

**EFFECT OF REVENUE AUTOMATION ON COMPLIANCE OF RATE
PAYERS IN NAIROBI CITY COUNTY**

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Migration from the traditional manual to automation assist in revenue collection that a county government cannot run away from if they are to achieve improvement in efficiency, effectiveness, efficient and clear means of revenue collection. Technology has been embraced both locally and internationally in the day to day running of business. Through technology it has affected how human being interacts with others, work and play. It has resulted to efficiency of revenue administration, better taxpayer services and ensuring tax compliance is increasing at both developing and developed counties (Dowe, 2008).

The key theory anchoring this study is the theory of ability to pay developed by Smith and Pigou (1903). The theory requires that burden of the overall tax should be spread among individuals depending on their ability to bear and it is frequently recognized principle of justice or equity in taxation since citizens pay taxes to a country according to their financial capacity. Another theory to be utilized in the study is the benefit received theory advanced by Wicksell (1896) and Erik Lindhi (1919).The theory states that the country imply taxes on persons depending on the benefit received from the county. The more an individual receives benefit from the government higher the rates payable. The final theory employed in the study is the optimal taxation theory developed by Frank Ramsey (1927) which argues that tax system chosen should be one that is able to make the most out of social welfare role when subjected to an economic constraint, and further contends that a ratepayer system should be picked depending on a social welfare limit subject to a game plan of prerequisites.

According to Amina (2013), revenue automation increases accountability and makes it easy to supervise the staff collecting revenue. The modern use of revenue collection in Nairobi city County government will enhance efficiency and convenience resulting into high level of transparency in revenue collection. The study will aim to examine effect of revenue automation on compliance of rate payers.

1.1.1 Revenue Automation

Revenue automation is the process of moving from manual system of revenue collection to modern system that embrace technology ways of revenue collection (Turner & Apelt, 2004). Automation of revenue will entail doing away with submission of any paper return, be it during the point of application or request for renewal of various licenses managed by the county (UN, 2007). Automation will involve the use of e-filing or electronic tax filing that involve the process of revenue accumulation records submitted by utilizing the web without presenting any desk work. The e-filing is income aggregation files or cost structures are submitted through the web, when in doubt to display any desk work. The automation will include the utilization of worldwide web, internet and the utilization of software to conduct a range of revenue administration activities (Gellis, 1991). Different countries have their own electronic taxation system that differs from one country to another. According to Gellis (1991), electronic tax filing is also known as electronic declaration and also referred to as online taxation payment by UN (2007). Turner & Apelt (2004) refer to it as e- tax lodgment.

Internationally, the tax environment is changing at a quick speed, making the advancement of data and correspondence to information communication technology (ICT) to be a challenge operating tax systems (Muita, 2011). Tax authorities should

have modern and responsive tax administration system that will ensure there work is done effectively. Since the 1990s, most of the tax authorities from developed countries have gradually embraced the power of ICT the use of electronic tax filing Tax authorities to interact easily with tax payers (Muita, 2011).

Andarias (2006) electronic filling depends on technology. The technology that is used in e-filling consists of internet, software applications and computer. Electronic filling is measured when there are outputs that are realized. The measurement of electronic filling includes less time taken to serve rate payers, better efficiency and less error caused during procedures of tax supervisors and making sure taxpayers comply with tax rules. One cannot know the full impact of your business equipment, technology and trained personnel unless you have real numbers and percentage to review across every function of the organization. Data driven metrics and automation tracking program allows the organization to know pricelessly what improved, where and by how much (Muita, 2011). While there are many data point to track regarding new business process automation, it is important to know the percentage of rate payers using the new software application or equipment, the profit from revenue collected relative to value of assets and the direct change occasioned by automation which include variable like expenses saved from better inventory management, cost cut due to elimination of unnecessary work flow checkpoints (Lymer & Oats, 2010).

1.1.2 Revenue Compliance

According to Braithwaite (2009), revenue compliance is defined as income consistence that is characterized as the full settlement of charges due. However John Creedy (2009) define tax compliance has the degree to which tax payers obey the tax rules. Non-compliance of Revenue is stated as any difference between the real amount

of revenues paid and the revenue due from an individual, organization or company benefiting directly from the County services. The difference happens due to overstating and understating of expenses, income and deductions. On the other hand, non-compliance consist of both unintentional noncompliance and intentional evasion which is the calculation error and insufficient thoughtful of tax laws (Robben, 1990). Taxpayer's mistakes can be unintended and don't speak to the endeavors to avoid or may even prompt expense over announcing (Robben & Antonides, 1995).

The revenue collection and compliance at the Counties is one of the biggest challenges that has been hindering most of the 47 county governments and even national government from achieving its revenue collection targets. It is clear that most Counties cannot fully finance their recurrent and capital budget by depending on the locally generated revenue and has therefore to depend heavily on national government for additional financing through the division of revenue bill as stipulated in the Kenyan Constitution, 2010. Compliance is essential so that all county government can raise revenues to finance public spending that include roads maintenance, solid waste management, hospitals to Early Childhood Education (ECD), colleges and community security by budget that is needed by the government.

From the above definition, the measurements of ratepayers dimension include electronic filling of application form, full payment and consistency in the payment of required fee yearly. Therefore, a taxpayer can also be referred to as non-compliant when the three dimensions are not accomplished properly since no fines or penalties will apply. In recent years independent literature on alternative measures on application of tax compliance was developed which was to provide tax agencies with the tool on how to identify tax noncompliance by making sure the measuring gap

between actual tax collected and maximum potential tax collected are under full compliance with the tax code have become the primary measure of tax noncompliance via legal or avoidance and or illegal/evasion. Revenue of the county is measured over full fiscal year.

1.1.3 Revenue Automation and Compliance

The fundamental objective of automating revenue collection guarantees taxpayers to meet their normal tax assessment commitments in suitable way without visiting the county revenue workplace. Some of the measures that can be applied to reinforce tax compliance include, offering better taxpayers services that can result into better long-term results for instance high collection of tax hence reducing tax gap (Fjeldstad, 2006).

The main goal reforms in tax in different countries is to make sure it achieves high voluntarily compliance and this can be achieved through the introduction of electronic filing systems (Khadijah, 2013). Tax filling in Kenya have deadline which is compulsory dates for tax return or payment, similarly ratepayers in Nairobi city have to pay their rate to county revenue account before 31st March otherwise it will attract penalty of 3% on a monthly basis until such a time when the payment will be settled.

Paper work are monotonous to file on the taxpayer and in the same time to reconcile on the KRA part using the same magnitude (Muita, 2011) therefore the use of e-filing ensures timely, accurate reconciliation of the data is done, and LAIFOMS is able to do automatically validate and reconcile the returns. According to Khadijah (2014), the main goal of tax reform in different countries is to ensure there is high voluntary compliance and this is achieved through introduction of self-assessment system. Tax compliance is a product of filing the application form accurately and the tax authority

is to verify through tax audits and compliance checks that the details as declared in the application form reflect the true position of the rate payer. A study done in India by Ojha (2006) after electronic filing was introduced tax returns indicated a lot of funds were used to outlay on the system, by the Malaysian Tax Authority, only forty percent of targeted taxpayers managed to file their tax returns through online, with a majority of taxpayers still using the paper return.

In Kenya, a report by KRA's (2012) pointed out that over five thousand taxpayers are grouped into both medium and large where 40% of the taxpayers were registered online as users by the end of 2011 and 10% out of these number filed their tax return through KRA online system. The report treated as negligible the number of small taxpayers who were using online for tax returns except majority of KRA employees whom were instructed to only use online for their individual annual tax returns.

1.1.4 Rate Payers in Nairobi City County Government

Nairobi County collects its revenue from the rate payers who are among the 3.134million Nairobians as per the 2009 census. Rate payers are people or businessmen who are obliged to pay Nairobi City County for utility services offered to them. The rate payers in Nairobi County could be the people who own land or building and therefore obliged to paying annual land rate to the county. Another category of the rate payers are those operating business within the environs of Nairobi these group have to obtain a single business license permit at a fee depending on the size of the business and the type of the business in order to get authority. Finally there are rate payer categorized as user fees/charges who pay for the services rendered e.g. parking space, garbage collection, advertisement just to mention a few.

Rate payers are important in a county tax system. According to Terkper, (2003) tax payers are grouped into three that is small, medium and large by tax authorities. The categorization generally depends upon the turnover, level of difficulty and other explicit order, according to each assessment expert. Small and medium citizens the traditionally “hard-to-tax” group, which may also include large entities such as profitable farmers and retail outlets which form the larger part of Nairobi rate payers who generally fall under the small tax payer’s bracket. Developing countries tax administration reforms places large of its units on large taxpayer unit (LTU) since recent trends.

In Kenya for example, Ouko (2010) asserts that any person who has registered for and obtains a Personal Identification Number (PIN), technically qualifies as a small taxpayer. This wider classification includes but not limited to employees and even students who mandatorily register for PIN to obtain loan facilities for their higher educational needs.it is for this reason that anybody who benefits directly or indirectly from the services rendered by the county has to pay county rate or levy.

Nairobi county revenue section has categorized ratepayers into revenue streams which are controlled and managed by different sections and departments for efficient service delivery to Ratepayers and accountability. Nairobi County is has ten sectors and each section has its revenue sources to manage. The ten sectors which cuts across the 17 sub counties within Nairobi county with majority of ratepayers in the east of Nairobi county considered to belong to the low income generating bracket, the ones operating small businesses and kiosks have poor structures and a number have no knowledge of computer usage. It might therefore be a challenge to embrace online filing should it be made mandatory by Nairobi city county government that all registered ratepayers to

only use automated revenue system in order to enhance compliance in Nairobi City County.

1.2 Research Problem

The ratepayers and taxpayers worldwide have attendancy to confrontation and unwillingness to pay for the services rendered to them by the county government or the national government. Use e- filing system is a great worry and a challenge to most of the tax agencies which are encouraging the use of electronic tax administration systems (EATAAC, 2002).It is important to understand and influence taxpayers to accept the use of electronic filing system is very important, since it involve investment in technology and it assist to save cost on operation. Although there is need to increase revenue collection from the public service and have proper enforcement, developing nations still face the challenge of low tax administration and tax compliance.

The rate payers are instrumental in the growth of the economy as their taxes contribute to the overall countries economy. The government of Nairobi City County recognizes the potential lying within the ratepayers and has since come up with the Finance bill in 2012 that assist in the enforcement of revenue collection as stipulated in the Nairobi City County by laws. The Counties haves for long operated without formal structures and no documented or empirical studies exists on tax compliance behavior among ratepayers, more so the effect of electronic filing on their tax compliance levels. This casts doubts on the ability of the counties to actually increase revenue collection and improve revenue enforcement efforts.

A number of research has been done on various factors related to tax compliance and small taxpayers. For instance, between 1950s and 1970s small taxpayers were observed as being marginal to the main stream of economic activity and had a habitual behaviour of tax avoiders and tax evasions. In the early 1980s as services sector took off and represented the higher growth of GDP in different countries, it was only few firms that were able to account for the growth of GDP, employment and utilization of capital (Poutziouris, 2001). Service sector was seen has the engine growth for economic growth and most of the tax policy researchers believed that compliance costs for the tax payment was high by the ratepayers. It is not about their routine but the complexity of the tax structure and the little resources tax administration invests on them which has resulted to high compliance costs that makes them to have a behaviour pattern of tax avoidance and evasion. Similarly, Ritchie (2001) studied a sample of small medium enterprises on how they make payment to the value added tax in New Zealand (GST), it was found that computerized accounting systems report less time is spent on the end –of- year tax activities. On the other hand, Rametse (2001) while carrying out the cost implications small taxpayers will encounter on electronic filing, established that, use of electronic filing does not affect the compliance costs, which remained significantly higher for private companies (2 percent of a turnover of state A\$100,000) than for larger than small ventures (0.04 percent of a turnover of state A\$2 million).

Muita (2011) examined factors that influence use e-filing in Kenya, It was established that electronic filling results into management benefits and it saves costs. For instance on-line lodgment and transfer can be used to make electronic submissions that will reduce the cost of compliance on ratepayers. From the various

empirical studies, it can be examined that no study has focus on the effect of electronic filing ratepayers in Kenya as far as tax compliance is concerned.

Automation of revenue entails adapting to structured approach to business operations which has been lacking among counties, in addition, ratepayers will have to acquire basic information technology knowledge, which majority of these ratepayers lack. It would be therefore, interesting to study how the county intends to achieve compliance among such ratepayers. The study therefore, sought to fill this gap in knowledge, by answering the following research question. What is the effect of revenue automation on compliance of ratepayers in Nairobi City County?

1.3 Research Objectives

1.3.1 General Objective

The general objective of the study was to examine the effect of revenue automation on compliance of ratepayers in Nairobi City County Government.

1.3.2 Specific Objectives

For the purpose of the study, the specific objectives included;

- i. To determine the effect of fines and penalties imposed on late ratepayers on compliance.
- ii. To determine how operational costs impact on compliance.

1.4 Value of the Study

The county governments rely strongly on revenue collected from its revenue streams to subsidize on the funds they receive from the national government in order to fund its development and recurrent expenditure. The funds given to the counties is always insufficient due to the limited resources hence the need to improve on revenue

collection through automation. When there is decrease in revenue collection on a country it has direct influence on the economy of the country.

This study revealed the weakness and strength that is related with execution of new technology and its benefits toward achieving revenue targets to the management of Nairobi City County Government. The implementation study will improve the revenue collection by sealing the leakages associated with manual collection of revenue which improve in timely service delivery to the Nairobians since bills will settled in time due to availability of funds.

Findings on objectives will enforce theoretical frameworks or models used in the study. Scholars will use the findings of the study to carry out further research and add knowledge to the existing body of theories. The recommendation of the above study will help supervisors of Nairobi city county government and the tax payers in cost saving as a result of minimal supervision required and reduced workforce and even become efficient in revenue collection.

1.5 Scope of the Study

The research focused on the automation of revenue collection in Nairobi City County and its effects towards county achievement of 100% compliance in rate payment among the rate payers in Nairobi City County between the financial periods of 2010/11 to 2015/16.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The section entails the empirical review of literature on impact of automation on ratepayer's compliance. The chapter further presents conceptual framework and critique of existing literature and research gap. A review of both empirical and theoretical literature also explores the determinants of tax compliance among ratepayers. These section also explores various theories associated with ratepayers.

2.2 Theoretical Review

Theory is a logical idea that has been verified after several tests overtime. All attempts to provide theoretical application in practice of revenue automation is reflected in taxation theories the evolution which took place together with the development of various discussions in economic thought. The following theories have been used to guide the study: ability to pay theory, benefit received theory and optimal tax theory all of which have been discussed below.

2.2.1 Ability to Pay Theory

Smith and Pigou developed the theory of ability to pay in 1903. "The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state." The theory requires that burden of the overall tax should be spread among individuals depending on their ability to bear and it is frequently recognized principle of justice or equity in taxation since citizens pay taxes to a country according to their financial capacity. If taxes were to be subjected on the above principle, then justice will be achieved and tax

compliance would increase. The good thing with this principle is that it is based on user charges and county levies rely heavily on the ability of its client to pay when implementing the charges on rate payers. Economists find it difficult to explain the exact measure of an individual ability to pay tax however some of the perspectives are;

Ownership of Property: Some economist argues that the best way to measure the ability of one to pay tax is through ownership of properties. For instance in Nairobi county those who own property in upland market area such as Karen, Westland pay more per acre in terms of land rates compared to property owners in the Eastland of Nairobi like Embakasi, Ruai. This idea has been rejected on the basics that if an individual earns high income and saves the money, it means he will escape to pay tax. On the other hand, when a person buys property from his meager income; he will be subjected to taxation. Further if one is in more income braded and buys property in the Eastland side of Nairobi it will therefore mean that he will pay less compared to what he would have paid in the upland market and Is this not acceptable since an individual earning large income should be exempted from paying more rate compared to a person with little income who is subjected to huge rates.

Income as the Basics: Some of the economist argue that an individual income be used to measure once ability to pay. It is suggested that when an individual income is higher than another, the person with higher income should support the government more by paying more taxes than the latter. In the contemporary tax system states have accepted income as the best way to measure ability of an individual to pay tax.

Advocates of ability-to-pay taxation state that individuals with most resources will be able to pool together funds so that to be able to provide services that is required by

many. Most businesses and people depend on these services either directly or indirect for instance security and solid waste management. If the government was to introduce flat rate instead of ability to pay, the tax rate will have to be set at low rate so as to accommodate people with low income in which it will loss revenue. However, the critics of the ability to pay tax prefer benefit received taxation method as levies are effected on individuals who receive the benefits of the taxation.

2.2.2 Benefit Received Theory

The theory was advanced by Wicksell (1896) and Erik Lindhi (1919).The theory states that the country imply taxes on persons depending on the benefit received from the county. The more an individual receives benefit from the government the more he/she should pay to the government. The advantage of a benefit received system of taxation is that the choice to pay tax and receive the service is ultimately in the consumers' hand .This means that the county government needs to be sure to provide a valuable and timely service thereby increasing compliance or it will simply go unused.

The above rule has been criticized based on the grounds that the benefit derived cannot be properly calculated in terms of money since the benefits are a subjective matter. Secondly it is not possible according to the theory to determine the percentage of the benefit that accrues to an individual. Thirdly if the above rule is to be applied in practice, it will make the poor to pay more taxes, compared to the rich because they are able to benefit more from the government services for instance the supply of water and waste disposal. If more taxes is gotten from the poor, it means we are working contrary to the rule of justice? The application of this model is that small taxpayers pay more tax compared to medium and large taxpayers. The fourth critic to the theory

is that most of the services rendered by the county government are indivisible and the identification of beneficiaries is difficult, for instance it is not possible to proportion the benefit of offering security to the people.

It is for this reason that that benefits received taxation is not effective as it remains controversial in many circles today. For example there are a number of benefit received taxation effects today, and one of the best examples is free early childhood education which is offered for free by the county government yet nothing is paid for by the parents of the children.

2.2.3 Optimal Taxation Theory

The theory was developed by Frank Ramsey (1927) and argues that tax system chosen should be one that is able to make the most out of social welfare role when subjected to an economic constraint. The theory further contends that a ratepayer system should be picked depending on a social welfare limit subject to a game plan of prerequisites.

The literature of optimal taxation treats the social planner as utilitarian; that is, the social welfare function is based on the utilities of individual in the society which is a non linear function of individual utilities.

The social planner goal is to choose the tax system that maximize the consumer welfare knowing that the consumer will respond to whatever incentive the tax system provide. If the social planner is allowed to be unrestricted in selecting a tax framework, the issue of optimal taxation will be too simple: the optimal tax is just a particular amount tax. All things are measured, if the economy is depicted by a representative rate payer, that payer is going to cover the entire government expense bill of the organization in some structure. Missing any market imperfection, for

instance, an earlier externality, it is best not to deform the choices of that payer in any way shape or form (Ramsey, 1927).

Problem facing the social planner is that it is assumed that everyone in the society has the same preference over consumption and leisure and that the economy is populated by identical individual.

Critics of optimal tax theory prescribe that the theory ignores the administrative cost of tax system; that is, each good in an economy should be taxed at a separate rate higher for necessities and lower for things with good substitute. Secondly there is no reasonable way of obtaining the information needed to differentiate indirect tax rate in accordance with the theory.

2.3 Determinants of Revenue Compliance

Revenue or tax compliance depends on various factors. According Batrancea (2012) asserted that three factors influence tax compliance namely; political, socio psychological and economic factors however there are other factors such as, fines and penalties imposed, revenue automation among others that also determine compliance. Each of these factors are discussed here below.

2.3.1 Social Psychological Determinant of Revenue Compliance

Schmolders (1960) argues that every valuation of the taxpayers' tax compliance behaviors should start by answering the question "How is the county perceived in the ratepayers' minds?" In other words, it is important to understand the way individuals express their attitude, interaction, respond and the way they behave is generally characterized by the think than dealing with the reality. It is important to understand what goes through the mind of citizens when dealing with matters such as public

goods, tax policy, tax principles, etc., that consist of the social psychological elements of tax compliance behavior.

Eagly & Chaiken (1993) assume that attitude can influence the behaviour of tax compliance since it represents taxpayer's propensity to react towards negative or positive condition. According to Orviska & Hudson (2002) there are several ways of measuring and operationalizing of attitude on tax compliance, starting from the overall judgments of tax authorities, subjective assessments of tax evasion and finally the ethical feelings towards tax evasion

Tax compliance can be attained through reduction of social distance between the two parties of taxpayers and authorities through mutual trust and cooperation between the two parties. Porschke & Witte (2011) opined that most of the taxpayers discuss on fairness as one of the most relevant issues that affect tax compliance. When taxpayers are able to perceive fairness in the taxation process, it becomes very easy for them to comply voluntarily and the reverse is also true. Regardless of the characteristics of taxpayers a high opinion of equality yields to a high level of compliance.

2.3.2 Political Determinant of Revenue Compliance

There are three political factors of revenue compliance (Rahman & Nathan, 2014). These factors include difficulty of the tax system, law and fiscal policy. It is important for one to consider ratepayers who are challenged with the tax law before making a decision. It is the level of complication of tax law that can turn out to be a well-calculated move by the ratepayer to either avoid or evade paying tax to the county. Tax system structure hinders readiness of ratepayer to obey the rules. When the fiscal policy is inefficient it results into waste of public resources of public funds hence low quality of products making taxpayers to think that paying tax is a liability.

Individuals understanding of county by- laws is significant feature which forms their ability to obey. If the rule is complex, taxpayers are unwilling to understand the provisions that are inside the tax law. Most tax payers if tax law to be a burden because of the difficult wording used hence perceived to be a foreign language Most of the studies have shown that the people with high level of education are able to understand the meaning of tax liabilities, the role of government or county policies hence making them to comply more Schmolders (1960).

Despite the huge number of attempts to simplify the relevant tax laws Rahman & Nathan (2014) asserted that there is no effect on the improvement of tax law clutched from the normal citizens, industry owners or by tax authorities that will make them to comply with tax system. Few studies indicate that when tax law is difficult to understand by ordinary citizen it creates ambiguity among taxpayers mind. Beck (1991) state that tax compliance is able to increase with income ambiguity. Snow & Warren (2005) established that tax compliance increases when taxpayers known that non compliance act can be detected through auditing. Ironically, it is very hard to understand tax law and be able to doubt.

In 1959, Schmolders investigated distinctive German government officials and fund delegates on level of understanding financial approach issues. The results were surprising since it was found that there is low level of awareness of the word fiscal policy (Kirchler, 2007). There is poor tax knowledge and vulnerability of the duty law which offers ill-advised conditions on which degree do citizens conduct legitimate and which is the limit between an inappropriate and right utilization of the assessment law arrangements. Studies by various scholars support the idea that it very difficult to understand the behaviour of taxpayer in the letter of the law.

2.3.3 Economical Determinant of Ratepayer Compliance

Most taxpayers will try to evade taxes so that to get the best outcome by saving so as to increase ones income. According to Beckers seminal work (1968) evading tax is definitely not a crime however a reasonable utility arguementing procedure that is utilized by citizens when there is advantage of evasion worth contrasted with the expenses of being evaluated, distinguished and fined. Allingham & Sandmo (1972) introduced a model about tax evasion basing on Beckers theory, which states that taxpayer is capable of paying tax based on two strategies that is real income or to come up with a model of tax evasion depending on Becker's theory, where the citizen is blessed with two methodologies: to cover the government expense as indicated by the genuine pay or declare modest quantity of pay so that to settle less regulatory expense.

To decide which strategy to be used in evading tax is influenced by the probability of the audit. The model argues that tax evasion reduces when audit probability and fine will increase due the expected utility of tax evasion

Some studies indicate that there is negative relationship between tax rate and compliance behaviour. Anderhub (2001) for instance indicated that when there is increase in tax rate it will discourage tax evasion. An experiment done by Alm (1992) indicate that compliance level reduces when the tax rate is increased from 10%, 30% to 50%. It was also observed by Freedland (1978) and Collins & Plumlee (1991) that tax compliance was low if the tax rates were high.

2.3.4 Revenue Automation

It is expected that automation of revenue will increase revenue collection received by sealing the loophole that were inherent by the use of manual receipting. The modern use of revenue collection in Nairobi city County government will enhance efficiency and convenience resulting into high level of transparency in revenue collection. According to Amina (2013) established that revenue automation increases accountability and makes it easy to supervise the staff collecting revenue.

Wasilewki (2000) was able to compare the tax collection between Brazil and Japan and it was found that the revenue collection for Japan was highly automated compared to that of Brazil. Japan has high economic growth due to better revenue collection.

2.3.5 Fines and Penalties

Penalties are extra charges imposed on rate payers for failing to pay their rates within the stipulated time as per the county by laws. Penalties increase on monthly basis he the need for ratepayers to pay as soon as possible. Fines and penalty rates may substitute each other due to their multiplicative linkages as long as neither of them is set to zero (Kirchler 2007).

Higher fines simply make evading taxes more hazardous for taxpayers and should deter them from evasion hence increasing the compliance rate. Similarly if the amount of penalties received in a given fiscal year is high it therefore means that the compliance rate was low and therefore most rate payers paid after 31st march when the taxes start accumulating interest. 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, 2007). Alm (1992) supports the evidence that fines do affect tax compliance though the impact was virtually zero. Friedland (1978) 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, 1998). Some of the findings suggest that a policy based on deterrence is effective only in combination with frequent Audits (Kirchler, 2007).

2.3.6 Operational Cost

These are cost that the organisation needs to incur so as to ensure that automation of revenue achieves the objective of compliance among rate payer. The operation cost that are directly affect compliance include the service fee charges, cost of carrying out audit and the gadgets that will be used to identify defaulters. According to Beckers model ratepayer will evade tax if they think they can get away with it and secondly ratepayer will voluntarily improve on tax compliance when probability of getting apprehended goes up. If the Organisation invest more in audit it means that the probability of catching up with defaulters will be high hence the need to comply.

2.4 Empirical Review

Various studies has being done both locally and globally on the role of information technology on tax compliance. For example a study by Lee et al (2008) examined evaluation of tax filing web sites in two countries that is Korea and Turkey by comparing the design and how complex the websites were for ease of the taxpayers to file returns and queries on their status. It was found that Turkey had a difficult online system in which Turkish users did not find it difficult to file tax and this is due to they depend on accounting professionals to file for them tax return online. On the other hand, South Korean system was not very complex although few taxpayers were using

it well. It is important for a country to have electronic tax filing system that should be able to be used by taxpayers. These has great influence on the current study to find out ways in which tax websites should be very easy to use before the tax system is rolled out to taxpayers. It is also important to consider efficiency and capacity of the system (Lee, 2005).

In India, Amitabh (2009) examined how youthful experts from India actualize or carry on towards paperless or web based recording of expense forms with the mission of guaranteeing consistence of the framework. Regression analysis was used to find out the credentials of young professionals who depend on paperless income tax and how it was perceived in terms of ease to use, relative advantage, compatibility, performance of the filling and personal innovativeness in information technology. The findings of the study showed that usability, innovativeness and accessibility are key to a successful implementation of revenue automation for any group of tax payers be small, medium and large.

Nawawi (2010) in Malaysia found out from participants who were tax practitioners on his study on the importance of tax education for taxpayers to fully understand the tax online system. It was found that it was necessary to have three skills as taxpayer so that to interact easily with the technology based tax system namely; word processing, software, e-mail and spread sheet software. The outcome of the study will have great implication on the current study that is, for one to have an in-depth understanding on the effectiveness of electronic filing system it important to have the mandatory skills to operate the system. If one fails to have the skills it will be very difficult to interact with the system making the intention of the system not to be discovered

In Kenya, different research studies have focused on technology and tax compliance on with reference to tax filling focusing on Kenya Revenue Authority. Muita (2010) conducted study which majored on large taxpayers which are companies that make a turnover of Kshs 750 million and above and within corporations and government ministries. The main point of the investigation was to assess what factors influence adoption and use of e-filing system among large tax payers in Kenya. It was revealed that for e-filling to be effective infrastructure, conducive environment and skills are required.

Oduyo, Oginda, Obura, Ojiera. Alila and Siring (2013) in Kenya examined how local government of Homabay conduct revenue collection. It was found that automation was able to reduce financial frauds resulting into efficiency and accountability hence increases in revenue collection. It was confirmed that 97% of the participants took part in the study. There was also resistance to change by county government staffs who was involved in revenue collection and opposed the implementation of the modern revenue collection.

2.5 Conceptual Framework

The conceptual framework of the study is summarized in the Figure 2.1 below. It shows the relationship between the four independent variable and the dependent variable. The conceptual framework of this study showed how the independent variables: revenue automation, penalties and fines, transaction charges, and operation cost of automation influence rate payers' compliance (dependent variable).

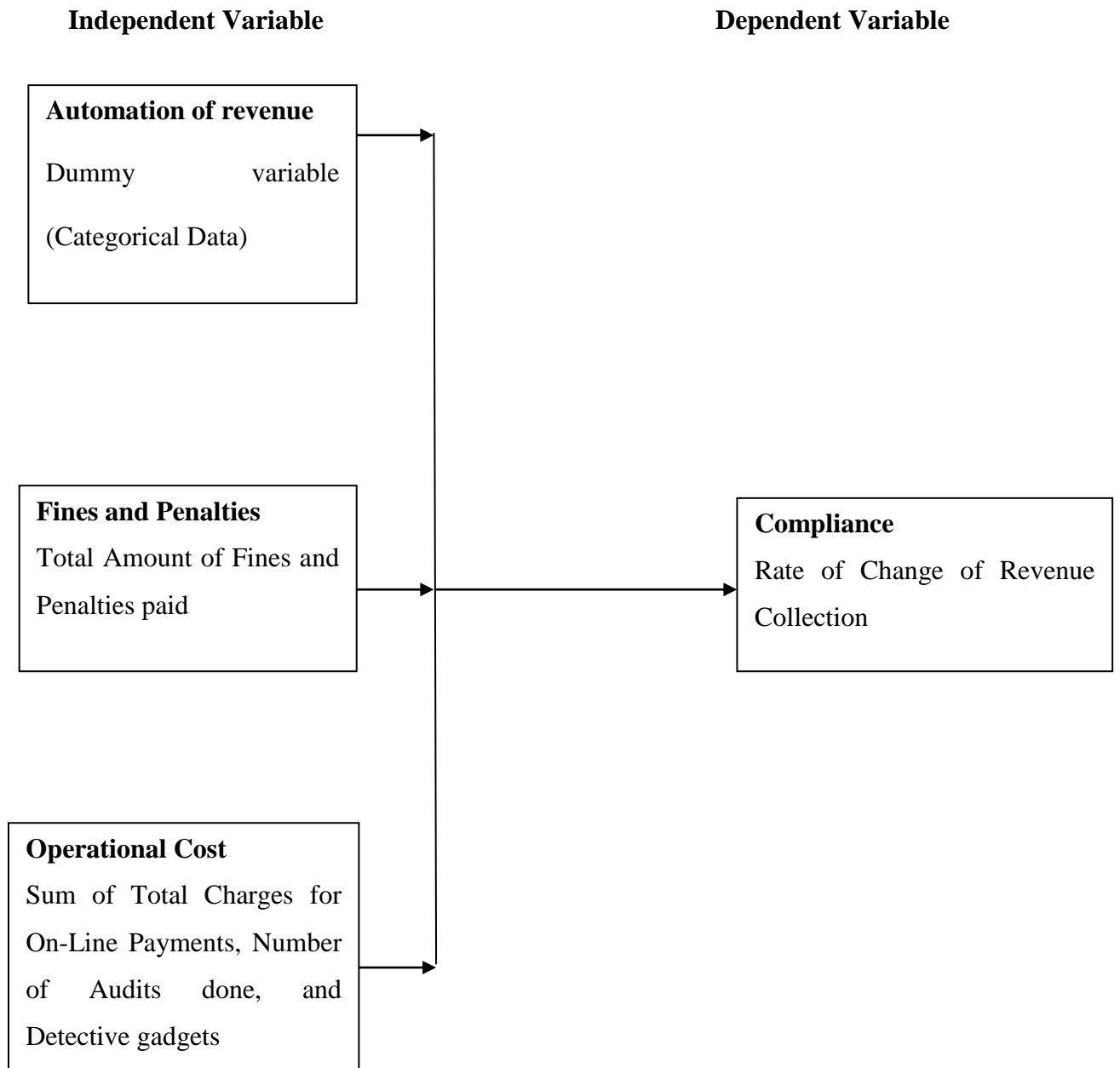


Figure 2.1: Conceptual Framework

Revenue automation is attributed to low operational cost and enhances the compliance of rate payers. However, it can result in high transaction charges which can discourage rate payers.

2.6 Summary of the Literature Review

It is compulsory for the use of technology (e-filing) in tax administration activity due to large set of data that is being processed. It is important to note that technology should not be considered as the main objective but should be regarded as a means of ensuring efficiency is achieved. In order to achieve excellence in tax administration activity, firms need to focus on taxpayer and customers. The good idea is to “reduce the time wasted between tax generated and the moment of payment”, reducing the human errors by automating the procedure, making it easy to pay tax anytime, anywhere” and ensuring employees assist every customer at the office” hence better turn out in revenue payment.

Bearing these objectives in mind, one may assume that technology in tax administration refers to integrations of soft wares on a one-stop shop implementation; which involves comprehensive work flow systems in which every document or form need to be include in the payment choices; customer services network to be connected by fast lines; flexibility so that to permit services in distant areas to be in real time.

2.7 Research Gap

Various studies have consistently pointed out that the use of technology to achieve tax compliance is a regular process that does not need to be done in hurry. In Kenya most studies that were done on tax compliance focused mainly on the revenue for the national government collected by KRA in which generally is measured in terms of technology advancement and the understanding of noncompliance. Studies on Tax education has also highlighted the required skill for ease of adopting the online payment by rate payers.

Further studies pointed out that automation of revenue resulted to improvement in revenue collected albeit no observational examination has having the option to look at impact of electronic revenue collection on compliance among ratepayer at the county level in Kenya. The above study will address the knowledge gap by examining on automation of revenue and the effect it brings forth in achieving maximum compliance among rate payers in Nairobi County.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section gives a discourse of the blueprint of the study methodology that will be utilized as a part of the research. It centers on the design of the study, techniques for the data analysis and arrives at a conclusion with the collection and data presentation strategies that will be utilized as a part of this study.

3.2 Research Design

According to Kothari (2014) research design is a collection and analysis of data that aims at coming up with relevant information for the purpose of the study considering economy in procedure. The current study utilized descriptive research design since it focused on what rather than why of the research subject. On the other hand, Sekaran (2006) define descriptive research design is non-exploratory in that it manages the connections between non-controlled variables in a characteristic as opposed to lab setting. Since the occasions or conditions have already happened, the researcher chose the significant variables for an analysis of their connections. The design also allowed the investigator to gather in depth information regarding the population being studied.

According to Doyle (2004) descriptive analysis focuses on the distributions of one variable while statistical analysis is concerned with various tests of significance in order to ascertain to what extent the collected data can be said to indicate some conclusions. It is only after this that the researcher is able to make some interpretation by comparing the results with prior predictions and past research.

3.3 Population

A study population consists of the entire cluster of individuals, objects, items, cases, articles, or things with mutual characteristics existing in space at a particular period of time that are significant to research findings. The population of the study consisted of the ratepayers in Nairobi city Kenya, it currently stands at 1,614,229 tax payers (Domestic Taxes Report, 2018). The population consisted of taxpayers categorized in ten different departments. The tax payers were broadly classified into two categories; Land Rate Tax Payers who consist of 152,420 accounts and Special Business Permit Tax Payers who stand at 1,461,809 accounts.

3.4 Data Collection

Data collection purely relied on secondary data. The research relied on financial reports from Nairobi county finance and economic planning department on revenue received for the period of three years before the advent of the revenue automation project and three years after, between the financial years 2010/20011 to 2015/2016. The unit of analysis was monthly where data was analyzed on a monthly basis.

Secondary data was preferred due to the time limit as the researcher did not have to devote a lot of time and money hence it was more economical. Secondary data assisted in determining revenue compliance by rate payers within Nairobi City County and information was be obtained from revenue reports of Nairobi City County (Finance and Economic Planning Sector, Revenue department. 2019).

3.5 Data Analysis

Data collected was organized, tabulated and simplified so as to make it easier to analyze, interpret and understand. Data analysis was done using SPSS Version 21.0. Correlation analysis was used to show whether and how strongly changes in

compliance is related to revenue automation, fines and penalties, and operational costs while regression analysis was employed to determine the relationship between compliance and the factors that influence it. The quantitative reports obtained from the investigation were displayed using tabulations.

The study adopted a confidence interval of 95%. The results were set to be statistically significant at the 0.05 level, which indicates that the significance value should be less than 0.05. A statistical inference technique was used in making conclusions relating to the accuracy of the model in predicting compliance. The model significance was tested using the significance values at 95% confidence. The meaning of the association amongst every predictor variable plus response variable was also determined by the significance values, which illustrated how much standard errors indicated that the sample deviates from the tested value. The data was presented in the multi linear regression model in the format shown below:

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

Where:

Y = Compliance (ratio of change in revenue)

X₁ = Revenue Automation will be introduced as a dummy variable where the quarters preceding the automation of revenue will be denoted as 0 and the quarters after denoted as 1.

X₂ = Log of fines & penalties (Kenya shillings)

X₃ = Log of operation cost (Kenya Shillings)

β₀ = Constant

B₁, B₂, B₃ = Regression Coefficients indicating the rate of change of tax compliance as revenue collection, penalties and fine and operation cost changes.

ε = Error term

3.6 Diagnostic Test

Regression diagnostics assess the model assumptions and probe if there are interpretations with a great, unwarranted effect on the examination or not. Diagnostic examinations on normality, linearity, multicollinearity, and autocorrelation were done on the collected data to establish its suitability in the formulation of linear regression model. Normality was tested by the Shapiro Wilk which though uncommon, fails to work well where large amount of data is involved, was supplemented by the Kolmogorov-Smirnov test which is suitable for testing distributions of Gaussian nature which have specific mean and variance. Linearity indicates a direct proportionate association amongst dependent and independent variable such that variation in independent variable is followed by a correspondent variation in dependent variable (Gall et al. 2006). Linearity was tested by determining homoscedacity which was determined by the Breuch-Pagan test.

Tests for multicollinearity of data was carried out using variance inflation factors (VIF) and Tolerance statistics to determine whether the predictor variables considered in the research are significantly correlated with each other. According to Grewal *et al.*, (2004) the main sources of multicollinearity are small sample sizes, low explained variable and low measure reliability in the independent variables. Auto-correlation test was carried out through the Durbin-Watson Statistic.

CHAPTER FOUR

DATA ANALYSIS, RESULTS, INTERPRETATIONS AND DISCUSSIONS

4.1 Introduction

This chapter focuses more on the presentation, interpretation and discussions of findings of the study carried out. The chapter was divided into three sections. It included; diagnostic tests, inferential statistics, and the interpretation and discussion of findings. The study analyzed the effect of revenue automation on compliance of ratepayers in Nairobi City County Government. The study was conducted for six financial periods, three financial periods preceding revenue automation and three financial periods after the implementation of revenue automation. The unit of analysis was monthly conducted from the 2010/11 financial period to the 2015/16 financial year

4.2 Diagnostic Tests

Diagnostic tests carried out in this study included; normality tests, homoscedacity tests, multicollinearity tests, and autocorrelation tests. Normality test was carried out using Shapiro Wilk test which was supplemented by the Kolmogorov-Smirnov test. The homoscedacity test was conducted through the Breusch-Pagan test. Tests on Multicollinearity of data was carried out using VIF and Tolerance tests. The autocorrelation test was carried out through the Durbin-Watson stastic.

4.2.1 Normality Test

The normality tests for all the variables employed in the study are highlighted in Table 4.1.

Table 4.1: Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Compliance	.184	73	.000	.847	73	.000
Rev_Automation	.343	73	.000	.636	73	.000
Fines_and_Penalties	.084	73	.200*	.971	73	.089
Operational_Costs	.211	73	.000	.847	73	.000

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

In testing for normality of the data, the null hypothesis holds that the data has a normal distribution. The level of significance adopted in the study is 5%. Since the significance values in both tests for all the variables except fines and penalties are less than the α (0.05), the null hypothesis is rejected. Hence, the data series of the variables are not normally distributed. The significance values in both tests for the variables fines and penalties are less than the α (0.05), thus the null hypothesis is not rejected and the data series is normally distributed.

4.2.2 Test for Homoscedacity

The homoscedacity test for all the predictor variables employed in the study is indicated in Table 4.2.

Table 4.2: Test for Homoscedacity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity			
Ho: Constant variance			
Variables: fitted values of Compliance	chi2(1)	Prob	> chi2
Compliance	77.956	1.00	
Rev_Automation	64.51	1.00	
Fines_and_Penalties	27.845	1.00	
Operational_Costs	47.234	1.00	

The null hypothesis is that there is homoscedacity. The level of significance adopted in the study is 5%. Since the significance values in both tests for all the variables are greater than the α (0.05), the null hypothesis is not rejected. Hence, the data series of all the predictor variables are homoscedastic.

4.2.3 Test for Multicollinearity

Results on Test for Multicollinearity of data carried out using Tolerance and Variance Inflation Factors (VIF) are displayed in Table 4.3.

Table 4.3: Multicollinearity Statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	Rev_Automation	.913	1.095
	Fines_and_Penalties	.973	1.028
	Operational_Costs	.929	1.077

a. Dependent Variable: Compliance

The common rule in statistics is that tolerance values should be more than 0.1 and VIF values should be less than 10 and greater than 1. The findings indicate that that tolerance values exceed 0.1 while VIF values fall below 10 and are greater than 1. Hence, there is no presence of multicollinearity amongst predictor variables included in the model.

4.2.4 Tests for Autocorrelation

The result on the autocorrelation test carried out using the Durbin-Watson Statistic is presented in Table 4.4.

Table 4.4: Autocorrelation Test

Durbin-Watson Statistic
1.934

The Durbin-Watson statistic ranges from point 0 and point 4. If there exist no auto-correlation between variables a value of 2 is shown. If the values fall under point 0 up to a point of less than 2, this is an indication of a positive autocorrelation and on the contrast a negative autocorrelation exist if the value falls under point more than 2 up to 4. As a common rule in statistics, values falling under the range 1.5 to 2.5 are considered relatively normal whereas values that fall out of the range raise a concern. Field (2009) however, opines that values above 3 and less than 1 are a sure reason for concern. Therefore, the data used in this panel is not serially autocorrelated since it meets this threshold. There is nearly no autocorrelation in the data used in the study.

4.3 Inferential Statistics

The section states the inferential statistics employed in ascertaining the effect of revenue automation, fines and penalties, and operational costs on compliance. They included correlation and regression analysis.

4.3.1 Correlation Analysis

Correlation analysis was done for predictor variables on the response variable. Pearson correlation analyzed the level of relationship amongst them. The study employed a confidence interval of 95%, as it is the most utilized in social sciences. A two tailed test was used. The findings are displayed in Table 4.5.

Table 4.5: Correlation Analysis

		Compliance	Rev_Automation	Fines_and_Penalties	Operational_Costs
Compliance	Pearson Correlation	1	.073	-.031	-.025
	Sig. (2-tailed)		.538	.792	.835
	N	73	73	73	73
Rev_Automation	Pearson Correlation		1	-.157	-.262*
	Sig. (2-tailed)			.185	.025
	N			73	73
Fines_and_Penalties	Pearson Correlation			1	.092
	Sig. (2-tailed)				.440
	N				73
Operational_Costs	Pearson Correlation				1
	Sig. (2-tailed)				
	N				73

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.5 shows that all the predictor variables are not significantly correlated to compliance.

4.4.2 Multiple Linear Regression Analysis

Research variables were analyzed using regression model. Revenue automation, fines and penalties, and operational costs were regressed against compliance. Regression analysis was done with significance level of 5%. The critical value of 0.05 obtained

from Analysis of Variance (ANOVA) and model coefficients was compared with significance values obtained in the analysis and results displayed.

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.076 ^a	.006	-.037	.91193

a. Predictors: (Constant), Operational_Costs, Fines_and_Penalties, Rev_Automation

The Coefficient of determination also referred as the R square, points out deviations in the response variable as an outcome of the predictor variables utilized in the model. Table 4.6 shows value of R square was 0.006, a finding that 0.6% of the deviations in compliance are caused by the predictor variables included in the study. Additional factors not comprised in the model justify 99.4% of variations in compliance.

Table 4.7: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.334	3	.111	.134	.939 ^b
	Residual	57.381	69	.832		
	Total	57.716	72			

a. Dependent Variable: Compliance

b. Predictors: (Constant), Operational_Costs, Fines_and_Penalties, Rev_Automation

The null hypothesis developed in the study is that the model is not significant to predict compliance. A significance value of 0.939 was obtained in the study, which was below the critical 0.05 value. The null hypothesis was thus not rejected. Thus, the overall model is not significant to predict compliance of rate payers in the Nairobi County.

Table 4.8: Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	.653	2.685		.243	.808	-4.703	6.010
1 Rev_Automation	.122	.223	.069	.548	.586	-.323	.568
Fines_and_Penalties	-.059	.358	-.020	-.165	.869	-.774	.655
Operational_Costs	-.003	.066	-.005	-.040	.968	-.134	.129

a. Dependent Variable: Compliance

Significance of individual coefficients was established using the significance values. The null hypothesis was that the single individual variables do not significantly influence compliance. If the significance values are greater than 0.05, the null hypothesis is not rejected and vice versa. From the findings in Table 4.8, revenue automation, fines and penalties, and operational costs do not significantly affect compliance of rate payers in Nairobi County at the 5% level of significance.

4.3 Interpretation and Discussion of Findings

The study set out to ascertain the effect of revenue automation on compliance of ratepayers in Nairobi City County Government. Fines and penalties and operational costs were introduced as control variables. Collective and individual effect of the independent variables on the dependent variable in terms of the strength and directions were analysed. Individual association of the independent variables on the dependent variable was also done.

The tests for normality exhibit that the variables included in the study are not normally distributed except for fines and penalties. This may cause biasness in the study findings. The tests for homoscedacity, mulitcollinearity, and autocorrelation exhibit that all the study variables display homoscedacity, and lack of presence of

multicollinearity and autocorrelation. This indicates that the study findings lack biasness.

The test for correlation showcases that revenue automation, fines and penalties, and operational costs do not exhibit a significant association with compliance. In the regression analysis, the analysis of variance displays that the model developed is not significant to predict compliance as evidenced by the significance values obtained when compared to the critical value. The model coefficients exhibit that revenue automation, fines and penalties, and operational costs do not have a significant effect on compliance of rate payers in Nairobi County at the 5% level of significance.

The study findings that revenue automation does not significantly impact on compliance are in agreement with a report by KRA (2012) which pointed out that 40% of the taxpayers were registered online as users by the end of 2011 and only 10% out of them filed their tax return through KRA online system. The report treated as negligible the number of small taxpayers who were using online for tax returns except majority of KRA employees whom were instructed to only use online for their individual annual tax returns.

However, the study findings are in disagreement to the findings of the study conducted by Wasilewski (2000) which compared the tax collection between Brazil and Japan and it found out that the revenue collection for Japan was highly automated compared to that of Brazil and that Japan has high economic growth due to better revenue collection.

Furthermore, the study findings are not congruent to study findings by Dowe (2008) which found out that technology has resulted to efficiency of revenue administration,

better taxpayer services and ensuring tax compliance is increasing at both developing and developed countries.

The study findings are also in disagreement with the study findings of a study conducted by Odoyo et al. (2013) in Kenya which examined how local government of Homabay conduct revenue collection and established that automation was able to reduce financial frauds resulting into efficiency and accountability hence increases in revenue collection.

The study findings that fines and penalties do not significantly impact on compliance are in tandem with the findings of a study conducted by Alm (1992) that found evidence that fines do affect tax compliance and the impact was virtually zero. The study findings are also in agreement with findings of the study conducted by Andreoni (1998) which found no support for the deterring effects of fines since it was weak.

However, the study findings are in contrast to the findings of a study done by Kirchler (2007) which established that increase of penalties can have undesirable effect and result in more tax avoidance. The findings were also in disagreement to the findings of a study conducted by Friedland (1978) that established that compliance was strongly affected by the amount of fines.

The study findings that the operational costs of a tax system have no significant impact on compliance is in contrast to the Beckers model which states that ratepayers will evade tax if they think they can get away with it and they will voluntarily improve on tax compliance when probability of getting apprehended goes up thus, if a fiscal organisation invests more in audit, it means that the probability of catching up with defaulters will be high hence the need to comply.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

In this section, a summarization of findings from the previous section is provided, conclusions are derived, limitations that were encountered on the overall study explained. Additionally, this chapter gives recommendation to decision maker as well as the policy makers. Finally, the researcher offers suggestions on areas that can be covered by other scholars in further research studies.

5.2 Summary of Findings

This study aimed at determining the effect of revenue automation on compliance of rate payers in Nairobi County. The specific objectives of the study were to determine the effect of fines and penalties and operational costs of the revenue collection system on compliance of rate payers in Nairobi County. The unit period of analysis was monthly, and data was gathered for the time frame of the 2010/11 financial period to the 2015/16 financial year, which amounted to six financial periods. Data was collected for three financial periods preceding the automation of revenue, and three financial periods after the implementation of the automation of revenue.

Secondary data was obtained from the Nairobi County government. The study employed the use of regression analysis and correlation analysis to establish the effect of the revenue automation, fines and penalties, and operational costs on compliance.

The study established that there is no significant association and relationship between revenue automation, fines and penalties, and operational costs on compliance of rate payers in Nairobi County.

5.3 Conclusion

The study concluded that revenue automation, fines and penalties, and operational costs are not significant to predict compliance. The study also concludes that revenue automation, fines and penalties, and operational costs are not significantly associated with and have no significant impact on compliance.

The study conclusion that revenue automation does not significantly impact on compliance are in agreement with a conclusion of a report by KRA (2012) that the number of small taxpayers who were using the online system for tax returns is negligible.

However, the conclusion is in disagreement to the conclusions of the study conclusion by Dowe (2008) which concluded that technology has resulted to efficiency of revenue administration, better taxpayer services and ensuring tax compliance is increasing at both developing and developed countries. The study conclusion is also in disagreement with the conclusion of a study conducted by Odoyo et al. (2013) that concluded that automation is able to reduce financial frauds resulting into efficiency and accountability hence increasing revenue collection.

The study conclusion that fines and penalties do not significantly impact on compliance are in tandem with the conclusions of studies conducted by Alm (1992) that concluded that fines do affect tax compliance and the impact was virtually zero and by Andreoni (1998) which concluded that there is a weak deterring effects of fines..

However, the conclusion is in contrast to the conclusion of a study done by Kirchler (2007) which concluded that increase of penalties can have undesirable effect and result in more tax avoidance. The conclusion is also in disagreement to the conclusion

of a study conducted by Friedland (1978) that concluded that compliance was strongly affected by the amount of fines.

The study conclusion that the operational costs of a tax system have no significant impact on compliance is in contrast to the Beckers model which states that ratepayers will evade tax if they think they can get away with it and they will voluntarily improve on tax compliance when probability of getting apprehended goes up thus, if a fiscal organisation invests more in audit, it means that the probability of catching up with defaulters will be high hence the need to comply.

5.4 Recommendations

The study findings will aid in further researches to be conducted on the field of revenue automation and compliance. The study findings will provide a useful basis for future research on revenue automation in fiscal bodies mandated by law to collect revenue. This study findings will also advance not only researcher's knowledge of revenue automation but also other factors that impact on compliance. The study findings will be used as referral by later scholars keen in research on revenue automation and its impact on compliance by tax and rate payers.

Policy recommendations are that since it has been established that revenue automation has no significant effect on compliance of tax payers, and additionally that fines and policies, and operational costs also have no significant effect on compliance, it can guide both national and local governments in making policies and practices to boost compliance. They should concentrate more on other factors that impact on compliance other than revenue automation, fines and policies, and operational costs.

The findings of the study will also aid consultants and debt collectors who assist the governments bodies to make strategies to boost compliance or even delegated the tasks of revenue collection to assess which factors to consider so as to augment compliance and thus effectively improving revenue collection. They should concentrate more on other factors that impact on compliance other than revenue automation, fines and policies, and operational costs.

5.5 Limitations of the Study

The study was only conducted for six financial periods, three financial periods before the advent of revenue automation and three financial periods after the implementation of revenue automation. This was mainly due to time and cost constraints. It is not certain that the results will apply beyond the period studied. Furthermore, it is uncertain whether the findings would hold beyond 2018.

As consequence of using secondary sources of data, some of this data was not readily available; and it took great lengths and costs to obtain it. Some data were not utilized in their raw form, for instance the compliance and further calculations and manipulations of the data were required. Impending delays were experienced due to data processing and further editing before the compilation by the researcher.

5.6 Recommendations for Further Study

Basing on the concrete information congregated and the expounding understanding elucidated in this study, it has been recommended that some areas for advance future studies be conducted. First, other factors have influence on compliance other than the ones utilized in the study. This is exhibited by the low explanatory powers of revenue automation, fines and policies, and operational costs in unison on compliance as

indicated by the R Square contained in the model summary. Further research can be done to identify and analyze them.

The current study's scope was limited to six financial periods, three financial periods before the advent of revenue automation and three financial periods after the implementation of revenue automation. Further research can be done beyond the six financial periods to ascertain if the findings would hold. Thus, inherent future studies may use a wider time range, which can facilitate the confirmation or disapprove the current study findings. The study context involved the Nairobi County government, future studies can be conducted on the other county governments and the revenue collection body in Kenya. Researchers in Africa, other regions of East African and other global countries can also conduct the study in these jurisdictions to see whether the current study findings would hold.

Secondary data was solely utilized in the study, alternative research can be employed using primary sources of data like in-depth questionnaires and structured interviews to be administered to the commercial bank practitioners and stakeholders. These can then approve or disapprove the current study findings. Multiple linear regression and correlation analysis were used in this research, further research can incorporate other analysis methods like factor analysis, cluster analysis, granger causality and discriminant analysis.