matter on the morals, beliefs and ethical inclinations of the taxpayer. Accordingly, this theory asserts that an individual intending to pay taxes may voluntarily comply even when the possibility by the tax authority to detect is low. On the contrast, economic theories put extreme emphasis on enhanced audits and punishments as alternatives to non-compliance, the fiscal exchange models greatly focus in altering tax payer perceptions and attitudes with regard to a tax regime.

2.2.3 Regulatory Compliance Theory.

Erick (2007) believes that individuals who have advanced compliance theories often perceive compliance as "planned" and not as an "automatic", response. In an attempt to concur with the Weberian approach to describing behaviour, compliance proponents regard goal-oriented responses as approximate indications of satisfaction for realistic response processes. This assumption has merited a number of intuitive analyses. To date, important concerns are unexplained, consequently, this has had a limiting effect on the uninterrupted growth of the compliance model. Two of them call for attention (Valeria, 2004).

To start with, the compliance theory needs to provide justification for the empirically established behavior of the tax controllers to institute concurrently numerous, heterogeneous targets (Jayapalan, 2003). Empirical studies confirm the possibility of having a combination of physical, psychological and normative targets taking effect on compliance and noncompliance tendencies. In particular, a regulatee could be focusing on enhancing his profitability, safeguard self from any anticipated loss, derive pleasure, and respond in an appropriate manner, all at once (Karingi *et al.*, 2005). However, Machogu and Amayi (2013) believe that the said targets may not necessarily translate into a generally accepted standard for utility. Therefore, the theories advocating for voluntary compliance rely only on one kind of these motives, particularly the rational actor theories of compliance, assume and fail to account for a substantial portion of the empirical certainty, the way a number of experimental studies have concluded.

Numerous concepts have been suggested as explanations to this fundamental problem, although a greater percentage of this propositions have turned out to be inadequate. The popular and significant contribution by the proponents of the compliance theories is the suggestion to combine varied formulations of response. If considered separately, each of these models puts aside the intricacy of purposes noticeable in convincing situations. However, when considered collectively, the models are able to convincingly provide explanations for almost all the interpretations, based on the assumption that the actors who constitute compliers and non-compliers can be categorized for instance as: "utilitarians" "unprincipled calculators" "bad apples" and or "opportunists". Alternatively, they could be the dutiful "virtuous" actors, citizens, or good apples. The popular illustrations are the assertions of Machogu *et al.*, (2013). It combines two conflicting theories: rational choice theory (game theory) and the perception that norm internalization in mutual exchanges is likely to overshadow opportunistic attractions of failure to comply. Therefore, this is generally considered a compromising position between the logic of consequences and logic of appropriateness as representation of the many developments to the regulation literature.

2.2.4 Fiscal Psychology Theory

This theory of tax compliance assumes that psychological factors including moral and ethical concerns are also important to taxpayers. Among these theories is the Theory of Planned Behavior which was developed by Ajzen in 2011.

This theory is a successor to the Theory of Reasoned Action of Fishbein and Ajzen (2005), Ajzen and Fishbein (2000) and Ajzen (2008).This theory tries to explain human behavior.

According to this theory, behaviors of the individuals within the society are under the influence of definite factors, originate from certain reasons and emerge in a planned way. The ability to perform a particular behavior depends on the fact that the individual has a purpose towards that behavior (behavioral intention). Behavioral intention in turn depends on three factors that is Attitude towards the behavior, Subjective norms and Perceived behavioral control. These three factors are also under the influence of behavioral beliefs, normative beliefs and control beliefs. The focus of this theory therefore is on the taxpayer’s morals and ethics. The theory suggests that a taxpayer may comply even when the probability of detection is low. As opposed to the economic theories that emphasize on increased audits and penalties as solutions to compliance issues, psychological theories lay emphasis on changing individual attitudes towards tax systems.

2.3 Tax Compliance.

It is a requirement that all tax management authorities focus their attention on attainment optimum compliance. This implies that overall adherence to taxation laws and regulations should be maximum. To achieve this, authorities have allocated a substantial amount of resources, consequently, a lot of caution should be taken when making decisions on the mode and through which the assigned resources will be used to realize the most superior result as far as enhanced compliance with the revenue collection rules are concerned. One of the major issues that has a close relationship with compliance to the tax requirements, is the fundamental question of determining the priorities for adherence response and the particular activities to be undertaken (Jamel and Michael, 2001). The main objective and concern of any tax administration, is raise the taxes and other levies expected to be paid with regard with established policy and carry out this process in a way that is bound to develop and nurture sustainable trust in the tax regime and its management. Adherence to tax obligations is a critical issue to many tax agents. To persuade taxpayers to conform to the tax regulations is also another demanding task that is not easy to achieve owing to the fact that tax laws are complex, rigid and never precise‟ (James and Alley, 2004).The concept of compliance to taxation requirements in the simplest form possible is often perceived in terms of the extent to which tax paying agents conform with the taxation rules (James, 1999).However, in concurrence with other similar concepts, compliance is always considered to have a range of explanations. One particular dimension fronted and popularly accepted is that the extent of failure to comply may be determined in relation to the „tax gap‟. This describes the deviation between the actual tax income raised and the levels projected to be raised if conformity to tax regulations were 100% (James, 1999).

Tax compliance is a major problem for many tax authorities and it is not easy task to persuade taxpayers to comply with tax requirements even though tax laws are not always precise‟ (James and Alley, 2004).The definition of tax compliance in its most simple form is usually cast in terms of the degree to which taxpayers comply with the tax law, (James and Alley, 2004). However, like many such concepts, the meaning of compliance can be seen as a continuum of definitions. One suggestion is that the degree of non-compliance may be measured in terms of the „tax gap‟. Tax gap represents the difference between the actual revenue collected and the amount that would be collected if there was 100% compliance

Allingham and Sandmo (2012) described tax compliance as an issue of reporting an actual income and also claimed that compliance behavior was influenced by a situation whereby taxpayers have to make a decision under uncertainty i.e. either taxpayers would enjoy tax savings due to under reporting income or have to pay on the undeclared amount at a penalty rate which is higher than they would have paid had the income been fully declared at the correct time.

Allingham and Sandmo (2012), and Andreoni *et al.*, (2008) characterize and explain tax compliance as the output of interrelation among variables including perception of equity, efficiency and incidence (public finance views). Tax enforcement aspects like penalties and the probability of detection also relate to tax compliance while other labor market behavior factors including an individual's wages and tax bracket also contribute to tax compliance (Kirchler, 2007).

According to Masinde and Makau (2010), taxes play an important role in the budget of any economy and one of the main reasons why the government imposes taxes is to generate income to manage the economy and redistribute resources. Over the years, the Kenya government has undertaken various revenue administration reforms aimed at enhancing revenue collection. One of the measures that have been implemented in order to increase revenue collection in Kenya was the introduction of self-assessment systems (SAS) in 1992. The objectives of this system was to increase voluntary compliance, reduce tax authorities‟ burden of assessing tax returns and increase tax collection efficiency (reduce tax collection costs) (Masinde *et al.,* 2010). However despite various administrative reforms, levels of tax compliance have remained quite low. A survey conducted by KRA, KIPPRA and the Treasury, based on 1999/2000 data revealed that VAT payment compliance was as low as 55% while return lodgment compliance was 65% (Makau *et al.*, 2010).

Nicoleta (2011) in his study says that tax noncompliance is a substantive universal phenomenon that transcends cultural and political boundaries and takes place in all societies and economic systems. There are many studies that explain the behavior of tax compliance in a more realistic situation. They focus on the determinants of tax compliance, respectively on economic and non-economic factors. Tax non-compliance is an area of concern for all government and tax authorities, and it continues to be an important issue that must be addressed. Regardless of time and place, the main issue faced by all tax authorities is that it has never been easy to persuade all taxpayers to comply with the regulations of a tax system. In contrast to the majority of employed people - who in many countries are paid net salaries with taxes being deducted at source –residential estate investors often need to self-assess and self-report their income and pay taxes "out of their pocket." Residential estate investors not only pay their income tax but need to take account of various types of business taxes such as corporate tax, property taxes, and payroll taxes; they need to collect sales taxes such as VAT; and they need to withhold taxes such as personal income taxes in the case of having at least one employee (Christensen *et al.*, 2001).

Jackson (2013) believes that to improve and sustain a significant level of tax compliance, demands focus on long-run tax reform initiatives. To achieve this, authorities may be required to start with reinforcing the structure and management of the tax collection agency, developing and applying dynamic collection procedures (e.g., remittance and withholding procedures) and also reinforcing the ability of the essential tax management functions (registration, filing and payment enforcement, debt collection, audit, taxpayer services, and processing of appeals). Keen *et al.*, (2013) assert that change of the legal infrastructure and judicial processes is also considered essential in ensuring that the required controls, penalty systems, and procedures adopted to settle any emerging differences should be in place. It is fundamental to note that advancement in technology and investment in sophisticated communication systems, is playing a crucial role in tax conformance administration .For instance, automatic collecting of third-party data as a by-product of natural transactional processes; application of electronic bills to enhance in-time transaction monitoring and verification; and evaluation of uncertainties related to tax revenue).

Prioritizing reforms in tax management and administration as a precondition to realize improved levels of tax compliance vary from one country to another and from one economic region to another, showing dissimilarities in stages of achievement, managerial ability, and the possibility of tax abuse. The assumption that “One size does not fit all”, requires that any changes in tax arrangements should to be tailored to each and every economic region’s prevailing conditions. The significantly growing tax gaps and reduced income generation of third world economies and other emerging economies indicate great potential for increased revenue productivity if tax conformity initiatives are enhanced. For these countries, getting the fundamentals of tax administration in place (especially taxpayer service operations and efficient audit and enforcement) should be the first step (Machogu & Amayi, 2013). According to the Tax Justice Network Africa, (2011), a conformance program for taxpayers is an advanced strategy that consolidates in one document an explanation of the most essential uncertainties relate to conformity to tax requirements which are recognized in the tax regime and lays out a detailed plan of how the tax authority anticipates to tackle these risks. It does not attempt to cover every aspect of a tax agency's operational activities. Programs to enhance taxpayer compliance are ordinarily developed with regard to stratification of the taxpayers based on their tax capacity and general tendency to comply. These segments could be large enterprise, average level firms, small and micro businesses, and individuals. The established programs are also tailored to mitigate compliance threats related to each specific section of the taxable population (Spitzer, 2003).

Studies by Nicoleta (2011) affirm that nonconformity to tax requirements is an essentially common occurrence which cuts across social and regional boundaries and manifests itself in all social backgrounds and economic establishments. A number of studies have been put forward that vividly attempt to explain the dynamics of adherence to tax obligations in an extensively and practical manner. This studies generally relate to the causes of tax compliance particularly emphasis is on economic and non-economic elements. Incidences of failure to pay taxes has gradually grown and become an area of great interest for most economic establishments, political governments and tax agencies. This economic menace is perpetually becoming a central problem that needs to be sorted out if the desire to raise and sustain substantial tax revenue is to be achieved. Irrespective of time and place, the major challenge that confronts significantly all tax authorities is the perennial difficulty of attempting to convince and eventually influence taxpayers to adhere to the requirements of a tax regime. As opposed to a great number of salaried persons who in most countries receive their salaries after imposed taxes have been remitted directly by their employers, private business owners more often require personally assess and individually declare their revenue and remit taxes "from of their pocket." Business owners not only submit their personal income taxes but also need to consider and account for the other numerous classes of business levies like corporate tax, material levies, and payroll fees etc. They also must to collect sales taxes such as VAT; and they need to withhold taxes such as personal income taxes in the case of having at least one employee (Christensen *et al.*, 2001).

Although passing strong and relevant laws is considered a milestone in quest to achieve significant tax compliance results as is the expectation of many tax management authorities, it is nonetheless an expensive reaction to any specified incidence of non-compliance. Consequently, emphasis of the external legislative context signifies an incidence of concerted effort by the authorities to examine the current pieces of law as a precondition to detect loopholes and dangers that may require to be solved or dealt with significantly by administrative procedures. The duty of the tax authority is to act as per the dictates of established rule of law. While recommending changes to legislation does represent a legitimate compliance approach for revenue authorities, this guidance note concentrates on administrative rather than legislative solutions (Tanzi & Zee, 2000).

Tax management systems all over the globe function within the jurisdiction of their political and social environments. Time and again, political establishments or sovereign states will often put commitments upon tax agencies that might not have otherwise represented a compliance risk worthy of regulatory intervention. These supplementary conditions however constitute a greater portion of the environment under which the tax regime need significantly work and signify a very fundamental impost on revenue distribution and expenditure that has to be substantially regulated. Public opinion represents an important consideration for revenue authorities. The context upon which administrative authority is exercised within the society presents a one on one effect not only on the public behavior with regard to tax compliance but rather upon the capacity of the income management authority to effectively manage the system of taxation and upon the attitude of the revenue authority employees (Tax Justice Network Africa, 2011).

Spitzer (2003) noted that in an environment with finite productive resources, the method through which a conformity threat will be managed should significantly be taken into account. This is not only because of the need to spread resources to achieve a balanced programme of compliance activity but also to ensure that the manner of treatment is acceptable to community standards. It is recommended that price for adherence to the tax regulations incurred by the society should be proportionate to the anticipated degree of compliance threat experience if a nation is to have the ability necessary to measure to its general goals of projecting and raising the income in a way that will promote and maintain significant levels of confidence by the community. Societal principles and the possible influence of tax compliance responsibilities are fundamental characteristics of the functioning environment that the management of any country should appreciate to design and implement an efficient compliance treatment process.

2.3.1 Tax Payer Education

The effort by tax authorities and the state in general to educate taxpayers is among the commonly applied initiatives meant to enhance delivery of services to the taxpayers. It believed that making service delivery better is crucial to promote voluntary compliance to tax requirements. Absence of willingness to comply with tax obligations induces income authorities to employ expensive and punitive approaches to enforce tax (Fjeldstad and Ranker, 2003). Therefore, education for taxpayers is a vital instrument formulated to make it possible and easy for the taxpayers to significantly comprehend the rules and regulations of taxation and processes. It concerns with training of specialized components within the income departments, provision of education, counselling and supporting of the tax paying agents. This is carried out through various forms of media that may include newspapers, televised programs, radio programs, websites, workshops, and customer care desks to help fundamentally distribute crucial information to the taxpayers (Siti, Normala & Sheik, 2007).

The influence of knowledge on compliance behaviors has been assessed in various researches. Knowledge as one of the factors in compliance is related to the taxpayers' ability to understand taxation laws, and their willingness to comply. The aspect of knowledge that relates to compliance is the general understanding about taxation regulations and information pertaining to the opportunity to evade tax (Kasipillai, Norhani and Noor, 2003). Taxation knowledge is necessary to increase public awareness especially in areas concerning taxation laws, the role of tax in national development, and especially to explain how and where the money collected is spent by the government (Mohd, 2010). Attitude towards tax compliance can be improved through the enhancement of taxation knowledge. When a taxpayer has a positive attitude towards tax, this will reduce his or her inclination to evade tax payment (Eriksen & Fallan, 2006). Self assessment system (SAS) requires taxpayers to understand all the laws and regulations that govern taxation. This is necessary because taxpayers will have to calculate themselves the amount of tax they need to pay and make the payment (Kasipillai, 2003). Taxpayers will readily accept any new system introduced, like the SAS, if they have ample knowledge to understand the system. Thus, education programs organized by the tax authority or other public education institutions are needed to enhance taxpayers' ability to understand Self assessment system and to increase their confidence in fulfilling their responsibilities as taxpayers (Mohani, 2001).

Greater education is directly linked to a likelihood of compliance. Educated taxpayers may be aware of non compliance opportunities, but their potentially better understanding of the tax system and their higher level of moral development promotes a more favorable taxpayer attitude and therefore greater compliance (Chan et. al. 2000). Chan *et al.*, (2000) also suggested that those with a higher education level are more likely to have a higher level of moral development and higher level attitudes toward compliance and thus will tend to comply more. One of the measures to increase voluntary compliance is by assuring that taxpayers have a certain level of qualifications, ability and confidence to exercise their tax responsibility (Mohani, 2001). Taxpayers who have attended a tax course would be expected to have better tax knowledge and tax compliance attitude in comparison with taxpayers who have never attended a tax course (Mohad, 2010). Further, the study highlighted that tax authority need to emphasize teaching tax courses because of impact of education on compliance.

From the tax administration viewpoint, researchers have concluded that compliance could be influenced by educating taxpayers of their social responsibilities to pay and thus their intention would be to comply. As a behavior problem, tax compliance depends on the cooperation of the public. There are greater gains in assisting compliant taxpayers meet their fiscal obligations rather than spending more resources pursuing the minority of no-compliers. Assisting tax payers by improving the flow and quality of information or education them (e.g., TV campaigns) in to becoming more responsible citizens has the potential to yield greater revenue than if it were spent on enforcement activities. A theoretical economic model introduced by Allingham and Sandmo (2012) has clearly indicated that penalties as well as audit probability have an impact on tax compliance. The higher the penalty and the potential audit probability the greater discouragement for potential tax evasion.

Failure to comply could sometimes be involuntary, meaning that the concerned taxpayer is particularly ignorant of his/her tax responsibilities or totally fails to carry out his/her tax obligations a result of not understanding the established laws of taxation and processes. Non-compliance may also be voluntary, where the potential taxpayer fails to promptly pay his or her tax levies because of compliance attitudes. It is believed that this initiative of enlightening taxpayers will enable them to adequately be familiar with the tax rules, procedures and associated processes and cultivate a friendly environment that will trigger greater tax conformity to the tax procedures (Normala, 2007). The revenue collection authorities have particularly prioritized giving special focus to the SMEs, by making procedures for tax laws simple, associations, initiating yearly taxpayer recognition day, and enhancing integrity in taxation, among the strategies (Kimungu and Kileva, 2007). Tax awareness is more significant when consideration is given to the objective of generating tax income in a more dynamic environment, predominantly from the official tax evaluation perspective (Machogu and Amayi, 2013). Similarly, to achieve compliance to tax obligations and to improve on raising tax income is generally an overwhelming task (Kimungu and Kileva, 2007). However, this challenge reduced to minimal levels when a well structure program of tax education is put place. The important objective of common programs of education is geared towards the change of taxpayer attitude. This being the case, analytical theories of behavioural change and learning theories can best explain how education can change the behaviour of an individual (Erich, 2007).

Change theory is commonly applied to explain change of taxpayer behaviour, this believes that in the unlikely event that challenge relating to attitude prevails, there exist be adaptable elements contributing to the challenge. Examples of the adaptable elements include awareness, beliefs, intents, relational support, administrative and other environmental circumstances. The model believes that education is essential to facilitate change in the adaptable elements, and education for a taxpayer is meant to particularly to improve this attitude. This is achieved by changing the attitude of a taxpayer by influencing the manner in which he or she arrives at decision making (Gardiner, 2001). Education is believed to have a substantial progressive effect on the behavioural change of an individual. Ideally, a number of studies conducted with special emphasis to tax compliance, as pointed out in the empirical literature have put more emphasis on strategies aimed to achieve change of the taxpayer attitude in order to become more compliant with tax management regulations and procedures. Strategies including audits, preventive actions of penalties and fines together with implementation of quality service delivery mechanisms an greatly enhance tax revenues. A handful of studies have put more effort on how tax compliance behaviour is affected by one individual factor holding constant other influencing factors. The results from such studies indicate that there is a significant positive relationship between taxpayer education and the level of tax compliance (Kassipillai, 2003). Taxpayer education provides the necessary tax knowledge to comply with the tax matter and change the perceptions and attitudes towards tax compliance by creating more positive attitudes.

Various researchers have assessed the influence of knowledge on compliance behaviour. The aspect of education being a major factor substantially related to tax compliance influences the taxpayer's capability to perfectly comprehend laws governing the processes and procedures of taxation, and their willingness to comply. The concept of knowledge that greatly concerns itself with adherence to tax requirements is the overall awareness of the taxation rules and any know-how regarding the possibility of loopholes that can permit tax evasion (Kasipillai, Norhani and Noor, 2003). The know-how on Taxation is essential to boost the general public consciousness particularly in aspects that are concerned with rules and regulations for taxation, the core function of tax in the development of a country, and specifically to describe the mode and structure of expenditure of the revenue raised by the government (Mohd, 2010). Advancement in the levels of tax education has the possibility of accelerating the change of taxpayer attitude and make it easier and convenient for adherence to the regulations. If the general feeling of a tax paying agent towards compliance is positive, inclination to non-conformance drastically falls to the minimum. (Eriksen & Fallan, 2006). Self-assessment system (SAS) demands that taxpayers have an understanding of all the rules and procedures that control the management of the taxation system. This will be indispensable to the taxpayers because it will enable them to individually determine their tax liability and make necessary arrangements to pay with the highest degree of convenience. (Kasipillai, 2003). Potential taxpayers will be ready to accommodate new systems that are brought on board, such as the SAS, only when they have adequate information that will facilitate their understanding of the system. Therefore, training modalities developed by the tax agency or any other public institutions of learning are required to promote the ability of the taxpayer to have an understanding of self-assessment systems and to boost their trust in performing their obligations as taxpayers (Mohani, 2001).

Higher level of tax education is directly associated with increased possibility of compliance. Informed taxpayers will always be in a position to detect incidences that may trigger non-compliance. The potentially higher level of know-how regarding the tax regime and that tax payer's greater degree of ethical growth is a recipe for promoting a more progressive taxpayer behavior and consequently lead to lower non-compliance (Chan et. al. 2000). In his recommendations suggested that individuals with enhanced educational background are highly likely to exhibit greater level of ethical maturity and higher level attitudes toward compliance and thus will tend to comply more. One of the measures to increase voluntary compliance is by assuring that taxpayers have a certain level of qualifications, ability and confidence to exercise their tax responsibility (Mohani, 2001). Taxpayers who have attended a tax course would be expected to have better tax knowledge and tax compliance attitude in comparison with taxpayers who have never participated in a tax course (Mohd, 2010). Hite and Hasseldine (2001) highlighted that tax authority needs to emphasize teaching tax courses because of the impact of education on compliance.

2.3.2 Improved Taxpayer Services.

Mikessel (2013) proposes that the fundamental objective for any revenue authority is to have an effectively and efficiently program of program of taxpayer services .The generally complicated guidelines for tax payment together with the vast and raising numbers of potential taxpayers to be taken care of by a taxation program requires that all revenue authorities should depend considerably on taxpayers' tendency to voluntarily comply in order to realize and even surpass the tax level expected of them. It is clear that if a tax authority has to obtain optimum levels of voluntary conformance, taxpayers and their agents must operate within an efficient standard of services to enable understand that it is their duty according to the law to follow the regulations expected of them in the event of fulfilling tax payment responsibility.

Under these concerns, income authorities preferably require a logical approach or system in order for them to be able to arrive at an ideal range of networks for service provision, the one that obtains greater levels of efficiency and at the same time also meets its productivity aims from both the perspectives of the income management authority and the taxpayer at large. The expression "channel strategy" has been devised under the sophisticated present business language to explain such a framework of operation. A channel strategy influences to a large extent the organizational arrangements that include the technical and physical infrastructure, the entire service provision channels, services content, management procedures ,processes and culture. Similarly, besides the internal participants, there exists a body of external participants who most of the time determines as to whether the channel strategies should be for individual customers, businesses, government, tax agents or different user groups (Zodrow, 2001).

2.3.3 Law Enforcement.

Credible enforcement is an integral part of any compliance strategy as it acts not only to deter tax evasion but also to remind taxpayers that the tax collector is working to sustain a fair system of tax by making it possible for every taxpayer to honor their tax liabilities fairly. Efficient tax management often starts with the requirements that are in practice. The law signifies and shapes the structure of the situation or circumstances within which a tax authority works and it is from this environment that we determine the uncertainties related to tax compliance that have a close link with the management of the tax law. The fundamental task for any effective revenue collection body is to manage the law in such a way as to ensure that overall community trust in their administration is sustained.

Some empirical studies have shown that trust nurtures compliance. The only way to obtain confidence in a tax management system is to carry out its activities in a manner that will make it possible for all the interested parties to experience fairness. People's understanding of trust is closely associated with their assessment of the processes with which authorities operate or work (Fjeldstad and Ranker, 2003). The expression ‘procedural justice' conventionally applied to define the professed fairness of the processes and procedures followed in determination of decision, and also the actual treatment an individual gets from the authority responsible for making such a decision. It is established that individuals who perceive that have been subjected to fair treatment by an organization are highly likely to have confidence in such a system and are more likely to appreciate and comply with its decisions and follow its directions. The opinion held by majority of individuals about the fairness of an authority is largely anchored on an individual’s actual experience from past happenings, other people's experiences and media reports (Christina, Debonah, & Gary 2010). Allingham and Sandmo (2012) portrays compliance to tax as an matter of providing true information regarding level of revenue and also goes ahead to assert that compliance responses are largely affected by a situations in which taxpayers have to make crucial tax determinations unclear circumstances i.e. either they may benefit from enhanced tax savings as a result of declaring low income levels or that they may be forced to pay on the misreported low revenue at a fine at a rate expected to be higher than what they would pay if they endeavored to truly declare their full income at the first incident.

It is recommended that the state pursues alternative measures in its quest to improve on the level of tax efficiency and effectiveness (Alm *et al.,* 1992). Therefore, the administration of coercive measures such as fines and other non-compliance costs should be encouraged to minimize further delayed payment of the tax liabilities. It therefore follows that tax audits by tax management agencies should be considered necessary and compulsory, specifically when non-compliance is detected or suspected to have been committed by the tax paying entity be ignorantly or intentionally. The concept non-compliance has always been emphasized by the policy changes geared to punish, such as the regular tax audits and percentage fines (Alm, McClelland, Schulze, 1992). Unfortunately, the theoretical instrument employed could not extensively predict and give a comprehensive account of the taxpayer reluctant attitude and more often refusal to comply with tax payment. Several empirical studies to explain the complex and unpredictable tendency of adherence to tax regulations in more genuine circumstances have been carried out. These studies concerned themselves with the elements that influence compliance or levels of non-compliance. This could be respectively on economic and non-economic elements. Non-financial elements, initially assumed by early economic proponents, are now considered in crucial in helping the understanding of the adherence to tax regulations through the use of an economic structure (Smith and Stalans, 1991). These economists have considered a number of non-economic determinants, that range from the general willingness to honor liability for government provisions, general education, tax attitude, etc. (Hyun, 2005)

From the perspective of tax management, compliance may largely be determined or enhanced by enlightening taxpayers and other stakeholders that it is their public duty to pay tax and consequently, their intentions to comply will greatly be boosted. Being a behavioral initiative, compliance to tax liabilities and the associated regulations, relies to a greater extent the overall support of the general public. Greater benefits are reaped when compliant taxpayers are assisted and enabled to achieve their fiscal obligations instead of an authority spending extra resources to pursue a smaller proportion of the population that fail either voluntarily or involuntarily to comply. By helping tax payers through improved flow and quality of information or educating them (e.g., TV campaigns) as a way of making them become more accountable citizens has the ability to trigger greater yields in terms of revenue than if it were spent on enforcement activities. Allingham and Sandmo (2012) developed a theoretical economic model that essentially proposes that fines, penalties as well as fraud detection possibilities always have a direct influence on taxpayer compliance. It is believed by this model that the greater and punitive the penalty is and the greater the possibility to detect fraud, the higher the level of discouragement to tax evasion behaviors. When heavy costs are imposed on any detected attempt to evade tax, it becomes more expensive for the errant taxpayers and has a greater impact of deterring them from any future attempts of evasion. Empirically, the preventive impact of penalties and fines could not always be supported. The manifestation of this situation is the fact that the negative effects witnessed are weaker than expected and some studies even assert that increased penalties may have disagreeable impact and may lead to greater incidences and preference by taxpayers to evade tax (Kirchler *et al.,* (2007). Alm *et al.,* (2012) in their findings and submissions support the position that costs of tax avoidance greatly affect tax compliance although the experienced impact was nearly insignificant. However, Friedland *et al.,* (2008) proposes that tax compliance is highly influenced by the severity of associated costs such as fines and penalties than as opposed to detection possibilities. The most extreme penalties will have no effect, if it is common knowledge that audits virtually do not occur. The increasing tax avoidance and tax resistance due to an increase of fines puts into question how fines should be assessed to be effective. On the one hand fines should be high enough to decrease the expected value of tax evasion and to assure its deterrent effect on tax payers. On the other hand, if fines are too high, the tax system would be perceived as unjust and unfair and taxpayers would use any possibility to legally avoid taxes (Kirchler *et al.,* 2007).A number of research findings however, have fundamentally failed to with the discouraging effects of fines and termed them as insignificant (Andreoni, 2008).Other related studies have proposed that a policy based on deterrence can only be successful if it is accompanied by regular and thorough tax Audits (Kirchler *et al.,* 2007).

Taxpayers may technically meet their obligations, but compliance may be in question due to interpretational differences of the law. In such circumstances, lack of clarity of the taxation law represents a category of risk to be addressed either by changing the law or by amending the way in which it is administered (Alligahm and Sandmo, 2004). All revenue authorities are appropriated a limited level of resources, invariably well short of what is required to ensure full compliance from every taxpayer as tax liabilities arise. This means that efficient tax administration has to be about optimizing collections under the tax laws in ways that sustain community confidence in the tax authority and in a manner that demonstrates that the system is operating correctly. As a result, revenue authorities require a methodology for determining the most rational allocation of their resources. This is by no means a straightforward proposition (Machogu and Amayi, 2013). The objective of tax administration may be consistent with optimizing collections under the law and increasing the levels of voluntary compliance in ways that sustain community confidence, but the means to achieving it are not. Success is founded on innovation and cooperation in understanding the marketplace, recognizing differences and devising approaches accordingly (Dicleson & Hadjimanolis, 2008).

The observations above suggest that authority should treat citizens fairly and respectfully, listening to them and providing clear explanations for different actions. Treatment must also be even-handed and consistent: the perception that one group has been dealt with more or less favorably than another will rapidly undermine trust (Siti, Normala, Sheik & Obid, 2007). The perception that authority is trustworthy (or untrustworthy) has also been shown to be a function of whether the agency trusts (or distrusts) those from whom they are demanding cooperation and compliance. If those to be regulated are treated as trustworthy, they will be more likely to repay this respect by voluntary compliance with ethical requirements. A basic conclusion is that the behaviour of the revenue authority should be considered as a part of the overall treatment strategy for influencing taxpayer behaviour. Each encounter with a taxpayer provides an opportunity for the agency to strengthen the loyalty and support of members of the public. Trust is a resource like no other; it is not depleted through use but rather through lack of use.

2.3.4 Technology adoption

Use of technology to file tax returns involves the process of forwarding tax information to a revenue authority electronically, often excludes the practice of having to submit paper documents. Currently, filing of tax returns by electronic systems is a government application that is being utilized with increasing frequency all over the world. Such arrangements are in particular useful for governments since they have the ability to reduce and even avoid the mistakes commonly committed by taxpayers during manual filings. They also fundamentally help to deter attempts to evade tax through data matching. (Machogu & Abayi, 2013) suggest that the data base developed using electronic tax filings can allow tax inspectors to analyze declarations more thoroughly, and enable policymakers to develop fairer and more efficient policies

All along, services by the government have always followed bureaucratic systems of management both in the third world economies and the developed nations. The principles of Weberian bureaucracy comprise of elements such as systematized hierarchy, establishment of uniform and objective approaches, proper division of labour and duty, and effectiveness in every aspect of processes. Every country has a bureaucratic state apparatuses; and besides the fact that the principles of bureaucracy aggressively motivate a number of commercial institutions, their effectiveness varies greatly (Palmer, 2002).

But Okello (2001) states that whatever the level of effectiveness 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, e-government can facilitate public service offerings in a truly standard, impersonal, efficient, and convenient manner for both the service provider (the government) and service recipients (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. For web-based information systems to remain useful, they must contain new, enhanced attributes. There are several success criteria for a website depending on the variety of goals such as selling, informing and advertising. The authors further argue that website success is audience specific and it should take account of diverse perspectives of users and owners. It should be noted that sometimes these perspectives might be even competing. For example, in electronic tax filing systems, users are usually unenthusiastic to pay tax and the site owner (government) is eager to collect it (Machogu&Abayi, 2013).

In their study of electronic tax filing system in Taiwan, Fu, *et al.*,, (2006) extend the technology acceptance model (TAM) to include the Theory of Planned Behaviour parameters as subjective norms, self-efficacy, resource facilitating conditions and techniques facilitating conditions. In yet another study, the same authors (Fu, *et al.*,, 2004) compared user satisfaction with the three methods of tax filing (manual, a two-dimensional barcode, Web-based) in Taiwan. According to such parameters as ease of data entry, correction, operation, learning and data submission, explanation completeness, filing form neatness and total deposition time.

According to Palmer (2002) electronic tax filing systems can be evaluated regarding usability, design and performance including download delay, navigability, site content, interactivity, responsiveness, and user satisfaction, the likelihood of a return to the website and frequency of use. 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 filings' 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 three weeks (Palmer, 2002). 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 to a tax refund can apply for an immediate bank loan equal to the expected IRS check. As a result, a customer could receive the rebate (less bank and preparer fees) within three days of the filing (Machogu & Amayi, 2013).

2.4 Conceptual Framework.

Aggregate revenue of a major tax type (personal income tax, VAT, customs, etc.) is typically forecast by the expected growth in the tax base of the particular type of tax. This is assuming that the rate structure stays the same (or that there are no discretionary changes in the tax rate structure). For budgeting purposes, these forecasts form the base case revenue before discretionary tax measures are considered. The results of these macro-models also enter into the monthly receipts forecasting models.

In addition to a static tax structure, these forecasts also assume that there are no significant changes in the effectiveness of tax administration or tax compliance and that the structure of the economy is not changing in a way that affects tax yields. For example, the composition of consumption and imports remains relatively constant such that there is no significant shift towards, or away from, high tax rate goods or services. In general, the macro- or GDP-based forecasts are considered static forecasts in that they do not take into account any of the dynamic interactions that may be occurring between components of an economy as relative prices change over time. In most cases, such interactions are of the second order of magnitude, or have offsetting effects, and do not affect the results substantially. Care has to be taken, however, to look for major structural changes in an economy that may be occurring and causing significant shifts in the tax base. Two approaches can be used in macro- or GDP-based forecasting. The first approach is to estimate the growth in revenue that accompanies real economic growth (or growth in a macro proxy to the tax base) without any change in the tax structure (base, rates or exemptions.) This estimates the tax elasticity, and if the tax elasticity exceeds unity, then tax revenue tends to grow faster than economic growth, and conversely if the tax elasticity is less than unity. To estimate the tax elasticity of a tax type requires time series data.

From the reviewed literature, it is evident of the existence of is a positive causal connection relating tax compliance to tax revenue. As used in the current study, the relationship between revenue and the variables of concern can be presented in a general form as:

Tr =f(TE, TS, CLE, T)……………………………………………………….(2.1)

The primary function can be interpreted as saying that with increased taxpayer education (TE), taxpayer services (TS), credible law enforcement (CLE) and adoption of technology (T), tax compliance will go up and this will translate into increased tax revenue.

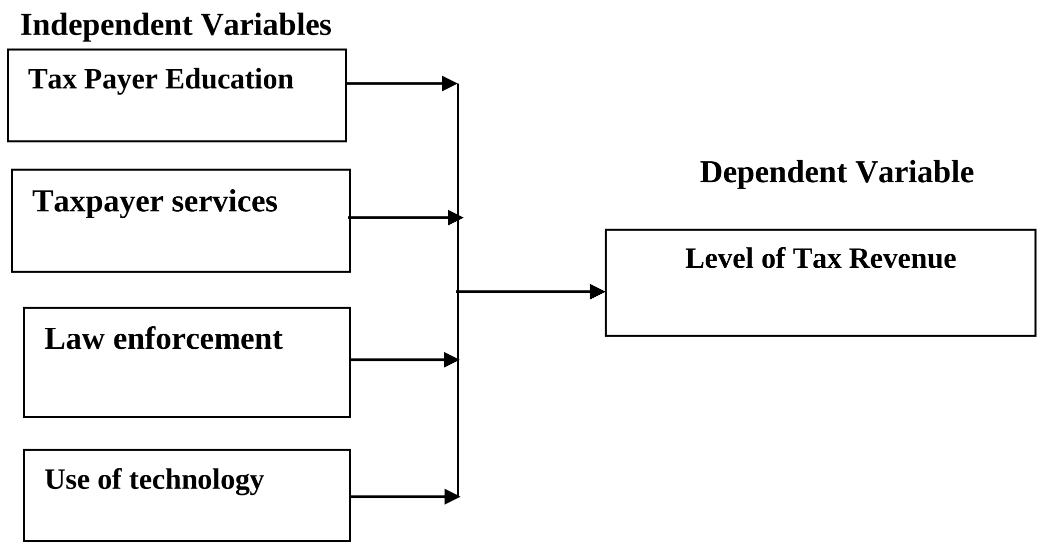

Figure 2.1: Effects of Tax Compliance Strategies on Tax Revenue

Source: (Author, 2018).

One of the strategies for enhancing voluntary tax compliance so as to increase tax revenue is to improve service delivery. Incidences of failure by the taxpayer to willingly comply with the required tax regulations forces the income management agencies to resort to rather expensive and punitive measure to ensure compliance is achieved and sustained. Provision of education to Taxpayers is one the mechanisms employed to assist taxpayers get a significant understanding of the tax requirements, processes and procedures. This approach concerns itself with teaching of expert divisions within the income sections for providing education, counselling and assistance to the taxpayers. This is particularly done through a variety of channels of communication that includes newspapers, television, radio programs, websites, seminars, and front desk to facilitate effective communication and sharing of crucial information to the taxpayers. An effective and efficient program of taxpayer service activities is a critical objective of all revenue bodies. The commonly perceived difficulty of laws related to taxation accompanied with a vast and ever rising number of potential and active taxpayers to be served, has an implication that revenue authorities should rely significantly on taxpayers' willingness to honor his or her tax obligations as a precondition to realizing their desired revenue results. Consequently, taxpayers together with their associates need to be exposed to better levels of services in order for them to be able define their responsibilities as the law requires and to implement procedures necessary to achieve or fulfil their obligations.

Credible enforcement is an integral part of any compliance strategy as it acts not only to deter tax evasion but also to remind taxpayers that the tax collector is working to sustain a fair system of tax by making it possible for every taxpayer to honor their tax liabilities fairly. The law signifies and shapes the structure of the situation or circumstances within which a tax authority works and it is from this environment that we determine the uncertainties related to tax compliance that have a close link with the management of the tax law. The fundamental task for any effective revenue collection body is to manage the law in such a way as to ensure that overall community trust in their administration is sustained. Administration begins with the law in place which should be administered in a manner that sustains community confidence in their management. Electronic tax filing, or e-filing, is a system for submitting tax documents to a revenue service electronically, often without the need to submit any paper documents. Electronic tax filing systems are an e-government application that is being utilized with increasing frequency all over the world. Such systems are particularly favorable for governments because they avoid many of the mistakes taxpayers make in manual filings, and they help to prevent tax evasion by data matching.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the research design, theoretical framework, the empirical model and estimation techniques used in the study. Furthermore, the chapter describes data types, sources, definition, measurement and how the data was analyzed.

3.2 Research design

The study adopted a non-experimental research design. Data was collected for different expenditures on tax compliance strategies from 1980 to 2015 in Kenya. The variables of interest were expenditures on taxpayer education, taxpayer services, law enforcement, and technology and government tax revenue. The data sources included the CRA and KRA publications. Least squares estimators are used to estimate the empirical model.

3.3 Theoretical Framework

The study adopted the economic deterrence theory which points out that tax compliance depends on tax rate which determines the benefit of evasion, the probability of detection and the penalties that applied to fraud. According to this theory tax compliance (Tr) is a function of expenditure on credible law enforcement in (CLE), information on penalties and tax evasion benefits (TE) as shown in equations 3.1. Therefore, the theoretical model is given by;

Tax compliance (Tr) = f (CLE, TE)………..………………………………………… (3.1)

Where:

Tr is tax revenue; while CLE is credible law enforcement and, TE is tax payer education.

In equation (3.1), tax compliance can be measured using government tax revenue. The government tax revenue is a good indicator of tax compliance as high compliance will lead to more tax revenue while low compliance will lead to low tax revenue. Therefore, tax revenue and tax compliance are expected to be positively correlated. On the other hand, the expenditure on law enforcement can increase the tax compliance by increasing the risk of tax avoidance. Therefore, expenditure on law enforcement can be used to indicate whether law enforcement is credible or not. Furthermore, the amount of information on penalties and benefits of tax evasion will depend on the expenditure on the taxpayer education. The higher the expenditure on taxpayer education the more the number of taxpayers who understand and appreciate the risk of tax evasion leading increased compliance and consequently tax revenues.

3.4 Empirical Model

The empirical model adopted by the study was derived from equation (3.1). From the literature review, other factors that affect tax compliance include services offered to tax payers (TS) and use of technology for tax administration (T). Inserting these factors in equation 3.1 yields the empirical model to be estimated.

$$TR = f\,(CLE, TE, TS, T) \qquad (3.2)$$

Where TR is government tax revenue, CLE is expenditure in law enforcement, TE is expenditure on taxpayer education, TS is the expenditure on services offered to taxpayers, and T is expenditure in technology used in tax administration.

To determine the effect of each factor on tax revenue, equation (3.2) will be modified, to include an error term that captures other factors that are not included in the model. The econometric model estimated to answer the research questions is given by;

$$\mathrm{TR_t} = \beta_0 + \beta_1\mathrm{CLE_t} + \beta_2\mathrm{TE_t} + \beta_3 TS_t + \beta_4 T_t + \varepsilon_t \quad \ldots\ldots \quad (3.3)$$

Where ε_t is error term. The coefficient of expenditure on law enforcement, taxpayer education, and services offered, and use of technology in tax administration is expected to be positive. Equation (3.3) is estimated using OLS and it gives the long run relationship between government tax revenue and expenditure on law enforcement, taxpayer education, services offered, and tax administration.

Several diagnostic tests were done to ensure estimated coefficients are consistent. Breusch-pagan test was used to test for heteroscedasticity and multicollinearity, Variance Inflation Factor method is used. When the error term in equation (3.3) is found to be heteroscedastic, robust standard errors is used. Since data is in form of time series, the study tested for serial autocorrelation. The Jarque-Bera test was also conducted to test normality for the error term.

3.4.1 Testing for Stationarity (Unit root Test)

Most time series data exhibit non-stationary. It occurs when the mean and the variance of the time series data is not constant over time and hence it is impossible to interpret the results of OLS. Therefore, unit roots test was done to avoid the problem of the non-stationarity, as it leads to spurious results. The study used Augmented Dickey-Fuller (ADF) test to test for stationarity.

3.4.2 Variance Decomposition

The variance decomposition show what percentage of the variation in a series is due to its own shocks and other variables in the model at the present and future periods (Enders, 2004). The study used variance decompositions to study the importance of shock or innovation in tax compliance strategy in relation to tax revenue.

3.5 Definition and Measurement of Variables

Table 3.1 below shows the variables, their symbols and how they are measured

Table 3.1 Variables used in the Model

Variable	**Definition**	**Measurement**
Tax revenues (TR_t)	Increase in real government tax revenue (GDP) Comparing consecutive periods	yearly tax revenue as given in the economic survey at time t in Kshs.
Taxpayer education (TE_t)	Real expenditure on taxpayer education in (Ksh) comparing consecutive periods	yearly expenditure on taxpayer education as given in the economic survey at time t in Kshs.
Improved taxpayer services (TS_t)	Real expenditure on improving taxpayer services in (Ksh)comparing consecutive periods	yearly expenditure on taxpayer services as given in the economic survey at time t in Kshs.
Law Enforcement (LE_t)	Real expenditure on instituting tax compliance laws (Ksh) Comparing consecutive periods	yearly expenditure on tax compliance laws as given in the economic survey at time t in Kshs.
Technology (T_t)	Real expenditure on adoption of technology in taxation in (Ksh) comparing consecutive periods	Yearly expenditure on technology as given in the economic survey at time t in (Kshs).

(Source: Author, 2018).

3.6 Data Type, Source and Collection

The study used time series data of Kenya government tax revenue collected for the period 1980 to 2015. The data sources included CRA and KRA publications and Economic surveys. The data on expenditure on taxpayer education, taxpayer services, law enforcement and on technology was extracted from the publication and cleaned using Excel spreadsheet. Data on tax revenue was extracted from economic surveys.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents the findings and discussions of the study. It presents the descriptive statistics, time series properties, diagnostic test and the results of the study.

4.2 Descriptive Statistics for the Variables

In time series analysis, descriptive analysis of data enables us to determine the variability of data so as to determine if the time series are susceptible for further statistical analysis. Table 4.1 shows the descriptive statistics (in millions).

Table 4.1: Descriptive Statistics

	Observations	Mean	Std. Deviation	Minimum	Maximum
Taxpayer Education	36	37.22	9.57	20.00	49.00
Taxpayer Services	36	29.06	7.44	16.00	38.00
Credible Law Enforcement	36	62.50	16.11	34.00	82.00
Adoption of Technology	36	76.33	19.65	42.00	101.00
Tax Revenue	36	304,007.70	277,272.80	66,260.00	1,008,671.00

(Source: Author, 2018).

From Table 4.1 it can be seen that the mean of government expenditure on taxpayer education was KES 37.22million with a standard deviation of KES 9.57million. The largest expenditure on taxpayer education was KES 49.00 million and the lowest was

KES 20.00 million. The mean expenditure on taxpayer services was KES 29.06 million with a standard deviation of KES 7.44 million. The largest and the smallest expenditure on taxpayer services were KES 38.00 million and KES 16.00 million respectively. On the other hand, the expenditure on law enforcement by the tax authority was KES 62.50 million with a standard deviation of KES 16.11 million. The respective largest and smallest values were KES 82.00 million and KES 34.00 million.

The expenditure on the adoption of technology had a mean of KES 76.33 million with a standard deviation of KES 19.65million. The largest and the smallest expenditure on adoption of technology were KES 101.00 million and KES 42.00 million respectively. Lastly, the mean of tax revenue collection by the tax authority was KES 304,007.70 million with a standard deviation of KES 277,272.80 million. The largest and the smallest tax revenue were KES 1,008,671.00 million and KES 66,260.00 million respectively. From the descriptive analysis of the time series above, it is evident that the time series are variable and can be subjected to further statistical analysis.

4.3 Pre-Estimation Tests

Before conducting the analysis, several pre-estimation tests were conducted. These included unit root test and correlation analysis.

4.3.1 Stationarity Test

To test for Stationarity, Augmented Dickey-Fuller (ADF) test was used. To conduct the ADF test, equation (4.1) was used.

$$\Delta Y_t = \alpha + \beta_t + \rho Y_{t-1} + \quad {}_{i=1}^{k} \delta_i \Delta Y_{t-1} + \mu_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 4.1$$

The null and alternative hypotheses of the ADF test were;

H_0: ρ = 0 (Non-stationary)

H_1: ρ < 0. (Stationary)

If the computed t-statistics is greater than the asymptotic critical values in absolute term, the null hypothesis is rejected and the study concludes that the series is stationary (Gujarati, 2004).

Table 4.2: ADF Unit Root Test Results

		Tax revenues	Credible law enforcement	Taxpayer education	Taxpayer services	Adoption of Technology
Constant	t-Statistic	4.1876	-1.7167	-1.7167	-1.7167	-1.7167
	Prob.	1	0.4143	0.4143	0.4143	0.4143
	Conclusion	Non-stationary	Non-stationary	Non-Stationary	Non-stationary	Non-Stationary
Constant & Trend	t-Statistic	0.6667	-6.4338**	-6.4338**	-6.4338**	-6.4338**
	Prob.	0.9994	0.0000	0.0000	0.0000	0.0000
	Conclusion	Non-Stationary	Stationary	Stationary	Stationary	Stationary

****** *Indicates stationary at 5% level of significance*

(Source: Author, 2018).

From the ADF test at level, credible law enforcement, taxpayer education, taxpayer services and adoption of technology are stationary at 5 percent level of significance. Therefore, using the ADF test the null hypothesis for the presence of a unit root was rejected at 5 per cent level of significance. However, the presence of a unit root was not rejected at 5 per cent level of significance for tax revenue, and hence was non-stationary. For tax revenue, ADF test was done at first difference. Table 4.3 shows the ADF test results for all variables differenced once. The table shows that at first difference, all variables are stationary.

Table 4.3: 1st Difference using ADF Stationarity Tests Results

At First Difference		
		Tax revenues
Constant	t-Statistic	-3.6789**
	Prob.	0.0091
	Conclusion	Stationary
Constant & Trend	t-Statistic	-5.2654**
	Prob.	0.0007
	Conclusion	Stationary

***** stationary at 5% levels of significance.***

(Source: Author, 2018).

The 1st difference of tax revenues is stationary at 5 percent level of significance. Therefore, tax revenues are integrated of order I (1).

4.3.2 Correlation Analysis

In regression analysis, multicollinearity tends to inflate the standard errors which affect the hypothesis testing. To test for multicollinearity between the variables, correlation analysis was done and variables with a correlation coefficient greater than 0.8 are deemed to be collinear. Table 4.4 shows the results of correlation analysis.

Table 4.4 Correlation Results

	Taxpayer Education	Technology adoption	Law Enforcement	Taxpayer Services	Tax Revenue
Taxpayer Education	1.0000				
Technology adoption	-0.0929 (0.5955)	1.0000			
Law Enforcement	-0.0805 (0.6457)	-0.0258 (0.8832)	1.0000		
Taxpayer Services	0.1460 (0.4025)	-0.5360 (0.1119)	-0.2567 (0.1366)	1.0000	
Tax Revenue	-0.0213 (0.9035)	-0.1111 (0.5253)	0.2113 (0.223)	-0.0249 (0.887)	1.0000

Significance level in the bracket and Variables in logarithms

(Source: Author, 2018).

Table 4.4 shows that the variables of the study are not highly correlated. None of the variables have correlation of 0.8 or higher. Tax revenue is positively correlated with law enforcement while it is negatively correlated to taxpayer education, adoption of technology and tax payer services. Taxpayer education is positively correlated to taxpayer services but negatively correlated to adoption of technology, law enforcement and tax revenues. Adoption of technology is negatively correlated to law enforcement, taxpayer services and tax revenues.

4.4 Regression Analysis

The study estimated the effect of the expenditure on law enforcement, log of expenditure on taxpayer education, log of expenditure on taxpayer services, log of expenditure on use of Technology on the log of tax revenue. The regression output is presented in table 4.5.

Table 4.5: Regression Output Summary for Tax Revenues on Various Variables

Dependent Variable: Tax Revenue			
Independent Variable	Coefficient	t-Statistic	Prob.
Expenditure on Taxpayer Education	0.021043	0.570446	0.0005**
Expenditure on the Use of Technology	0.246333	3.979523	0.0005**
Expenditure on law Enforcement	0.003128	18.87002	0.0000**
Improved Taxpayer Services	0.182391	-1.432906	0.1638
Adjusted R-squared: **0.681577**			
Durbin-Watson statistics: **1.911331**			
F-Statistic **12.82431**			
Probability (F-statistic) **0.000012**			

(**) indicates that the effect is significant at 5%. The variables are in logs.

(Source: Author, 2018).

From Table 4.5, the variations in the independent variables jointly explain about 68.2 per cent of the variations in tax revenue in Kenya. This is shown by the adjusted R-squared of 68.2 per cent. The remaining 31.8 per cent of the variations in tax revenue in Kenya could be attributed to variables that are not captured in the model.

From Table 4.5, the coefficient of expenditure on the use of technology is 0.246333 and it has p value of 0.0005. This shows that the variable is significant at 5 per cent. The coefficient indicates that when the tax authority increases its expenditure on the use of technology in tax collection by 100 percent, the tax revenue increases by 24 percent. These findings are concurrent with the findings of Machogu & Amayi (2013) which argue that investments in technology by the tax authority increase tax revenues. It is also in agreement with the findings of Okello (2001) which argues that the ability of citizens to access government services anytime, anywhere helps to mitigate the transaction costs inherent in all types of government services and the findings of Palmer (2002) which argues electronic tax filings shortens the time for refunds from an average of 12 weeks to about 3 weeks thus enhancing the efficiency of tax collection.

As for the Expenditure on law Enforcement, the coefficient was found to be positive 0.003128 with a probability value of 0.0000. It was thus concluded that Expenditure on law Enforcement is highly significant at 5 percent. The magnitude implies that when the Expenditure on law Enforcement increase by 100 percent, the tax revenue to the government increases by about 0.3 percent. These findings are in agreement with the findings of Siti, Normala, Sheik & Obid (2007) which argues that paying taxes is a disincentive and must be enforced if sufficient tax revenue has to be raised from the taxpayers.

From regression results, the coefficient of Expenditure on Taxpayer Education is positive 0.021043 and it has a probability value of 0.0005. Therefore, the coefficient is significant at 5 percent. This finding are consistent with the findings of Allingham and Sandmo (1972) and Becker (1968) which found that governments should sensitize the people on matter relating to tax payment and tax compliance to increase the tax revenue From the study findings, we can conclude that Expenditure on Taxpayer Education has a significant effect on the tax revenues in Kenya. The implication of this is that the government should pay close attention to tax education to enhance awareness in order to ensure that higher levels of tax revenue are realized.

However, the spending of the tax authority on Improved Taxpayer Services is found not to be statistically significant in explaining the variations in tax revenue in Kenya. These findings are in contrast with the results of Mikessel (2013) which found out that an effective and efficient program of taxpayer service activities is a critical objective of all revenue bodies. The overall complexity of tax laws coupled with the relatively large populations of taxpayers to be served means that all income agencies must rely substantially on taxpayers' voluntary compliance to achieve the outcomes expected of them. It is axiomatic that to achieve high levels of voluntary compliance, taxpayers and their representatives must have a good standard of services to help them determine their obligations under the laws and to complete the steps required to acquit those obligations.

4.5 Post Estimation Diagnostic Tests

One model was estimated by OLS and the residual were tested for normality, serial correlation and heteroscedasticity. The model dependent variable was tax revenue while independent variables log of expenditure on taxpayer education, log of expenditure on the use of technology, log of expenditure on law enforcement, log of expenditure on improved taxpayer services.

Table 4.6: Normality test, Heteroscedasticity, and Serial Correlation

Type of test	Test Statistic	Values
Histogram-Normality Test	Jarque-Bera	0.009001
	Probability	0.995510
ARCH LM Test	P-value of the Observed* R-Squared	1.995156
	Probability of Chi-square	0.7366
Breusch-Godfrey LM test for Serial Correlation	F-statistic	1.919537
	Probability	0.3830

(Sources: Author, 2018).

Residual based tests were conducted to test for the normality and presence of heteroskedasticity and autocorrelation. The results of these tests are reported in table 4.6.

The Jarque-Bera statistic from the histogram-normality test was 36.75279 with a p-value of 0.995510. The probability value was greater than 0.05 and so the null hypothesis of normality of the regression residuals could not be rejected at 5 per cent significance level. Conclusion was thus made that the regression residuals from the estimated equation followed a normal distribution.

The study tested for the presence of autocorrelation for the estimated equation by the use of the Breusch-Godfrey langrage multiplier test. This method is due to Breusch (1978) and Godfrey (1978) is capable of handling higher order autocorrelation (Gujarati, 2004; Greene 2008). As shown in table 4.6, the higher probability values for the Observed R-Squared for the Breusch-Godfrey tests showed that the null hypothesis of no serial correlation in the models could not be rejected. This implies that there was no serial correlation in the residual series from the regression.

Autoregressive conditional heteroskedasticity (ARCH) is said to be present in the case where the magnitude of the regression residual is related to that of the recent residuals. If this occurs, there would be an estimation efficiency loss (Greene, 2008). The LM test for no ARCH was conducted and it included up to fifth lagged value of residuals per equation. For both of the equation, the p-value of the Observed* R-Squared was found to be greater than 0.05. The null hypothesis could not be rejected at 5 per cent significance level implying that each of the residuals series exhibited no heteroskedasticity problems.

4.5.1 Model Specification and Stability Tests

Table 4.7: Ramsey RESET Tests Results for the Model

Dependent Variable	No. of terms	Test statistic		Conclusion
		F-statistic	Prob.(F-stat)	
Tax revenues	1	0.203192	0.6560	No misspecification error evidence
	2	0.114465	0.8923	

(Source: Author, 2018).

Regression Specification Error Test (RESET) was proposed by Ramsey (1969) to determine the departure from the classical linear regression assumptions. The preceding sections entailed a discussion on the individual tests such as normality tests, heteroskedasticity tests and serial correlation. All the three tests pointed out the models are statistically sound. To detect specification errors in an equation which could have been wrongly specified but nevertheless gives satisfactory conventional tests, Ramsey and Alexander (1984) proposed RESET as a general test for omitted variables alongside correlation between the explanatory variables and the error term and incorrect functional form. The Ramsey RESET test was conducted for the estimated model. The p-values of the F-statistic was greater than 0.05. Therefore, the null hypothesis that the coefficients of the fitted values were all zero at 5 percent level of significance was not rejected. Based on the result it was concluded that there was no specification errors in the model.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary and Conclusions

This study was conducted to establish the effects of tax compliance strategies on the level of tax revenue in Kenya. Specifically, it aimed to: establish the effect of taxpayer education on the level of tax revenue in Kenya; determine the effect of improved taxpayer services on the level of tax revenue in Kenya; assess the impact of law enforcement on the level of tax revenue in Kenya; and determine the effect of the use of technology on the level of tax revenue in Kenya. The motivation for conducting the study was the fact that while the government of Kenya has over time pursued a battery of policy measures to realize higher tax productivity, over the years, the government has run deficit budgeting.

The study used secondary sources of data on all the variables for the period 1980 to 2015. One empirical model was estimated corresponding to the study objectives. Diagnostic tests including residual property tests, stability and normality tests were conducted on the model emanating from the estimation before their adoption. The test results regarding their statistical appropriateness helped to qualify the model.

The results of the study show that expenditure by the tax authority on the use of technology has a positive effect on the tax revenue. On a similar note, expenditure on law enforcement and the expenditure on taxpayer education are also found to be highly significant in explaining variations in tax revenue. The relationship between the three was positive which implies that as the tax authority increases its expenditure on law enforcement, it is expected that its revenues will grow. Contrary to these findings was the fact that the study found that the expenditure of the tax authority on Improved Taxpayer Services is not significant in explaining the variations in tax revenues.

The three variables, spending by the tax administration on the use of technology, the expenditure on law enforcement and the expenditure on tax education had positive and statistically significant coefficients. This means that as Kenya's tax authority increases its expenditure on purchase and acquisition of technology, on law enforcement and sensitization, it is likely to realize more in revenue.

5.2 Policy Recommendations

This section discusses the implications of the findings of this study for policy. First, the study found a positive relationship between the expenditure on purchase and acquisition of technology and the tax revenue that Kenya's tax authority collected in any given year. The implication of this is that technology enhances the efficacy of tax collection. Thus, the government should spend more on acquiring technology which will help in the administration of the tax system. This is in agreement with the findings of (Machogu & Abayi, 2013) who argue that electronic tax filing systems are particularly favourable for governments because they avoid many of the mistakes taxpayers make in manual filings, and they help to prevent fraud by data matching. The data houses developed using electronic tax filings can allow tax inspectors to analyze declarations more thoroughly, and enable policymakers to develop fairer and more efficient policies.

Secondly, the study found that there is a positive relationship between the expenditure by the tax authority on law enforcement and the tax revenue collected. The implication of this is that the government should continue to up its tax compliance enforcement efforts. This will help it curb tax evasion and underreporting which may lead to low tax revenue realization. Credible law enforcement is an integral part of any compliance strategy as it acts not only to deter tax evasion but also to remind taxpayers that the tax collector is working to maintain the fairness of the tax system by ensuring that all pay their fair share. Administration begins with the law in place. The law represents a component of the context or environment in which a revenue authority operates and it is from this environment that we discern the compliance risks associated with the administration of the law. The challenge for revenue agencies is to administer the law in a manner that sustains community confidence in their administration.

It is further recommended that the state pursues alternative measures in its quest to improve on the level of tax efficiency and effectiveness Therefore, the administration of coercive measures such as fines and other non-compliance costs should be encouraged to minimize further delayed payment of the tax liabilities. It therefore follows that tax audits by tax management agencies should be considered necessary and compulsory, specifically when non-compliance is detected or suspected to have been committed by the tax paying entity be ignorantly or intentionally. The concept non-compliance has always been emphasized by the policy changes geared to punish, such as the regular tax audits and percentage fines.Unfortunately, the theoretical instrument employed could not extensively predict and give a comprehensive account of the taxpayer reluctant attitude and more often refusal to comply with tax payment. Several empirical studies to explain the complex and unpredictable tendency of adherence to tax regulations in more genuine circumstances have been carried out. These studies concerned themselves with the elements that influence compliance or levels of non-compliance.

Thirdly, the study found that there is a positive relationship between expenditure by the tax authority on tax education and tax revenue collected. The implication of this is that the government should continue to up its taxpayer sensitization efforts. This will help to enlighten and emphasize to the citizenry that tax payment is an obligation to all. Taxpayer education program is one of the strategies of improving service delivery to the taxpayers. Improving service delivery is critical to enhancing voluntary tax compliance. Thus, taxpayer education should be designed to enable taxpayers to understand tax laws and procedures.

Non-compliance may be unintentional, where the taxpayer is not aware of his/her tax obligations or fails to fulfill his/her tax obligations due to ignorance of tax laws and procedures; or intentional, due to the compliance attitudes. It is expected that tax education will enable the taxpayer to understand tax laws and procedures and create a positive tax compliance attitude and should be directed towards behavioral change.

5.3 Areas of Further Research

The study sought to establish the effects of tax compliance strategies on the level of tax revenue in Kenya. The findings emanating from the study point out to the fact that the use of technology, law enforcement and tax education practices are healthy for the authority of income to realize high tax revenues. The study has recommended that the government should scale up its expenditure on these avenues. However, the study fails to determine a cap on the expenditure. Further studies should seek to determine the optimal expenditure that will ensure that the highest possible tax revenue is realized. For instance, such study should give a tradeoff between tax revenues and the respective expenditures on technology use, education and law enforcement. This is because, from economic theory, there must be a limit beyond which expenditure on these items can turn out to be counterproductive.

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APPENDICES

APPENDIX 1: DATA

Table A1: Time Series Data Used in the Study

Year	Taxpayer Education	Taxpayer Services	Credible Law Enforcement	Adoption Of Technology	Tax Revenue
1980	20,352,688	15,875,097	34,192,516	41,723,011	77,798,694,856
1981	20,516,823	16,003,122	34,468,262	42,059,487	76,358,417,536
1982	22,685,244	17,694,490	38,111,209	46,504,749	71,615,096,886
1983	22,868,189	17,837,187	38,418,558	46,879,788	66,259,748,315
1984	23,052,610	17,981,036	38,728,385	47,257,850	70,177,982,506
1985	25,489,038	19,881,449	42,821,583	52,252,527	70,943,075,425
1986	25,694,594	20,041,784	43,166,919	52,673,919	82,998,402,296
1987	25,901,809	20,203,411	43,515,039	53,098,708	98,672,230,457

1988	28,639,368	22,338,707	48,114,139	58,710,705	106,000,184,643
1989	28,870,331	22,518,858	48,502,156	59,184,178	104,148,413,515
1990	29,103,156	22,700,462	48,893,302	59,661,470	112,030,125,497
1991	32,179,065	25,099,671	54,060,830	65,967,084	143,660,548,424
1992	32,438,574	25,302,088	54,496,804	66,499,077	151,107,496,710
1993	32,700,175	25,506,137	54,936,295	67,035,359	86,079,105,124
1994	36,156,253	28,201,878	60,742,505	74,120,319	106,760,676,960
1995	36,447,836	28,429,312	61,232,364	74,718,064	185,398,348,817
1996	36,741,770	28,658,581	61,726,174	75,320,629	190,897,646,674
1997	40,625,004	31,687,503	68,250,006	83,281,257	210,667,815,391
1998	40,952,625	31,943,047	68,800,409	83,952,880	212,247,646,467
1999	41,282,888	32,200,652	69,355,251	84,629,920	208,327,

					906,243
2000	45,646,071	35,603,936	76,685,400	93,574,447	213,845,694,482
2001	46,014,185	35,891,064	77	94,329,079	231,563,559,737
2002	46,385,267	36,180,508	77,927,249	95,089,798	227,384,969,714
2003	46,759,342	36,472,287	78,555,694	95,856,651	234,981,230,123
2004	47,136,433	36,766,418	79,189,208	96,629,688	273,183,265,171
2005	47,516,566	37,062,921	79,827,831	97,408,960	349,845,111,890
2006	47,899,764	37,361,816	80,471,603	98,194,516	391,036,238,155
2007	48,286,052	37,663,121	81,120,568	98,986,407	484,547,015,639
2008	48,675,456	37,966,856	81,774,766	99,784,685	573,016,083,651
2009	49,068,000	38,273,040	82,434,240	100,589,400	575,507,970,791
2010	42,213,000	32,926,140	70,917,840	86,536,650	629,328,410,902

2011	43,057,260	33,584,663	72,336,197	88,267,383	669,060,185,080
2012	43,918,405	34,256,356	73,782,921	90,032,731	800,431,299,317
2013	44,796,773	34,941,483	75,2[illegible]	91,833,385	868,653,388,680
2014	44,357,589	34,598,920	74,520,750	90,933,058	981,073,037,056
2015	45,244,741	35,290,898	76,011,165	92,751,719	1,008,670,955,80