

**FACTORS INFLUENCING UTILIZATION OF ELECTRONIC TAX REGISTER  
BY SMALL MEDIUM ENTERPRISES IN NAIROBI CENTRAL BUSINESS  
DISTRICT**

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**DECLARATION**

I declare that this project is my original work and has not been presented for any award of a degree, diploma or certificate in any other college, institution or university.

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This research project has been submitted for examination with my approval as the university supervisor

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

ETAAC	Electronic Tax Administration Advisory Committee
ETR	Electronic Tax Register
ICT	Information communication technology
IRBM	Inland Revenue Board Malaysia
IRS	Information Technology infrastructure
ITAS	Integrated Tax Administration System.
KRA	Kenya Revenue Authority
OECD	Organisation for Economic Cooperation and Development
PIN	Personal Identification Number.
PwC	Processes of Tax Administration
SMEs	Small Medium Enterprises
SSA	Sub Saharan Africa
TRA	Tanzania Revenue Authority
URA	Uganda Revenue Authority
USA	United States of America
VAT	Value added tax

## **OPERATIONAL DEFINITION OF TERMS**

<b>Tax</b>	refers to the contribution to state revenue, levied by the government on workers' income and business profits, or added to the cost of some goods, services, and transactions (Muturi and Kiarie, 2015).
<b>Tax compliance</b>	refers to the ability of citizens to fulfill the tax obligation as required of them by law and regulations of a country (Mandola, 2013).
<b>SME</b>	refers to a business enterprise with revenue not exceeding kshs 5,000,000 per annum and more than kshs 500,000 in sales (OECD, 2013)
<b>Tax fines</b>	refer to a penalty enacted on an individual/non individual for not paying enough of his or her total estimated tax and withholding (Boone , 2012)
<b>Tax rate</b>	refers to the percentage at which an individual or corporation is taxed based on an individual's taxable income or business earnings (Mandola, 2013).
<b>Tax register</b>	refers to any device approved by the government to record and issue fiscal data of goods and services (Lemuria Carter, 2011).

## ABSTRACT

In Kenya, benefits of automation include a reduction of fraud, remote access to information, improved collection statistics, and uniform application of tax legislation. However, use of ETR in processing tax returns has been met with mixed reactions, resistance and perceptions while KRA believes it has increased efficiency in operations and revenue collection. In view of this, the primary goal of this study was to analyse the factors influencing utilization of electronic tax register by Small Medium Enterprises in Nairobi CBD. The study was guided by the following specific objectives: to establish the effect of knowledge of electronic tax system operation on its utilization by Small Medium Enterprises, to determine the effect of cost incurred on the utilization of electronic tax register by Small Medium Enterprises, and to establish the extent to which user perceptions affects utilization of electronic tax register by Small Medium Enterprises. This study was guided by the systems theory, technology determinism theory and the ability to pay theory managers/owners. The study adopted descriptive research design. The study population was 7,719 SMEs in Nairobi. Simple random sampling technique was used to select the sample. The sample size of this study was based on Yamane's 1967 formulae to get a sample of 380 respondents. This study used primary data that was collected through questionnaires. To determine the reliability of research instruments a pilot study was conducted before the actual data collection and further split half method was carried out to calculate Cronbach alpha. A value of above 0.7 confirmed the reliability of the research instruments. The data was analyzed using both inferential (multiple regression and correlation) and descriptive statistics (frequencies, percentages, mean and standard deviation) and was presented by use of tables. The study findings indicated that knowledge of electronic tax system operation ( $\beta = 0.103$ ;  $\rho < 0.05$ ), cost incurred ( $\beta = 0.393$ ;  $\rho < 0.05$ ) and user perceptions ( $\beta = 0.328$ ;  $\rho < 0.05$ ) had significant relationship with utilization of electronic tax register by Small Medium Enterprises. Therefore, it is recommended that the government should ensure proper training of entrepreneurs on the utilization of ETR machines, small and medium sized enterprises within the VAT threshold use ETRs in their operations, review the compliance costs to ensure more SMEs access VAT tax services, provide free and cheaper ETRs to SMEs. Lastly, there should be regular SME training and capacity building on ETR technical skills, systems and processes

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

An electronic tax register can be defined as one that enables taxpayers to register and submit their tax returns over the Internet. The system could have inbuilt software that has been preapproved by the relevant tax authority to assist the taxpayers in calculating and consequently submit the correct amount of tax due (Muturi and Kiarie, 2015). The benefits of electronic tax register over submitting manual returns to the tax office are that the return goes directly to the revenue authority's systems with a greatly reduced chance of human keying or document scanning errors. In addition electronic tax register cost less to process compared to a manual return both in terms of money and time to the revenue as well as the tax payer (Lemuria Carter, 2011). Electronic tax register is also environmentally friendly as there is less paper used.

With the rapid advancement in information and communication technology that the world continues to experience, the operation of the tax collection and administration system continues to be a challenge for many authorities. Tax authorities are being challenged to maintain a modernized and responsive tax administration system so as to facilitate faster collection of taxes which is user friendly and also cost effective (Choong, 2010). An electronic tax register integrates the processes of registration, tax preparation, tax filing and tax payment. Taxpayers therefore avoid the hassles of visiting the tax office and making long queues, the returns are filed at their convenience. It is in this regard that several tax authorities have embraced the change and adopted an e-filing approach (Mandola, 2013)

Utilization of electronic tax register has several key components or modules which are centered around the taxpayer, who is identified using a unique personal identification number (PIN). These components are: Taxpayer registration which aids in the registration of taxpayers; assessment processing; account management module that gives information about the taxpayer; payment processing module that makes it possible for taxpayers to generate payment slips; collection and enforcement module that is useful in defaulter

identification by matching assessments and payments; and reporting and statistics module that helps in revenue report compilation (KRA, 2016). The intended purpose of electronic tax register is to increase the speed of service delivery, enhance accountability and integrity through reduced opportunities for corruption, as well as reduce tax avoidance and evasion by utilizing its capabilities of electronic data matching and enhanced third party information, hence increased revenue collection (KRA, 2015). Despite its importance there are various factors that influence its utilization of electronic tax register by Small Medium Enterprises. These factors include Compliance cost, training, tax compliance and user perceptions.

Tax compliance costs are the costs incurred by taxpayers in meeting the requirements laid on them by the tax law and the revenue authorities. These are costs over and above the actual payment of tax and over and above any distortion costs inherent in the nature of the tax. These costs would disappear if the tax was abolished. They include the costs of collecting, remitting and accounting for tax on the products and profits of the business and on the wages and salaries of its employees, and also the costs of acquiring and updating the knowledge to enable this work to be done, including knowledge or legal obligations and penalties (Mandola, 2013).

Training can be described as a method of educating the people about the whole process of taxation and why they should pay tax (Aksnes, 2011). It assists taxpayers in meeting their tax obligations to the government. This means that the primary existence of taxpayer education is to encourage voluntary compliance amongst taxpayers. According to Misra (2014), the main objective of tax payer education is in three folds: impart knowledge as regards tax laws and compliance; change taxpayer's attitude towards taxation and increase tax collection through voluntary compliance.

Tax compliance refers to the degree to which taxpayers meet their obligations under the tax law (Muturi and Kiarie, 2015). All individual taxpayers and businesses should fulfill their obligations under the law to register for tax purposes, and to voluntarily declare and pay on time their tax liabilities (Aksnes, 2011). Tan and Chin-Fatt (2008) state that tax compliance by taxpayers can be viewed in terms of whether such compliance is achieved

voluntarily (quasivoluntary compliance) or corrected by enforcement actions carried out by the revenue administration (enforced compliance).

Perception towards Electronic Tax Registers refers to the perceived fairness of a tax system which is important both to its acceptability and smooth functioning. According to De Mello (2018) tax can be seen as unfair in a number of ways: If those of similar incomes are taxed differently, he found out that how a person perceives his own role in influencing the perceived inequity is of central importance and he argues that a taxpayer may withdraw from the exchange relationship by evading taxes in order to offset or reduce the disparity

### **1.1.1 Global Perspective of Utilization of Electronic Tax Register**

According to Cobham (2010), the electronic tax system has been around, globally, for the last 30 years. According to Friedman, Kaufmann and Zoido-Lobaton (2010), those SMEs and persons that are inclined to cheat on their sales tax are probably already cheating on their income tax and would be inclined to do so under any tax system. Similarly, the taxation of SMEs faces several major policy challenges. The first one concerns compliance costs of taxation. Existing empirical evidence clearly indicates that small and medium sized businesses are affected disproportionately by these costs: when scaled by sales or assets, the compliance costs of SMEs are higher than for large businesses. Given that small start-ups and research oriented SMEs are generally considered as important factors for economic growth, tax compliance cost may slow down the economy. At least two policy responses to the problem of compliance costs are conceivable. Governments could try to generally simplify tax administration for businesses (Muturi and Kiarie, 2015).

One of the earliest adopters of online filing was the United States of America (USA), through its Internal Revenue Service (IRS). The IRS, in recognition of the need to effectively and efficiently collect taxes with minimum disruption to taxpayers employed the use of modernized Information Technology infrastructure (IRS, 2007). According to e-File LLC (2016), online filing of tax returns in the USA began as early as 1986. Initially, e-filing in the USA began as a small test program with only 25,000 tax returns

being filed electronically. The system also allowed a tax refund to be wired directly to the taxpayers' bank account. It was seen to greatly reduce the chances of making an error while filing the tax return. The test program's success led to its rollout to other cities initially not covered. Four years later 4.2 million tax returns were filed in the year 1990. As at 2013, the method had become widely popular with a record of 1 billion tax returns having been filed throughout its history (LLC, 2016)

In the Australia, it was found that the lack of perceived benefits, cost of compliance, lack of willingness to learn and perceived insecurities and misconceptions of the e filing service have impeded the tax professionals in the US from expending the resources to get involved (ETAAC, 2017). In a similar vein, in the UK, the ACCA survey found that professional accountants have shown no confidence in online tax filing (Khadijah, 2014). The Electronic Tax Administration Advisory Committee (ETAAC) is recommending mandating certain taxpayers and tax practitioners to e-file personal and business tax returns in the US (ETAAC, 2009). In Singapore, studies indicated that the government needs to restore public trust in e-filing and to blend sociopolitical strategies, technology and taxation together.

In 2006, the Inland Revenue Board Malaysia (IRBM) streamlined the tax administration policies to embrace an e-filing system (Porschke and Witte, 2011). With the e-filing system, Malaysian taxpayers and tax agents can file their income tax returns electronically via the enabling Internet technologies, rather than through mail or physical visits to the tax office, thus simplifying the process of making returns for the taxpayer. In its first year of implementation of e-filing system for individual taxpayers, in spite of the extension of the tax filing deadline by one month and a promise to get faster tax refund for e-filers; just more than 120,000 out of 4 million individual taxpayers opted to use e-filing; which represented only 3% of the total individual taxpayers (Standard Newspaper, July 21, 2012). Factors attributed to this include taxpayers' discomfort about e-filing technology and the perceived insecurity of e-filing in addition to lack of internet self-efficacy and skills are Though it is yet to gain momentum, the number of taxpayers using e-filing has increased gradually from 538,558 in 2007 to 881,387 in 2008 (Standard

Newspaper, July 21, 2012). Most recently, the Malaysian Inland Revenue Board has been streamlining the tax administrative policies to embrace an e-filing system (Wasao, 2014)

### **1.1.2 African Perspective of Utilization of Electronic Tax Register**

Electronic tax administration systems have gained prominence in Sub Saharan Africa (SSA) in the 21st century. This has been spurred on by the need for improved efficiency and accountability in taxation systems, and inherently the adoption of information technology (IT) tax based systems (Organisation for Economic Cooperation and Development (OECD, 2013). Population growth and demands for transparency in tax administration policy has further emphasized the need for better revenue collection systems and policy in East African countries (Khadka, 2015).

In Nigeria modernized its tax administration services in the period between 2004 and 2013. The online system was known as Integrated Tax Administration System (ITAS). The system was launched in 2013; its main aim was to use technology to enhance tax compliance with automation of all core processes of tax administration (PwC, 2015).

The East Africa region was not left behind; Uganda and Tanzania were early reformers of their revenue administration systems in the Eastern Africa Region (KRA, 2010). Muwonge (2011) notes that in Uganda, the Uganda Revenue Authority (URA) in 2005 developed an online tax system dubbed 'e-Tax'. Muwonge (2011) further comments that the purpose of the online tax system was to enable efficiency in the tax administration process as well as reduce the taxpayer's expenses in tax compliance. In Tanzania on the other hand, electronic filing of VAT returns was introduced in October 2012 significantly reducing the time taken to file the tax returns. Additionally, in 2013 the Tanzania Revenue Authority (TRA) launched a Revenue Gateway System, an interface between the TRA and commercial banks enabling seamless payments of taxes (Wasao, 2014)

### **1.1.3 Kenyan Perspective of Utilization of Electronic Tax Register**

In Kenya, the first KRA ICT strategy was developed in November 2005 as a modernization roadmap for the transformation of the Management Information Systems (MIS) Department in line with the technology trends and to re-align the KRA operational

systems along the business strategic direction. Various projects were identified for implementation over a period of five years starting from December 2005. Information and Communication Technology Department in KRA operates in an environment that demands significant reliance on automation as a result of advances in IT and telecommunication that is facilitated by an enabling legal and regulatory framework in the country. The mandate of ICT in KRA is to support KRA business objectives and play the role of a change enabler in the modernization of business operations and support systems (KRA ICT Strategy, 2014/2018).

Kenya Revenue Authority in year 2014 switched the country's tax system from manual to a new electronic platform iTax, the new electronic tax system dubbed iTax is an online platform that allows the tax payer to view his/ her tax position and access all services offered by KRA from the comfort of his/her home or office (KRA, 2014). Despite all the efforts aimed at developing better and easier electronic tax filing systems, these tax-filing systems has remained unnoticed by the public or are seriously underused in spite of their availability. Kenya is ranked among low compliance countries with the hard task of ensuring efficient and effective tax administration, in order to ensure tax compliance, hence raising more revenue (Mandola, 2013). Therefore, there is a need to understand the acceptance by the users of the electronic tax-filing systems and identify the factors that can affect their decision to use or not use these electronic tax-filing systems. This issue is important in that the answer could help the government to plan and promote new forms of electronic tax-filing systems in the future.

The SMEs in Kenya are characterized by the ease of entry and exit, the small scale nature of activities, self-employment with a high proportion of family workers and apprentices, the little amount of capital and equipment, their labor intensive technology, the low level of skills, the low level of organization with little access to organized markets, the unregulated and competitive markets, the limited access to formal credit, the low levels of education and training and the limited access to services and amenities (Waweru, 2007). VAT also requires regular returns from a large number of firms. However, with proper record-keeping, one advantage of VAT is that it creates a clear invoice trail, making it much easier to detect and deter tax evasion. Similarly, the multistage structure

of VAT induces firms to register voluntarily as taxpayers. The other challenge is that there are different rates of tax for various goods and services, which makes it difficult for average citizens to understand what is expected of them (Karingi et al., 2005).

## **1.2 Statement of the Problem**

Automation facilitates the clearance of legitimate trade, improves the efficiency of taxation controls and secures revenue collection. In Kenya, benefits of automation include a reduction of fraud, remote access to information, improved collection statistics, and uniform application of tax legislation (Muturi, Mutivo & Nyang'au, 2015). The introduction of tax registers minimizes direct contacts between tax collection officers and traders hence reduction of corruption.

Further benefits achieved through automation include improved reporting, control of file transfers, automatic reconciliation of tax returns declarations, and compliance testing of bank files. Paperless declarations and customs automation save time and make it easier to focus on inspecting high-risk consignments (Murigu, 2017). However, use of ETR in processing tax returns has been met with mixed reactions, resistance and perceptions while KRA believes it has increased efficiency in operations and revenue collection. Recurrent maintenance cost, ETR handling and higher compliance costs have been reported as major problems SMEs face (KRA, 2015).

There have been incidences of unallowable expenses due to lack of consistency and transparency. Though ETR was introduced to reduce the burden of cross checking records, some SMEs are yet to embrace the idea. Challenges on payment for ETRs, installation costs, maintenance cost and annual checkup cost have been cited. There have been inconsistencies of the automation in improving efficiency for SMEs. KRA has experienced inconsistency in business classification which has made measurement of taxation compliance costs and identifying costs difficult. Further, some SMEs have questioned quality of service and training offered by ETR suppliers. Fixing ETR technical problems bears high maintenance cost for SMEs while at the same time, they are not sufficiently trained to handle technical issues. This has greatly influenced the cost of running the ETRs (Murigu, 2017). This has been compounded by the fact that only the KRA officials are adequately conversant with ETR. Some shy off from acquiring ETR

because they lack necessary operational skills. Some ETR suppliers also take time to respond regarding malfunctioned machines. It is therefore against this background that the study sought to analyse the factors influencing utilization of electronic tax register by Small Medium Enterprises in Nairobi.

### **1.3 Objective of the Study**

#### **1.3.1 General Objective**

The purpose of the study was to analyse the factors influencing utilization of electronic tax register by Small Medium Enterprises in Nairobi CBD.

#### **1.3.2 Specific Objectives**

This study sought to achieve the following specific objectives:

- i. To establish the effect of knowledge of electronic tax system on its utilization by Small Medium Enterprises.
- ii. To determine the effect of cost incurred on the utilization of electronic tax register by Small Medium Enterprises.
- iii. To establish the extent to which user perceptions affects utilization of electronic tax register by Small Medium Enterprises.

### **1.4 Research Questions**

The study sought to answer the following research questions;

- i. What are the effects of knowledge of electronic tax system on its utilization by Small Medium Enterprises?
- ii. What is the effect of cost incurred on the utilization of electronic tax register by Small Medium Enterprises?
- iii. To what extent does user perceptions affects utilization of electronic tax register by Small Medium Enterprises?

### **1.5 Significance of the study**

The outcomes of this research will add information to the current available laws and regulations in tax compliance which will be of incredible use to the administration in

planning and reviewing policies to avoid non-compliance. Learning the factors influencing utilization of electronic tax register by Small Medium Enterprises will be important by availing the results of the study to help those in the area to expand their strategies on tax system.

It will likewise help KRA in distinguishing the different needs of taxpayers in order to settle on key choice for expanding utilization of electronic tax register by Small Medium Enterprises. The investigation will likewise help pay workers from SME's segment to pick up learning on the significance of paying taxes and recording their profits.

Lastly findings from this study will help the government to institute the necessary legislative and administrative measures to enhance tax compliance among SME's and also to increase cases of voluntary compliance and enforce compliance in cases of non-compliance.

### **1.6 Scope of the study**

The study sought to analyze the factors influencing utilization of electronic tax register by Small Medium Enterprises in Nairobi. The specific factors covered include; knowledge of operation of electronic tax system, cost incurred, tax rates and user perceptions. The study employed descriptive research design. And the population was all the SMEs managers in Nairobi. This study was carried out between the months of June and September 2019.

### **1.7 Limitations of the Study**

The researcher encountered a number of challenges when undertaking the study. However, the limitations did not have a significant interference with the outcome of the study. The use of self-administered questionnaire was a limiting factor in terms of respondents getting the time and understanding the questions for which answers were being sought. The challenge was however reduced as the researcher was able to make follow-ups and clarify the questions that respondents were not able to comprehend or answer. This greatly reduced the number of unfilled sections in the questionnaires and increased the response rate.

Since the information required was confidential, the respondents were not willing to participate in the study. This limitation was overcome by assuring the respondents that the research project was solely for academic purposes and that data confidentiality would be upheld. Since there were respondents who would not give objective opinions about leadership styles used in the counties and how they influence the change management the researcher encouraged the respondent to be more objective as possible.

Some of the respondent had concerns of being victimized for taking part in the study and hence were not willing to give the required information for the study. However, the researcher sought to create good rapport with the respondents and encouraged them to take part in the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews literature related to the study based on the themes that follow; effect of level of knowledge of operation of electronic tax system, cost incurred, and the extent to which user perceptions affects utilization of electronic tax register, theoretical review, conceptual framework and summary of literature.

#### **2.2 Theoretical Review**

In order to elaborate on the factors influencing utilization of electronic tax register, the researcher focused on the following theories as elucidated by numerous researchers.

##### **2.2.1 Systems Theory**

Systems Theory was developed by Talcott Parsons in 1950. This theory states that systems are made up of various parts which are dependent on each other and relate to each other, sometimes in very complex and at times in simple ways. Most if not all organizations are open systems meaning that they are dependent on the eternal environmental factors for survival (Drucker, 1988). The systems can either be closed or open and are a series of organizational activities working together for the aim of attaining the organization objectives (Gerson, 2007). Systems theory has two assumptions, the first is the epistemological assumptions which states that groups will use processes and their resources within their environment to develop the desired outputs and the second is the ontological assumptions stating that the theory is deterministic, because the environment and the resources provide the processes that are used to gain the desired outputs.

According to Kiprop (2016), flow of information and material from any part of the system must be consistent to the input necessities. The organization gets inputs from the outside world which it then transforms into output and takes it back to the world for use. According to McAuley, Duberly and Johnson (2007) Systems Theory was proposed as an approach to understanding the fundamental nature of the systems. From time to time, suffer disturbances, as the disturbances occurs the subsystems of the organization change

in order to adjust to the new circumstances. They do so in order to maintain the system as a whole. Koontz and Weihrich (2009) found that organizations are systems which it belongs, the economic system and the society. Hence, the enterprise receives inputs then transforms them and exports the output to the environment. Some of the outputs become input again in other areas.

Systems theory was relevant to this study in that information system has a central database which is the bigger system from which other applications such as the online tax return processing, tax compliance monitoring and electronic tax payment is done and other organizational services and products are obtained, human resource, reporting application amongst other application emerge. Systems theory is also significant to the study as it clearly demonstrated the relationship between an itax and revenue collection. Proper management of that relationship ensures that the conversion process of inputs to outputs is smooth. Systems theory views the management in totality and helps in seeing the problems of the smes revenue collection in a wider perspective (Gerson, 2007).

Systems theory has been widely criticized, despite its frequent use, the systems approach does not work well enough to stand on its own merits. It has fell out of favor because it didn't work well enough, especially in the case of solving organizational problems emanating from the external environment. It has further been criticized that the societal claims of the systems thinkers served only to justify the claims to power and prestige of the technocratic elite, is characteristic of more recent reactions to systems views among social scientists. A system thinking has come to be associated with the highly rationalized technological and institutional systems and the concept of system has become synonymous with control and totalization.

Modern theorists of technology and society no longer consider technological determinism to be a very accurate view of the way in which we interact with technology, even though determinist assumptions and language fairly saturate the writings of many boosters of technology, the business pages of many popular magazines, and much reporting on technology (Amin, 2013) Instead, research in science and technology studies, social construction of technology and related fields have emphasized more nuanced views that resist easy causal formulations. They emphasize that the relationship between technology

and society cannot be reduced to a simplistic cause-and-effect formula. It is, rather, an 'intertwining"', whereby technology does not determine but operates, and are operated upon in a complex social field. Feenberg (2012) argues that technological determinism is not a very well founded concept by illustrating that two of the founding theses of determinism are easily questionable and in doing so calls for what he calls democratic rationalization (Feenberg 2012).

### **2.2.2 Technological Determinism**

Technological Determinism theory was coined by Thorstein Veblen between 1857–1929. Technological determinism (TD), Wood (2004) simply put, is the idea that technology has important effects on people's lives. This idea figures prominently in the popular imagination and political rhetoric, for example in the idea that the Internet is revolutionizing economy and society. According to the Technological Determinism theory wherein this study underlies, technology, specifically media decisively shapes how individuals think, feel and act and how societies organize themselves and operate. The thinking behind this theory is that people shape their tools.

Wood (2004) indicates that as an example, the computer is one technology that has promoted in society expectations of immediacy, and ability to multitask by engaging in several tasks simultaneously or in overlapping and interactive ways hence enhancing continence. This theory was relevant to the study because technological determinism has been defined as an approach that identifies technology, or technological advances, as the central causal element in processes of social change. As a technology is stabilized, its design tends to dictate users' behaviors, consequently diminishing human agency.

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and society cannot be reduced to a simplistic cause-and-effect formula. It is, rather, an 'intertwining"', whereby technology does not determine but operates, and are operated upon in a complex social field. Feenberg (2012) argues that technological determinism is not a very well founded concept by illustrating that two of the founding theses of determinism are easily questionable and in doing so calls for what he calls democratic rationalization (Feenberg 2012).

### **2.2.3 Ability to Pay Theory of Taxation**

Ability-to-pay theory is a progressive taxation principle that maintains that taxes should be levied according to a taxpayer's ability to pay. This theory places an increased tax burden on individuals, partnerships, companies, corporations, trusts, and certain estates with higher incomes. Ability-to-pay theory requires higher-earning individuals to pay a greater percentage of their income towards taxes, compared to individuals with lower incomes. The tax rate increases as a percentage along with income (Fjeldstad, Schulz-Herzenberg and Sjursen, 2012).

This is one of the major theories of modern taxation; it is primarily based on the Law of diminishing marginal utility. Pigou (1928), observed that in all instances in order to secure equal sacrifice, the tax formula must be in some measure progressive, in the sense that the rate of taxation grow as incomes increase. The ability to pay theory of taxation has been used to justify the progressive tax system of taxation that is widely practiced across the globe. It is based on the following assumptions; the falling rate of marginal utility of money given an increase in supply, sacrifice in payment of taxes and the ability to quantify the sacrifice (Merima, Fjeldstad, and Sjursen, 2013).

The theory will be relevant to the study because it justifies equity as a principle of taxation and can also be applicable to smes to improve compliance, the SMEs sacrifices part of their income and it is turned over to the government to be spent on public services. The sacrifice is measured both in terms of the burden that SMES bears on sacrificing their income to the public but also the ease with which they got that income.

Critics of ability-to-pay taxation state that progressive tax systems reduce the incentive to climb the earnings ladder. It penalizes those who through hard work and ingenuity have

risen into higher incomes. These critics claim ability-to-pay taxation is not fair for wealthy individuals (Lumumba, Migwi, and Obara, 2011).

## **2.3 Empirical Review**

In this section, the study reviews literature based on the objectives of the study.

### **2.3.1 Knowledge of Tax System and Utilization of Tax Register**

The Board and Management of KRA have since its inception spent time and resources setting up systems, procedures and the adoption of new strategies aimed at enhancing the operational efficiency of the Authority's processes. In particular, the functions of the Authority are: To assess, collect and account for all revenues in accordance with the specified provisions of all revenue collection laws; To advise on matters relating to the administration, and collection of revenue under the specified provisions of all revenue collection laws and, to perform such other functions in relation to revenue as the Minister of Finance may direct. In fulfilling its mandate, KRA administers 17 revenue Acts, with the key ones (in terms of revenue importance) being the Value Added Tax (VAT) Act (Cap. 476), the East African Community Customs Management Act (EACCMA), the Income Tax Act (Cap. 470), the Customs and Excise Act (excise provisions) (Cap. 472) and the Traffic Act (Cap. 403).

Karingi et al (2005) argues that in revenue collection, tax system is crucial in the implementation of a properly designed tax. Tax system consists of three interrelated activities: a) the identification of tax liabilities based on existing tax laws, b) the assessment of taxes to determine if the taxes actually paid are smaller (or large) than liabilities and, c) the collection, prosecution and penalty activities that impose sanctions on tax evaders and ensure that taxes and penalties due from tax payers are actually collected.

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

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

Muita & Makanga (2010) did a study on the adoption of technology as a strategic tool for enhancing tax compliance in Kenya. The case study was based on Large Taxpayers which included companies with a turn over Kshs.750 million and above, or government ministries and corporations. The objective of the study was to evaluate the role Technology would play in Kenya to enhance tax compliance among large taxpayers. The study found that in the fast changing business world, technology has become part and parcel of any business growth.

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

A study by Kariuki (2013) has found that ICT plays a vital role in the revenue administrations through its versatile nature that avails accessible data in both historical and current categories, reduces computation errors, and reduces data processing time and mitigating overall costs. It is further noted in the study that there is improved client service and voluntary tax compliance resulting in increased revenue collections and reduced frequency of interaction between the authority staff and the taxpayers thereby facilitating the decision-making process

Atambo and Gekonge (2016) did a study on the effects of electronic tax system on the revenue collection efficiency of Kenya Revenue Authority. According to Atambo and Gekonge (2016), Electronic tax system is a computerized tax administration system that is especially designed to handle general tax administration from registration, assessment, filing returns and processing of claims and refunds. Its intended purpose is to reduce the cost of the tax payer complying with Kenya Revenue Authority (KRA), increase tax collection and remove the inefficiencies associated with costs of movement by tax payers to KRA offices to do business and present to tax payers a system that reduces their cost of compliance. The study employed a case study research design of revenue collection efficiency of KRA within Uasin Gishu County. The main data collection tools were questionnaires that were administered to the respondents. They found out that revenue collection activities including tax payment, registration, returns and filing have improved since the inception of the system.

Muita (2011) did study on the factors that influence adoption and use of e-filing system among Large Taxpayers in Kenya. The study examined the skills required by the users of e-filing, the technology required and the tax authority's preparedness in enhancing the adoption of tax compliance based technology. The study found that for e-filing to effectively take off in Kenya skills, infrastructure and conducive business environment are needed. For instance, a study of South Korea and Turkey on user evaluation of tax filing web sites was done by Lee, Liu, Hui and Chen (2013), to compare the design and the complexity of the web sites and the ease with which taxpayers are able to file tax returns and queries on their tax status. While Turkey had a complex online system, to the contrary Turkish users did not find tax filing system difficult to use and that was attributable to the fact that they relied on accounting professionals to do their tax returns online. On the other hand, South Korean system was considered less complex but few taxpayers were using it as expected.

### **2.3.2 Cost and Utilization of Tax Register**

Tax compliance costs are the costs incurred by taxpayers in meeting the requirements laid on them by the tax law and the revenue authorities. These are costs over and above the actual payment of tax and over and above any distortion costs inherent in the nature of

the tax. These costs would disappear if the tax was abolished. They include the costs of collecting, remitting and accounting for tax on the products and profits of the business and on the wages and salaries of its employees, and also the costs of acquiring and updating the knowledge to enable this work to be done, including knowledge or legal obligations and penalties (Sandford, 1995)

For individuals, compliance costs include the costs of acquiring sufficient knowledge to meet legal requirements; of compiling the necessary receipts and other data; making the relevant calculations and completing tax returns; paying professional advisors for tax advice; and paying incidental costs of postage, telephone, and travel to communicate with tax advisors or the tax office. For a business, the compliance costs include the costs of collecting, remitting, and accounting for tax on the products or profits of the business, and on the wages and salaries of its employees. Tax Compliance costs for a business also includes the costs of acquiring the knowledge to enable this work to be done including the knowledge of their legal obligations and penalties (Sandford, Godwin & Hardwick 1989).

A study by Eragbhe and Modugu (2015) evaluated the estimated cost of tax compliance for SMEs in Nigeria. The study explored the sum of internal compliance cost, external compliance cost and incidental cost; including bribery psychological cost related to the different taxes paid by SMEs in Nigeria. The study findings revealed smaller SMEs were taxed more than larger SMEs, and therefore there was existence of tax compliance costs regressivity in Nigeria. Nahida et al., (2014) also investigated the nature and extent of the relationships between the complexity of Bangladesh's Value Added Tax legislation, the costs of compliance with VAT in Bangladesh, and noncompliance with the VAT legislation by Bangladeshi SMEs. The study findings established that a majority of the compliant SMEs taxpayers listed complexity in VAT law and compliance costs as the two important factors influencing VAT noncompliance in SMEs. A study by Mas'ud et al. (2014) examined the correlation as well as the effect of tax rate on tax compliance in Africa using cross-country data. The findings showed that there is significant negative correlation between tax rate and tax compliance. Osebe (2013) analyzed the factors affecting tax compliance in real estate sector in Kenya. The study used explanatory

research design and a sample of 271 respondents from Nairobi Town. The study findings established that compliance cost had a negative effect on level of tax compliance of the real estate sector in Kenya.

Njeru, Kariuki and Mwangi (2017) did a study on Tax compliance cost and tax payment by small and medium enterprises in Embu County, Kenya. The population of interest comprised all the 615 registered SMEs in Embu County. This study used a sample of 185 Small and Medium Enterprises in Embu County, which were selected using stratified and simple random sampling methods. Data for the study was collected using questionnaires. Descriptive statistics like mean, standard deviation and percentages of responses were calculated. Inferential statistics like regression, analysis of variance and t tests were used to test the significance. The findings of the study found a significant positive relationship between tax compliance costs and tax compliance by Small and Medium Enterprises in Embu County. The study concluded that there is a significant direct relationship between tax compliance costs and tax payment by Small and Medium Enterprises in Embu County. The study recommended that the Kenyan tax authorities should come up with policies to reduce tax compliance cost in order to enhance tax payment. The policies should also ensure that they do not affect the growth of Small and Medium Enterprises and should encourage Small and Medium Enterprises to comply with taxes.

Sapiei, Abdullah, Che Azmi and Mustapha (2017) examined Compliance Costs and the Behaviour of SMEs with the Implementation of GST in Malaysia. A total of 401 usable survey responses were received from SMEs situated in the Klang Valley. Findings indicate that the costs incurred by SMEs ranged from MYR10,000 to MYR225,000 and were between 1.16% and 26.15% of their sales turnover. The average costs were approximately MYR43,803 per SME, which is five times higher when compared to the findings of a similar Malaysian study prior to GST implementation. The costs incurred in dealing with GST varied depending on SMEs' respective business characteristics, but costs were clearly higher for the construction industries. Compliance behaviour, which was measured using two tax scenarios, indicated that SMEs were predominantly compliant with income reporting and registration of the GST. The introduction of the GST in Malaysia provides an excellent opportunity for researchers to study its

commencement costs and the behaviour of SMEs in view of the lack of international evidence in this area.

### **2.3.3 User Perceptions and Utilization of Tax Register**

The perceived fairness of a tax system is important both to its acceptability and smooth functioning. According to De Mello (2008) tax can be seen as unfair in a number of ways: If those of similar incomes are taxed differently, he found out that how a person perceives his own role in influencing the perceived inequity is of central importance and he argues that a taxpayer may withdraw from the exchange relationship by evading taxes in order to offset or reduce the disparity. A recent work by Adams (1996) shows that perceived inequity in the taxation system was found to be the most important variable predicting non-compliance in those running small businesses in Holland.

Boone (2012) conducted a quasi experimental survey within 8 different states in America to assess the factors that best explain whether a taxpayer adopts the new technology of electronic filing and once they have adopted e-filing, the factors that predict taxpayers' satisfaction with the process. Incorporating the various theories of technology adoption, Boone concludes that a modified version of TAM seems to provide a very solid basis for exploring the factors that affect adoption of state internet filing systems. Boone, (2012) confirmed his hypothesis that with regard to perceived ease of use, the more that an individual feels that a particular filing method (between the e-filing and manual method) is easier to use, the more likely they are to use that particular filing method to file their state tax return. Boone's research also confirmed that the more useful individuals perceive their chosen filing method, the more likely they are to use that method to file. Boone's study was however limiting in that the number of respondents who had actually used the state's website to file was insufficient to conclude on the factors that influenced their choice to e-file.

Kira (2017) evaluated the taxpayer's perceptions on the use of electronic fiscal devices (EFDs) by analyzing the benefits of using EFDs in revenue collection; the perceptions of taxpayers towards the use of EFDs and challenges towards the use of the EFDs in revenue collection. The study adopted the survey research design and the sample size of 75 taxpayers was used. The findings show that majority of taxpayers' demonstrated

advantages of using EFDs machine in revenue collection. The study findings reveals that EFDs has reduced the time it takes to prepare sales report, secure tax information for auditing purpose and transaction; and ensure tax rate to be paid by the taxpayers. The challenges faced by EFDs users includes high prices of EFD machines, faint fiscal tax invoices, EFD's network problem, lack of taxpayer's education EFDs applications and few suppliers of EFDs machines.

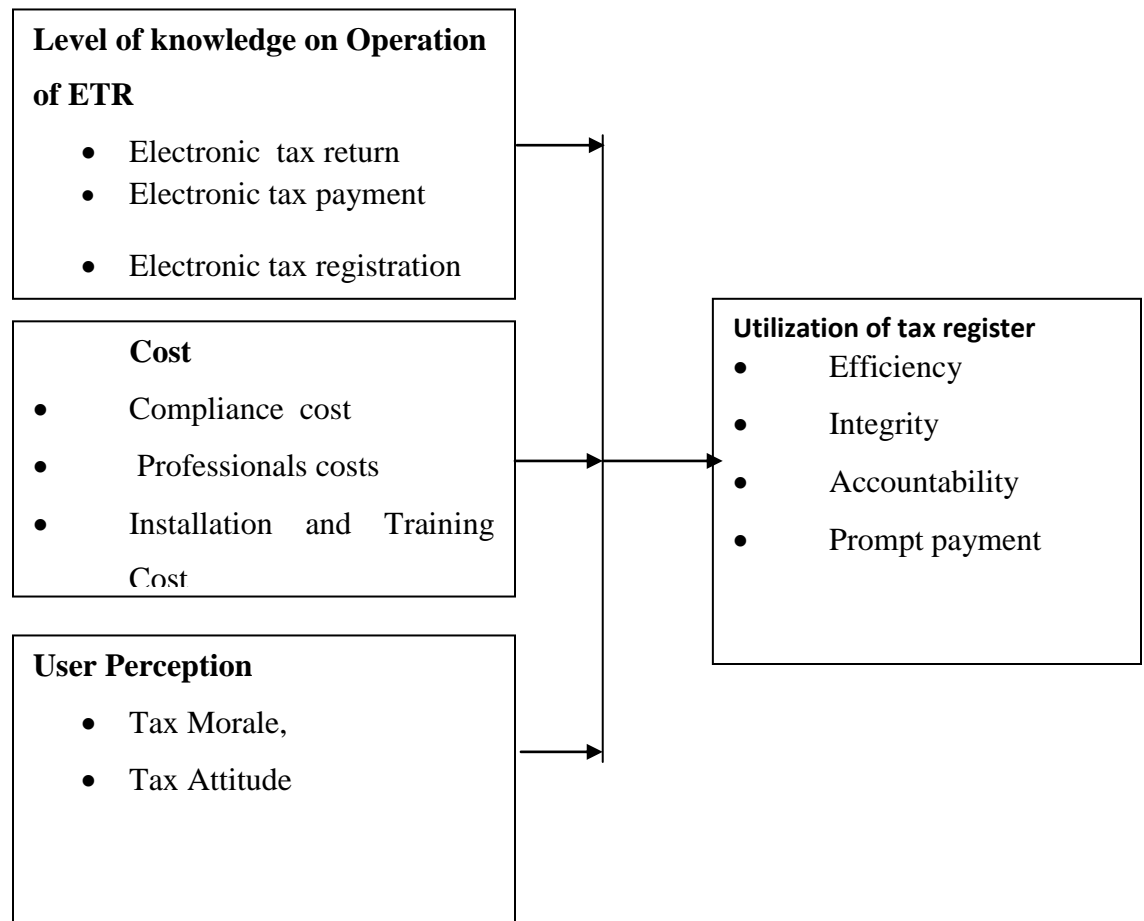
Nyasha et al., (2013) study deals with attitudes of employees towards the use of fiscal electronic devices in calculating value added tax (VAT); this was, a case study of motor industry in Zimbabwe, the research sought to find the attitude of motor industry employees in Zimbabwe towards the use of fiscal electronic device. The findings of the study revealed that fiscal electronic devices had positively impacted on the motor industry through improvements in tax collection, saves time in tax collection, reduces direct contact between tax collectors and hence minimizes corruption. Moreover, the study found out that employees with low educational level find it difficult to use fiscal electronic devices because they lack know how on how best to use them. Employees perceived negatively the use of fiscal electronic devices because they are not aware of the method and some are just resistant to change that is given all the resources they will reject to use the advanced method.

Mmanda, (2010) did a study on the introduction of Electronic Fiscal Device (EFD) machines is good in that once information are entered TRA gets information after 24 hours and if one tampers with the information, the machine reports to tax authorities. In addition, the machines keep the information for not less than five years. After all, it is the government that pays for the machines. However, the VAT and TIN running registered businesses have to buy them first but when they install them, the costs are deducted from the tax the businesses are supposed to pay to TRA. It is only when the amount is paid that the businesses start paying Tax

## **2.4 Conceptual Framework**

The researcher uses conceptual framework showing the relationship between dependent variable and independent variables of the study. From the study factors influencing tax

compliance which include: understanding of tax system operation, cost, tax rates and user perception are the independent variable while utilization of tax register is the dependent variable explained by tax morale, tax attitude, tax behavior, prompt payment and right amount. The conceptual framework is reflected in figure 2.1



**Independent Variable**

**Dependent Variable**

**Figure 2.1 Conceptual Framework**

## **2.5 Summary and Research Gap**

The above review has elucidated on some of the factors that have been examined in a number of studies in Kenya and in other countries. In summary, there are several studies on tax compliance behavior, for example; Ebimobowei,(2013) inspected the influence of tax audit on tax compliance in Nigeria. An investigation by Lumumba et al. (2010) analyzed how the taxpayers' demeanor impacts compliance conduct among SMEs in Kerugoya town. Musau,(2015) examined the determinants of tax compliance behaviour among SMEs in Nairobi County, Kenya. Mukabi (2014) investigated the determinants of turnover tax compliance in the Kenya income. From these investigations there has been little research essentially considering the tax system, understanding of operation of tax system, cost of taxation, tax rates and tax fines as an indicator of tax compliance. Thus, there is a gap in literature that the present study seeks to bridge. This study therefore seeks to analyse the factors influencing utilization of electronic tax register by Small Medium Enterprises in Nairobi. It brought out an in-depth understanding of the effects of operation of tax system, level of knowledge operation of the tax system, cost incurred in the process of being compliant, and user perception of tax register on level of compliance among SMEs in Nairobi.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter outlines the methodology that was used to conduct the study. It specifically presents the research design, target population, sampling design, data collection method and instruments, and data analysis and interpretation.

#### **3.2 Research Design**

Research design is defined as the conceptual structure within which research is conducted; it comprises of the overall plan for the collection, measurement and analysis of data (Kothari, 2008). It assists the study to determine the objectives of research, subjects of research, the sample size, the data to be collected, the procedures for collecting and recording that data, the procedures for analyzing that data and how the data is interpreted and presented (Bryman, 2012). This study adopted a descriptive research design. Descriptive research design involves collection of information from a large population and concentrates on the respondent's views in order to get relevant information about the dependent and independent variable using questionnaires to achieve the research objectives. The major purpose of descriptive research is description of the state of affairs as it exists. Descriptive research includes survey method, observational method and case study method (Sekaran & Bougie 2010).

#### **3.3 Target Population of the Study**

According to (Gall et al., 2006), the study population represents a set of individuals with comparable features that a researcher intends to select for a study to enable him/ her draw statistical inferences. The target population of this study comprised of Small and medium Enterprises in Nairobi. Data from Nairobi County license department (2019) indicates that there are 39616 SMEs that has been issued with permits from 1<sup>st</sup> July 2018 to 19<sup>th</sup> April 2019; out of this 7719 are within the CBD town. Therefore, the study population for this study was all the 7719 managers/owners of the registered SMEs /in Nairobi CBD between 1<sup>st</sup> July 2018 to 19<sup>th</sup> April 2019.

### 3.4 Sampling Frame

Sampling frame is a list containing all information about the study population. Sampling frame is important since it contains the entire item in the population where a sample can be obtained for statistical analysis (Singh, 2010). The sampling frame for this study was the list of all the registered SMEs within Nairobi CBD.

### 3.5 Sampling Size and Sampling Technique

#### 3.5.1 Sampling Technique

Cooper and Schindler (2003) sampling technique refers to the process of selecting study population from a defined area as representative of the all population. According to Cooper, Schindler (2003) a sampling technique is a list of elements where a sample is actually collected and with closely resemblance to the population to be studied. Simple random sampling procedure was used to select the sample. According to Kothari(2009), simple random sampling refers to probability sampling whereby all members in the population have equal chance of being selected to form a sample.

#### 3.5.2 Sample Size

The sample size of this study was based on Yamane's 1967 formulae which is shown below:

$$n = \frac{N}{1 + N(e)^2}$$

Where;

n is the sample size,

N is the population size, (7719)

e is the level of precision (0.05).

$$\begin{aligned} n &= \frac{7719}{1 + 7719(0.05)^2} \\ &= 380 \end{aligned}$$

The desired sample size thus comprised of 380 respondents.

### **3.6 Research Instruments**

This study used primary. Primary data is the one collected for the first time by the researcher hence can be said to be original. Primary data was collected from owners/managers of the SMEs within CBD Nairobi County. The researcher used questionnaires as primary data collection instrument (Yeasmin & Rahman, 2012). A questionnaire is a tool that consists of a number of questions printed or typed in a definite order on a form or set of forms, sent to persons concerned with a request to answer the questions and return the questionnaire (Kothari & Garg, 2014).

### **3.7 Data Collection Procedure**

An introductory letter was obtained from KESSRA to assist in seeking authority for the administration of the questionnaire. The researcher sought authority from the top management of SMEs in order to be allowed to collect data. Questionnaires were self-administered. Self-administered questionnaires are usually preferred for purposes of developing close relationship with the respondents and also assist in providing clarifications sought by respondents on the spot (Sasaka, Namusonge & Sakwa, 2014). The respondents were briefly taken through the purpose of the study and how they were expected to fill the questionnaires. The questionnaires were administered during official working hours.

### **3.8 Pilot Test**

Pilot study is the process of conducting preliminary test of data collection instruments in order to eliminate data collection problems that may lead to low data validity and reliability (Mbonga & Kimani, 2017). Pilot testing has dual advantages; firstly, is to catch potential problems, costly mistakes, provide an indication of time required for actual field work and possible modifications of the instrument and modality of data collection. Secondly, enhancing the training of field staff, review of the instrument, prevention of wasteful expenditures on a full blown survey whose results may not be acceptable (Mugo, & Ngahu, 2015). The pretest sample should be between 1% and 10% (Mugenda & Mugenda, 2003). In this study, the questionnaire was piloted on 10% of the population to ensure that the instrument was relevant and reliable. The respondents for a pilot study must come from outside the sample selected from the main sample of the study

(Nyabwanga *et al.*, 2012). The researcher administered 38 questionnaires to SMEs in Nairobi.

### **3.8.1 Validity test**

Validity refers to the extent to which an instrument measures what is supposed to measure. Data need not only to be reliable but also true and accurate. If a measurement is valid, it is also reliable (Kothari & Garg, 2014). The content of validity of the data collection instrument was determined through discussing the research instrument with the research supervisor. The valuable comments, corrections, suggestions given by the research supervisor will assist in the validation of the instrument.

### **3.8.2 Reliability test**

Reliability refers to the consistence, stability, or dependability of the data. Whenever an investigator measures a variable, he or she wants to be sure that the measurement provides dependable and consistent results. A reliable measurement is one that if repeated a second time gives the same results as it did the first time. If the results are different, then the measurement is unreliable. To measure reliability of data collection instruments, an internal consistency technique using Cronbach's alpha will be used in this study (Mugenda, 2008). This method was popularized by Lee Cronbach in 1951. It is reported that an alpha coefficient is ranging from 0.00(low) to +1.00 (high). Cronbach's alpha coefficient above or equal to 0.70 is considered sufficient for most cases (Mbonga & Kimani, 2017).

### **3.9 Data Processing and Analysis**

Data analysis refers to the application of reasoning to understand the data that has been gathered with the aim of determining consistent patterns and summarizing the relevant details revealed in the investigation (Zikmund *et al.*, 2010). Before processing the responses and financial data, every filled questionnaire was tallied for every response. The responses was then edited, coded and cleaned in case of any inconsistencies and entered into the computer with the help of excel spreadsheet software before being uploaded into a statistical package known as statistical package for social science (SPSS) version 23 which was used to facilitate analysis as it has an in-build formula. The data

collected was analyzed, with respect to the study objectives, using both descriptive and inferential statistics. The quantitative method involves both descriptive and inferential statistics. Descriptive statistics included frequencies, percentages, mean and standard deviation. Inferential statistics include product moment correlation analysis and multiple regression (Vance, 2011).

Product moment correlation analysis measures the extent of interdependence where two variables are linearly related. If variables are correlated, then a change in one variable is accompanied by a proportionate change in another variable. Correlation coefficient is a measure of correlation between two variables. If variables are independent,  $r=0$ , if dependent, then  $r=1$ . If the value of  $R$  is close to one, then it shows there is a strong correlation between the variables. If the value of  $R$  is close to zero, then the association is weak. Pearson’s product-moment correlation coefficient ( $r$ ) was used to explore the relationship between the variables, specifically to assess both the direction and strength. This was crucial in assessing the nature of relationship existing between the variable before carrying out further analysis (cooper & schindler, 2011).

Multiple linear regression is used in situations where the number of independent variables are more than one. Regression analysis is also valuable for quantifying the effect of various simultaneous influences upon a single dependent variable. Multiple regression analysis involves combining several predictor variables in a single regression equation. With multiple regression analysis we can assess the effect of multiple predictor variables (rather than a single predictor variable) on the dependent measure (Tabachnick & Fidell, 2013). Multiple regression was used to examine the factors influencing utilization of electronic tax register and took the following equation;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \dots \dots \dots \text{Equation 3.1}$$

Where:

**Y** represents the dependent variable (Utilization of Electronic Tax Register)

**$\beta_0$**  represent the constant

**$\beta_1 \dots \beta_3$**  represent the coefficient of independent variables

**$X_1$**  represent uKnowledge of operation

**$X_2$**  represent cost

$X_3$  represent user perception  
 $\varepsilon$  represent the error term

### **3.10 Assumptions of Regression Model**

It is paramount to validate the tests for assumptions of linear regression models so as to provide consistent estimates of parameters that are devoid of bias (Lind, Marchal & Wathen, 2012). This study will evaluate the assumptions by testing for linearity, normality, autocorrelation, heteroscedasticity and multicollinearity test.

Linearity is the assumption that a straight line relationship exists between two variables (Tabachnick & Fidell, 2013). Testing for linearity is deemed necessary since linearity is an assumption of regression which must be satisfied. The bivariate Scatter plot will be used to assess the degree of linear relationship. Pearson correlation may also be used to test linearity though it is limited in determining the degree of linearity given that it only captures the linear component of the relationship. For linearity assumption to be met, variables will be expected to produce oval or elliptical scatter plots. If the relationship between independent variables (IV) and the dependent variable (DV) is not linear, the results of the regression analysis will under-estimate the true relationship (Garson, 2012).

Normality test was used to determine if the data set is normally distributed. Graphical or mathematical test can be performed to test for normality. Mathematically, Shapiro-Wilk test and Kolmogoro-Smirnov test are the commonly used test (Ghasemi & Zahediasl, 2012). pp plots were used to test normality(Garson, 2012).

Autocorrelation is the correlation between members of the series of observations ordered in time or space. It is a measure of correlation among regression residuals (Tabachnick & Fidell, 2013). Occasionally, the assumption of independence of errors is violated when factors such as time and distance are associated with the order in which cases are taken. For instance, respondents interviewed first may vary in response with those interviewed later because of the inexperience the researcher may have with the questionnaire. Independence of errors was tested using the Durbin-Watson statistic which is regarded as a measure of autocorrelation of errors when the order of cases is factored in (Tabachnick & Fidell, 2013). Under this test, the critical values of  $1.5 < d < 2.5$  will be used to

examine presence of autocorrelation. Consequently, a Durbin-Watson statistic lying within the two critical values was deemed to signify lack of first order linear autocorrelation in our multiple linear regression data.

Heteroscedasticity is a situation that arise when the residuals does not have a constant variance. That is, the variance of the residuals keeps varying in respect to changes in independent variables values (Frost, 2017). Residuals are said to be heteroscedastic if the distribution of the residuals vary over the range of measured values (kaufman, 2013).

Multicollinearity is identified as a situation where independent variables or predictors are highly correlated among themselves (Vatcheva, Lee, McCormick, & Rahbar, 2016). In such a situation, the regression model includes many factors that correlated with not only the dependent variable but also among themselves. Multicollinearity can lead to standard errors being unstable and biased; this may as a consequence result in interpretations that may be unrealistic and untenable (Vatcheva *et al*, 2016). To test for multicollinearity, the Variance Inflation Factor (VIF) is known to assess the increase in the variance of an estimated regression coefficient when there is correlation among the predictors (Tabachnick & Fidell, 2013). The threshold for rejecting existence of multicollinearity was therefore set at a maximum value of “5” (Ringle, Sven & Michael, 2015). If there is no multicollinearity, then the Variance Inflation Factor (VIF) will be 1. A VIF above one was an indication that the independent variables are moderately correlated while a VIF between 5 and 10 indicates severe multicollinearity, which is problematic.

## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSION

#### 4.1 Introduction

The chapter begins by giving the response rate to establish if the collected data was adequate to be analyzed and to be relied on, then the reliability results. This is followed by demographic characteristics, reporting of data pertaining to the research objectives posed in the study; correlation and regression analysis.

#### 4.2 Response rate

There were 380 questionnaires distributed to the selected respondents' owners or managers of the SMEs within Nairobi CBD. The analysis of findings according to the returned questionnaires indicated that, out of the 380 questionnaires sent to the sampled subjects, 291 were filled and returned which translated to 76.6% response rate. This high response rate was achieved by the great cooperation between the researcher and the respondents. All the returned questionnaires were found to be correctly filled and fit for analysis. Babbie (1990) suggested that a response rate of 50% is adequate 60% is good and 70% and above very good for analysis. Rogers, Miller and Judge (2009) also agree and recommend a response rate of 50% which they considered acceptable for a descriptive/correlation study. The results of response rate are presented in Table 4.1.

**Table 4.1 Response Rate**

Questionnaires	No.	%
questionnaires received	291	76.6%
Questionnaires not received	89	23.4
Total	380	95.3%

### 4.3 Results of Pilot Test

The study performed a pilot study on 38 respondents. The test as shown in the table 4.2 in order to test for the reliability of the instrument, the participating respondents in the pilot test were not included in the final study. Cronbach Alpha was used to evaluate the reliability of this instrument which measure internal consistency. Cronbach's Alpha value is widely used to verify the reliability of the construct. George & Malley (2003) provided the following values of the rule of the thumb for Cronbach's Alpha values > 0.9 Excellent, > 0.8-0.89 Good, > 0.7-0.79 Acceptable, > 0.6 - 0.69 Questionable, >.5.0.5.9 Poor, <.5.0. The results obtained were above the acceptable limit for all the variables.

**Table 4.2 Cronbach's Alpha's Reliability Test for Study Variables**

Item	Cronbach's Alpha	No of items	Comments
Knowledge on system operation	0.757	4	Accepted
Cost	0.888	4	Accepted
User perception	0.872	5	Accepted
Utilization of tax register	0.871	4	Accepted

### 4.4 Background Characteristics

This section presents the distribution of respondents by their gender, age bracket, and the level of education of respondents who are the owners or managers of the SMEs within Nairobi CBD.

#### 4.4.1 Gender of the Respondents

The study sought to assess the gender distribution of the owners or managers of the SMEs within Nairobi CBD. This is because different gender has different opinions about various issues. The finding in table 4.3 shows that 60.8% of the respondents were male and 39.2% of the respondents were female. This implies that there were more male respondents in the study.

**Table 4.3 Gender of the respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Male	177	60.8
Female	114	39.2
<b>Total</b>	<b>291</b>	<b>100.0</b>

**4.4.2 Age of Respondents**

Age of respondents was operationalized into four categories. The age of respondents was important and the study reveals that the distribution of age among the owners or managers of the SMEs within Nairobi CBD, majority of the respondent were aged above 25-35 years with 36.1%, this was followed by 35-45 years and above were 27.5%, and then between above 45 years with 24.4% and the least was from between 18-25 years with 12%. This implies that majority of the owners or managers of the SMEs were in their mid-ages and also the respondents were composed of individuals from diverse age groups. This is presented in table 4.4

**Table 4.4 Age of Respondents**

<b>Age of Respondents</b>	<b>Frequency</b>	<b>Percent</b>
Between 18-25Years	32	12
Above25-35 years	105	36.1
Above35 – 45Years	80	27.5
Above 45 years	74	24.4
<b>Total</b>	<b>291</b>	<b>100.0</b>

#### 4.4.3 Education Level

Education level has an impact on how people respond to different opinions. The researcher sought to establish the education level of the owners or managers of the SMEs within Nairobi CBD. The findings are indicated in table 4.5.

**Table 4.5 Education Level of respondents**

<b>Academic qualification</b>	<b>Frequency</b>	<b>Percent</b>
O' Level	36	12.4
Diploma	109	37.5
Degree	120	41.2
Masters	26	8.9
<b>Total</b>	<b>291</b>	<b>100.0</b>

The finding in table 4.5 reveals that 12.4% of the respondents were O-level graduates, 37.5% were diploma holders, 41.2% of the respondents were degree holders and 8.9% represented respondents with post graduate level of education. This shows that majority of the respondent were degree holders, followed by diploma holders, which implies that, all the respondents selected were educated and most of the respondents understood the contents of the questionnaires and their responses can be taken seriously.

#### 4.4.4 SME Existence

Respondents were asked to indicate the number of years their business has been in operation to assess their familiarity in the field and hence assure validity of their responses. This is presented in table 4.6

**Table 4.6 SME Existence**

<b>SME Existence</b>	<b>Frequency</b>	<b>Percent</b>
Less than 1-5 years	63	21.6
6-10 years	78	26.8
11-15years	92	31.6
16 years and above	58	20
<b>Total</b>	<b>291</b>	<b>100.0</b>

The findings on table 4.6 revealed that 21.6% of the of the SMEs have been in existence for less than 1-5 years, 26.8% of have been in existence for between 6-10 years, 31.6 % for between 11-15 years and 20 % have been in existence for 16 years and above This show that most of the SMEs have been in existence for between 11-15 years implying that owners/managers are fairly experienced in issues relating to SMEs tax compliance. The experience proves the validity and reliability of the information obtained.

#### **4.5 Descriptive Statistics**

The descriptive statistics of the variables were analyzed using frequencies, percentages and mean. In the analysis mean range of 1 to 1.4 represents strongly disagree, while for disagree the mean ranged from 1.5 to 2.4, and for neutral the mean ranged from 2.5 to 3.4, for agree the mean ranged from 3.5 to 4.4 and lastly, for strongly agree the mean ranged from 4.5 to 5.0, while for standard deviation of greater than 0.5 was evaluated to indicate homogeneity and a standard deviation less than 0.5 indicates heterogeneity of data

##### **4.5.1 Knowledge of Electronic Tax System Operation**

This study sought to establish the effect of knowledge of electronic tax system operation on its utilization by Small Medium Enterprises. To achieve this objective mean, frequencies and percentages were used to interpret the data. This is presented in Table 4.7

**Table 4.7 Knowledge of Electronic Tax System Operation**

<b>Tax Economy</b>		<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>	<b>M</b>	<b>Std</b>
I understand the operations of ETR	F	125	98	12	28	28	3.91	1.311
	%	43.0	33.7	4.1	9.6	9.6		
I no longer visit KRA offices to seek help in registration process since I understand the electronic tax payment system and its use	F	115	120	21	35	0	4.08	.972
	%	39.5	41.2	7.2	12.0	0		
I no longer visit the cyber for electronic tax registration since I understand the procedures	F	153	83	39	7	9	4.25	.987
	%	52.6	28.5	13.4	2.4	3.1		
It is much easier to amend filing details on the iTax system	F	140	85	22	35	9	4.07	1.147
	%	48.1	29.2	7.6	12.0	3.1		

The Table 4.7 shows the effect of knowledge of electronic tax system operation on its utilization by Small Medium Enterprises whose responses were analyzed through mean and standard deviation. The respondents agreed that they understand the Operation of ETR with a mean of 3.91 and a standard deviation of 1.311. The respondents also agreed that they no longer visit KRA offices to seek help in registration process since they understand the electronic tax payment system and its use with a mean of 4.08 and a standard deviation of 0.972. The response on whether the respondents no longer visit the cyber for electronic tax registration since they understand the procedures was supported by a mean of 4.25 and a standard deviation of 0.987. Lastly the respondents agreed that it is much easier to amend filing details on the iTax system with a mean of 3.91 and standard deviation of 1.311. This implied that majority of the respondents agreed on the effect of knowledge of electronic tax system operation on its utilization by Small Medium Enterprises with an average mean of 4.04 indicating that knowledge enhances the utilization of electronic tax system.

These findings concur with Ling and Nawawi (2010) who stated that three skills are needed by a taxpayer to interact well with technology based tax system namely, spread sheet software, word-processing software and e-mail. The findings of this study has got

implications on the current study in that in analysing the effectiveness of electronic filing system, one must not ignore the mandatory skills that would be users of the system need to have. In addition, Muita (2010) found that for e-filing to effectively take off in Kenya, skills, infrastructure and a conducive business environment are needed. Lastly, Kariuki (2013) has found that ICT plays a vital role in the revenue administrations through its versatile nature that avails accessible data in both historical and current categories, reduces computation errors, and reduces data processing time and mitigating overall costs.

#### 4.5.2 Cost and Utilization of Electronic Tax Register

This study sought to examine the effect of cost incurred on the utilization of electronic tax register by Small Medium Enterprises. To achieve this objective mean frequencies and percentages were used to interpret the data. This is presented in Table 4.8

**Table 4.8 Cost and Utilization of Electronic Tax Register**

<b>Cost and Utilization</b>		<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>	<b>M</b>	<b>Std</b>
Cost of compliance affect my F company's utilization of tax % register		123	101	36	27	4	3.99	1.211
Cost of Employing professional F staff for ETR use affect my % company's utilization of tax register		125	98	12	28	28	4.08	1.022
Software and Internet expenses F affect my company's utilization % of tax register		132	96	48	6	9	4.15	.979
The annual recurrent cost of F maintaining ETR machines affect % my company's utilization of tax register		120	130	11	24	6	4.05	1.073

On the effect of cost incurred on the utilization of electronic tax register by Small Medium Enterprises, the respondents agreed that cost of compliance affect their company's utilization of tax register, this was supported by a mean of 3.99 and a standard deviation of 1.211, the respondents also agreed that cost of employing professional staff for ETR use affect their company's utilization of tax register with a mean of 4.08 and a standard deviation of 1.022, further they agreed that software and Internet expenses affect my company's utilization of tax register with a mean of 4.15 and a standard deviation of 0.979. Lastly they agreed that the annual recurrent cost of maintaining ETR machine affect their company's utilization of tax register with a mean of 4.05 and a standard deviation of 1.073. This implies that cost incurred is a predictor of the utilization of electronic tax register by Small Medium Enterprises. This was supported by an average mean of 4.06 indicating that the respondents agreed on the questionnaire statements.

This study results are similar to Eragbhe and Modugu (2015) who indicated that compliance costs include the costs of acquiring sufficient knowledge to meet legal requirements; of compiling the necessary receipts and other data; making the relevant calculations and completing tax returns; paying professional advisors for tax advice; and paying incidental costs of postage, telephone, and travel to communicate with tax advisors or the tax office. Also Njeru, Kariuki and Mwangi (2017) found a significant positive relationship between tax compliance costs and tax compliance by Small and Medium Enterprises in Embu County. The study concluded that there is a significant direct relationship between costs and utilization of the ETR by Small and Medium Enterprises in CBD Nairobi County.

#### **4.5.3 User Perceptions and Utilization of Electronic Tax Register**

This study sought to examine the extent to which user perceptions affects utilization of electronic tax register by Small Medium Enterprises. To achieve this objective mean frequencies and percentages were used to interpret the data. This is presented in Table 4.9

**Table 4.19 User perception and Utilization of Electronic Tax Register**

<b>User perception of Electronic Tax Register</b>		<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>	<b>M</b>	<b>Std</b>
Tax morale and compliance level is influenced by fairness of the tax administration system	F	130	93	12	28	28	3.81	1.303
	%	44.7	31.9	4.1	9.6	9.6		
I always declare the right amount of tax due when filing on iTax	F	125	99	36	27	4	4.0	1.022
	%	43.0	34	12.4	9.3	1.4	8	
Tax register has improved my business compliance status since I always file on time	F	170	79	23	17	2	4.3	.909
	%	58.4	27.1	7.9	5.8	0.7	7	
Payment is faster and saves time spent on the iTax system hence has increased chances of paying taxes	F	126	121	11	27	6	4.1	1.005
	%	43.3	41.6	3.8	9.3	2.1	5	

On factors related to the user perception on utilization of electronic tax register by Small Medium Enterprises, the respondents agreed that tax morale and compliance level is influenced by fairness of the tax administration system, this was supported by a mean of 3.81 and a standard deviation of 1.303, the respondents further agreed that they always declare the right amount of tax due when filing on iTax with a mean of 4.08 and a standard deviation of 1.022. On the issue that tax register has improved my business compliance status since they always file on time, the respondents agreed with a mean of 4.37 and a standard deviation of 0.909. Lastly the respondent agreed that payment is

faster and saves time spent on the iTax system hence has increased chances of paying taxes ss at a mean of 4.25 and a standard deviation of 0.987. These findings imply that there are several factors that influence utilization of electronic tax register by Small Medium Enterprises. This was supported by an average mean of 4.13 indicating that the respondents agreed on the questionnaire statements.

These findings concur to that Muturi and Kiarie, (2015) who stated that, the benefits of electronic tax register over submitting manual returns to the tax office are that the return goes directly to the revenue authority's systems with a greatly reduced chance of human keying or document scanning errors. In addition electronic tax register cost less to process compared to a manual return both in terms of money and time to the revenue as well as the tax payer (Lemuria Carter, 2011). Electronic tax register is also environmentally friendly as there is less paper used.

#### **4.5.4 Utilization of Electronic Tax Register**

This study sought to examine the factors influencing utilization of electronic tax register by Small Medium Enterprises. To achieve this objective mean frequencies and percentages were used to interpret the data. This is presented in Table 4.10

**Table 4.10 Utilization of Electronic Tax Register**

Utilization of ETR		SA	A	U	D	SD	M	Std
	F	125	102	14	22	28	3.94	1.284
I believe that the tax return process is simple	%	43.0	35.1	4.8	7.6	9.6		
I have the knowledge to file my returns online	F	127	97	18	35	14	3.99	1.190
	%	43.6	33.3	6.2	12.0	4.8		
I believe that the manner in which information is disseminated across taxpayers is fair	F	151	100	18	12	10	4.27	.992
	%	51.9	34.4	6.2	4.1	3.4		
I believe the information of income taxes is available	F	126	121	11	27	6	4.15	1.005
	%	43.3	41.6	3.8	9.3	2.1		
I understand that current tax laws don't require me to pay more than my fair share of income taxes	F	170	79	23	17	2	4.37	.909
	%	58.4	27.1	7.9	5.8	0.7		

The study sought to establish the effects of utilization of electronic tax register by Small Medium Enterprises .The respondents agreed on the belief that the tax return process is

simple with a mean of 3.94 and a standard deviation of 1.284, also when asked whether they have the knowledge to file their returns online, majority of the respondents agreed with a mean of 3.99 and a standard deviation of 1.190, further when asked whether they believe that the manner in which information is disseminated across taxpayers is fair, the respondents agreed at a mean of 4.27 and a standard deviation of 0.992, furthermore they agreed on the believe the information of income taxes is available they agreed at a mean of 4.15 and a standard deviation of 1.005. Lastly the respondents agreed that they understand that current tax laws don't require me to pay more than my fair share of income taxes, this was supported by a mean of 4.37 and a standard deviation of 0.909. This implies that a user perception is a predictor of utilization of electronic tax register. This was supported by an average mean of 4.14 indicating that the respondents agreed on the questionnaire statements.

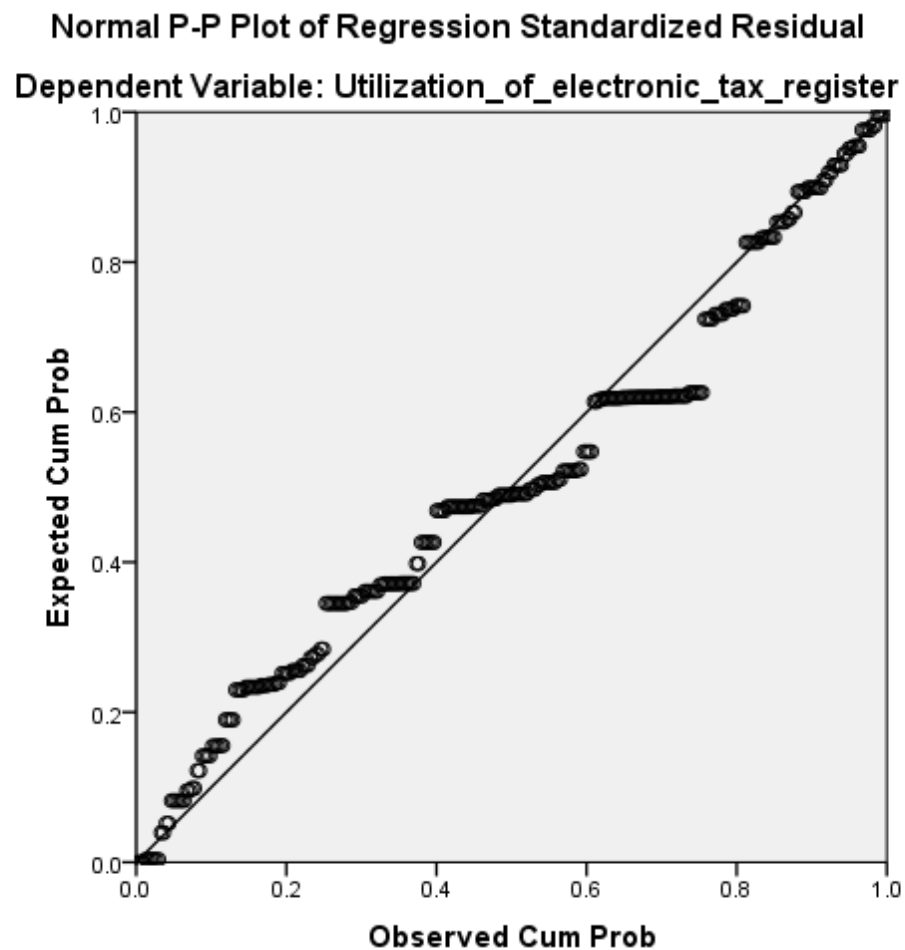
This study results are similar to Boone, (2012) confirmed his hypothesis that with regard to perceived ease of use, the more that an individual feels that a particular filing method (between the e-filing and manual method) is easier to use, the more likely they are to use that particular filing method to file their state tax return. Boone's research also confirmed that the more useful individuals perceive their chosen filing method, the more likely they are to use that method to file. Boone's study was however limiting in that the number of respondents who had actually used the state's website to file was insufficient to conclude on the factors that influenced their choice to e-file. Also Kira (2017) reveals that EFDs has reduced the time it takes to prepare sales report, secure tax information for auditing purpose and transaction; and ensure tax rate to be paid by the taxpayers. The challenges faced by EFDs users includes high prices of EFD machines, faint fiscal tax invoices, EFD's network problem, lack of taxpayer's education EFDs applications and few suppliers of EFDs machines.

## 4.6 Diagnostic Tests

To provide unbiased estimates of the study parameters, various assumptions of regression were tested. These include normality assumption, linearity assumption and homoscedasticity assumption of the independent variables.

### 4.6.1. Normality Assumption

The study assumed that all the variables have a normal distribution. Non-normally distributed variables can distort relationships and significance tests. There are several pieces of information that are useful in testing the assumption; visual inspection of data plots will be used to test the normality assumption. From the plots in the Normal P-P in figure 4.1 below, clearly shows a normal distribution along the diagonal line. The distribution is not skewed to either side of the plot implying a normal distribution.



**Figure 4.1 Test of Normality Assumption**

**4.6.2 Linearity Assumptions**

Linearity assumption accurately estimates the relationship between dependent and independent variables. It tests if the relationships are linear in nature. Non linearity of the regression analysis under-estimate the true relationship between the study variables. This was done by use of the Pearson product moment correlation. Saunders, Lewis, and Thornhill, (2012) indicated that a correlation of 1 shows a Perfect linear correlation, correlation of between 0.9 and 1 indicates strong positive correlation, correlation between 0.7 and 0.9 high Positive correlation, correlation of between 0.5 and 0.7 indicates a moderate Positive correlation, correlation of 0 and 0.5 shows a weak correlation while a correlation of 0 indicates No relationship and a correlation of -1 and 0 indicates a negative relationship. Linearity assumption was therefore satisfied. This implies that all the factors under study jointly have a positive and significant relationship with utilization of electronic tax register by SMEs. The results are shown in Table 4.11 below

**Table 4.11 Correlation Results**

		<b>Correlations</b>			
		Knowledge	cost	User perception	Utilization
	Pearson	1			
Knowledge	Correlation				
	Sig. (2-tailed)				
	Pearson	.764**	1		
Cost	Correlation				
	Sig. (2-tailed)	.001			
	Pearson	.809*	.680**	1	
User perception	Correlation				
	Sig. (2-tailed)	.016	.000		
Utilization of ETR	Pearson	.907*	.879*	.731**	1
	Correlation				

Sig. (2-tailed) .025 .027 .001

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

#### 4.6.3 Homoscedasticity

Homoscedasticity assumes that the dependent variable show an equivalent level of variance across the range of predictor variable. Although the violation of homoscedasticity might reduce the accuracy of the analysis, the effect on ungrouped data is not fatal (Tabachnick and Fidell, 2007). The study used Durbin-Watson statistic to test the assumption of homoscedasticity. The Durbin-Watson statistic should be between 1.5 and 2.5. The results in Table 4.12 indicated that The Durbin-Watson statistic is 1.961 which is between 1.5 and 2.5 and therefore the data is not auto correlated.

**Table 4.12 Test of Homoscedasticity assumption**

Test	Durbin-Watson
Value	1.961

#### 4.6.4 Assumption of Multicollinearity

The assumption of multicollinearity implies that there is no correlation between independent variables. The standard issue in multicollinearity is that, the standard errors and thus the variances of the estimated coefficients are inflated when multicollinearity exists (Simon, 2004). Test for multicollinearity among study variables was conducted using Tolerance and Variance Inflation Factor (VIF). The results are presented in Table 4.13

**Table 4.13 Test of for Multi-Collinearity**

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Knowledge	.252	3.975
Cost	.208	4.811

User perception	.316	3.165
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Variance Inflation Factor was checked for evidence of multicollinearity where their numerical values were all well below the cut-off value of 10 suggested by Neter, Kutner, Wasserman and Nachtsheim (1996). Gujarat and Porter (2010), view that as a rule of the thumb if VIF of independent variables exceeds 10, that variable is collinear. Based on this rule of the thumb, there was no collinearity among the independent variables. From the results, inspection of the Variance Inflation Factors (VIFs) showed that multicollinearity was not a concern. No variable was observed to have VIF value above 10 and no tolerance statistic was below 0.100 as suggested by Hamilton (2006). This hence led to a conclusion that no predictor had a strong linear relationship with any of the predictor(s).

#### 4.7 Multiple Regression Analysis

Multiple regression analysis was conducted to test the influence among the study variables Knowledge, Cost, User perception on utilization of electronic tax register by Small Medium Enterprises in Nairobi CBD. This was done with a significance level of 0.05. This is discussed in the section that follows:

**Table 4.14 Multiple Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.957 <sup>a</sup>	.916	.915	.19880

a. Predictors: (Constant), Knowledge, Cost, User perception

b. Dependent Variable: Utilization of ETR

From Table 4.14, R-Squared is used to evaluate the goodness of fit of a model. In regression, the R square coefficient of determination is a statistical measure of how well the regression line approximates the real data. It measures the proportion of the variation in dependent variable in this case on utilization of electronic tax register by Small Medium Enterprises in Nairobi CBD., explained by independent variables. From the results on model summary R= 0.957, R- square = 0.916, adjusted R- square= 0.915, and the SE= 0.198. The coefficient of determination also called the R square is 0.916. This implies that the effect of the predictor variables (Knowledge, Cost, User perception)

explains 91.6% of the variations in on utilization of electronic tax register by Small Medium Enterprises in Nairobi CBD. This implies that a 1 unit change in the predictor variables (Knowledge, Cost, User perception) has a strong and a positive effect on utilization of electronic tax register by Small Medium Enterprises in Nairobi CBD. This study therefore assumes that the difference of 8.4% of the variations is as a result of other factors not included in this study.

#### 4.7.1 Assessing the Fit of the Multiple Regression Model

Multiple regression analysis was conducted to test the influence among predictor variables on utilization of electronic tax register by Small Medium Enterprises in Nairobi CBD. The test results are shown in table 4.15.

**Table 4.15 ANOVA<sup>a</sup> Results**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	123.305	3	41.102	103.973	.000 <sup>b</sup>
Residual	11.343	287	.040		
Total	134.647	290			

a. Dependent Variable: utilization of ETR

b. Predictors: (Constant), Knowledge, Cost, User perception

The findings of the study in Table 4.15 showed that there was a statistically significant relationship between the independent variables and the dependent variable ( $F= 103.97$ ;  $p=0.00$ ). This therefore indicates that the multiple regression model was a good fit for the data. It also indicates that Knowledge, Cost and user perception all influence utilization of electronic tax register by Small Medium Enterprises in Nairobi CBD.

#### 4.7.2 Overall Regression Coefficients

The t-test was conducted to determine whether the individual regression coefficients of the study were statistically significant. These results were presented in Table 4.16

**Table 4.16 Overall Regression Coefficients**

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	$\beta$	Std. Error	$\beta$		
(Constant)	0.557	1.303		3.195	.013
1 Knowledge	.103	.057	.322	2.807	.003
Cost	.393	.427	.204	2.745	.001
User Perceptions	.328	.083	.301	2.152	.002

a. Dependent Variable: Utilization of ETR

From the study, the results showed that knowledge of electronic tax system operation was positive and significant predictor of utilization of electronic tax register by Small Medium Enterprises with ( $\beta = 0.103$ ;  $\rho < 0.05$ ). The study hence concluded that there was a significant relationship between knowledge of electronic tax system operation was positive and significant predictor of utilization of electronic tax register by Small Medium Enterprises. This study concurs to that of Muita (2010) found that for e-filing to effectively take off in Kenya, skills, infrastructure and a conducive business environment are needed. Lastly, Kariuki (2013) has found that ICT plays a vital role in the revenue administrations through its versatile nature that avails accessible data in both historical and current categories, reduces computation errors, and reduces data processing time and mitigating overall costs.

Further, the study results showed that there was a clear relationship between cost incurred and utilization of electronic tax register by Small Medium Enterprises ( $\beta = 0.393$ ;  $\rho < 0.05$ ). This finding concurs to Njeru, Kariuki and Mwangi (2017) found a significant positive relationship between tax compliance costs and tax compliance by Small and Medium Enterprises in Embu County. The study concluded that there is a significant direct relationship between tax compliance costs and tax payment by Small and Medium Enterprises in Embu County.

Lastly, the study findings also showed that ( $\beta = 0.328$ ;  $\rho < 0.05$ ), indicating a significant relationship between user perceptions and utilization of electronic tax register by Small Medium Enterprises. This finding concurs to Boone, (2012) confirmed his hypothesis

that with regard to perceived ease of use, the more that an individual feels that a particular filing method (between the e-filing and manual method) is easier to use, the more likely they are to use that particular filing method to file their state tax return. Boone's research also confirmed that the more useful individuals perceive their chosen filing method, the more likely they are to use that method to file. Boone's study was however limiting in that the number of respondents who had actually used the state's website to file was insufficient to conclude on the factors that influenced their choice to e-file. Also Kira (2017) reveals that EFDs has reduced the time it takes to prepare sales report, secure tax information for auditing purpose and transaction; and ensure tax rate to be paid by the taxpayers. The challenges faced by EFDs users includes high prices of EFD machines, faint fiscal tax invoices, EFD's network problem, lack of taxpayer's education EFDs applications and few suppliers of EFDs machines.

The findings shows that the regression coefficients of the independent variables (Knowledge, Cost, User perception). Thus the regression equation becomes;

$$Y = 0.557 + 0.103 X_1 + 0.393 X_2 + 0.328 X_3$$

In Table 4.18, the coefficients refer to the slope of the regression line and amount of variance each predictor contributes to the general regression equation. Therefore adjusting knowledge of electronic tax system operation by 1 unit would lead to a 0.103 units change in utilization of electronic tax register by Small Medium Enterprises. It is also noted that changing 1 unit of cost incurred would lead to a 0.393 units change in utilization of electronic tax register by Small Medium Enterprises. Further changing 1 unit of user perception would lead to a 0.343 units change in utilization of electronic tax register by Small Medium Enterprises. Hence all variables are statistically significant predictors of the dependent variable.

## **4.8 Discussion key Findings**

### **4.8.1 Knowledge of Electronic Tax System Operation**

On the effect of knowledge of electronic tax system operation on its utilization by Small Medium Enterprises, the study indicated that majority of the respondents agreed on the effect of knowledge of electronic tax system operation on its utilization by Small

Medium Enterprises with an average mean of 4.04 indicating that knowledge enhances the utilization of electronic tax system. The results also showed that knowledge of electronic tax system operation was positive and significant predictor of utilization of electronic tax register by Small Medium Enterprises with ( $\beta = 0.103$ ;  $\rho < 0.05$ ).

These findings concur with Ling and Nawawi (2010) who stated that three skills are needed by a taxpayer to interact well with technology based tax system namely, spread sheet software, word-processing software and e-mail. The findings of this study has got implications on the current study in that in analysing the effectiveness of electronic filing system, one must not ignore the mandatory skills that would be users of the system need to have. In addition, Muita (2010) found that for e-filing to effectively take off in Kenya, skills, infrastructure and a conducive business environment are needed. Lastly, Kariuki (2013) has found that ICT plays a vital role in the revenue administrations through its versatile nature that avails accessible data in both historical and current categories, reduces computation errors, and reduces data processing time and mitigating overall costs.

#### **4.8.2 Cost and Utilization of Electronic Tax Register**

Regarding the effect of cost incurred on the utilization of electronic tax register by Small Medium Enterprises, the findings indicated that cost incurred is a predictor of the utilization of electronic tax register by Small Medium Enterprises. This was supported by an average mean of 4.06 indicating that the respondents agreed on the questionnaire statements. The study results also showed that there was a clear relationship between cost incurred and utilization of electronic tax register by Small Medium Enterprises ( $\beta = 0.393$ ;  $\rho < 0.05$ ).

This study results are similar to Eragbhe and Modugu (2015) who indicated that compliance costs include the costs of acquiring sufficient knowledge to meet legal requirements; of compiling the necessary receipts and other data; making the relevant calculations and completing tax returns; paying professional advisors for tax advice; and paying incidental costs of postage, telephone, and travel to communicate with tax advisors or the tax office. Also Njeru, Kariuki and Mwangi (2017) found a significant positive relationship between tax compliance costs and tax compliance by Small and

Medium Enterprises in Embu County. The study concluded that there is a significant direct relationship between tax compliance costs and tax payment by Small and Medium Enterprises in Embu County.

#### **4.8.3 User Perceptions and Utilization of Electronic Tax Register**

Lastly on the extent to which user perceptions affects utilization of electronic tax register by Small Medium Enterprises, the findings indicated that a user perception is a predictor of utilization of electronic tax register. This was supported by an average mean of 4.14 indicating that the respondents agreed on the questionnaire statements. The study findings also showed that ( $\beta = 0.328$ ;  $\rho < 0.05$ ), indicating a significant relationship between user perceptions and utilization of electronic tax register by Small Medium Enterprises.

This study results are similar to Boone, (2012) confirmed his hypothesis that with regard to perceived ease of use, the more that an individual feels that a particular filing method (between the e-filing and manual method) is easier to use, the more likely they are to use that particular filing method to file their state tax return. Boone's research also confirmed that the more useful individuals perceive their chosen filing method, the more likely they are to use that method to file. Boone's study was however limiting in that the number of respondents who had actually used the state's website to file was insufficient to conclude on the factors that influenced their choice to e-file. Also Kira (2017) reveals that EFDs has reduced the time it takes to prepare sales report, secure tax information for auditing purpose and transaction; and ensure tax rate to be paid by the taxpayers. The challenges faced by EFDs users includes high prices of EFD machines, faint fiscal tax invoices, EFD's network problem, lack of taxpayer's education EFDs applications and few suppliers of EFDs machines.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The chapter covers the summary of major findings; conclusion based on the findings and the recommendations. This study aimed at examining the factors influencing utilization of electronic tax register by Small Medium Enterprises in Nairobi CBD. In this study, a questionnaire was used to collect the needed primary quantitative data. This chapter therefore presents the conclusions reached and the recommendations of the study and areas warranting further research are also highlighted.

#### **5.2 Summary of Findings**

This area contains the summary of the study findings.

##### **5.2.1 Knowledge of Electronic Tax System Operation**

The first objective sought to find out the effect of knowledge of electronic tax system operation on its utilization by Small Medium Enterprises, the study indicated that majority of the respondents agreed on the effect of knowledge of electronic tax system operation on its utilization by Small Medium Enterprises indicating that knowledge enhances the utilization of electronic tax system. The findings also showed that knowledge of electronic tax system operation was positive and significant predictor of utilization of electronic tax register by Small Medium Enterprises. These findings concur with Ling and Nawawi (2010) who stated that three skills are needed by a taxpayer to interact well with technology based tax system namely, spread sheet software, word-processing software and e-mail.

##### **5.2.2 Cost and Utilization of Electronic Tax Register**

The second objective sought to find out the effect of cost incurred on the utilization of electronic tax register by Small Medium Enterprises, the findings indicated that cost incurred is a predictor of the utilization of electronic tax register by Small Medium Enterprises. The study findings also showed that there was a clear relationship between

cost incurred and utilization of electronic tax register by Small Medium Enterprises. This study results are similar to Eragbhe and Modugu (2015) who indicated that compliance costs include the costs of acquiring sufficient knowledge to meet legal requirements; of compiling the necessary receipts and other data; making the relevant calculations and completing tax returns; paying professional advisors for tax advice; and paying incidental costs of postage, telephone, and travel to communicate with tax advisors or the tax office

### **5.2.3 User Perceptions and Utilization of Electronic Tax Register**

Lastly on the third objective sought to find out the extent to which user perceptions affects utilization of electronic tax register by Small Medium Enterprises, the findings indicated that a user perception is a predictor of utilization of electronic tax register indicating that the respondents agreed on the questionnaire statements. The study findings also showed a significant relationship between user perceptions and utilization of electronic tax register by Small Medium Enterprises. This study results are similar to Boone, (2012) confirmed his hypothesis that with regard to perceived ease of use, the more that an individual feels that a particular filing method (between the e-filing and manual method) is easier to use, the more likely they are to use that particular filing method to file their state tax return.

### **5.3 Conclusions**

From the findings, it was concluded that SMEs owners/managers understand the online tax return process, they no longer visit KRA offices to seek help in registration process since I understand the electronic tax payment system and its use and also it is much easier for them to amend filing details on the iTax system

It was also concluded that, cost of compliance, cost of Employing professional staff for tax filling affect my company's utilization of tax register, Software and Internet expenses and the costs of book Keeping for tax filling affect SMEs utilization of tax register

Lastly it was concluded that, they believe that the tax return process is simple, the knowledge to file my returns online, the manner in which information is disseminated across taxpayers is fair and the information of income taxes is available influence utilization of electronic tax register

### **5.3 Recommendations**

Based on study finding, this study recommends that the government should ensure proper training of entrepreneurs on the utilization of ETR machines as this will help in compliance with the VAT laws as well as efficiency in filing of returns

The government should ensure that all small and medium sized enterprises within the VAT threshold use ETRs in their operations. This will ensure that all businesses in the category receive equal treatment from the government and this will no doubt boost compliance levels.

The government should review the compliance costs to ensure more SMEs access VAT tax services. Filing of VAT returns online should be simplified to improve efficiency. ETR acquiring and installation costs should be reviewed through consultation with SMEs to encourage more compliance to VAT tax.

Government should provide free and cheaper ETRs to SMEs, installation costs should be drastically reduced to support more SMEs to submit their VAT returns online and KRA should provide sufficient technical skills on management of ETRs.

Lastly, there should be regular SME training and capacity building on ETR technical skills, systems and processes. SMEs should be trained on tax laws, procedures and responsibilities to enhance compliance levels.

### **5.4 Suggestions for Further Research**

The study focused on utilization of ETRs among SMEs. Although it's clear that ETRs have enhanced revenue collection capacity of the government, this study was limited to small and medium sized enterprises within Nairobi. There is need for further research touching of larger business units.

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## APPENDICES

### APPENDIX I: INTRODUCTION LETTER

Beryl Adhiambo Ochieng,

P.O Box

Nairobi, Kenya

Dear respondent,

#### **RE: PERMISSION TO COLLECT DATA IN YOUR SACCO**

I am a student Kenya School of Revenue Administration a diploma in tax Administration. I am carrying out a study on the “**FACTORS INFLUENCING UTILIZATION OF ELECTRONIC TAX REGISTER BY SMALL MEDIUM ENTERPRISES IN NAIROBI CBD**”. I am inviting you to participate in this research. Your confidentiality is assured as the information you will give will be used for academic purposes and no instance will your name be mentioned in the report.

Your co-operation will be highly appreciated.

Yours sincerely,

Beryl Ochieng

HDB336-C016-6517-2016

## APPENDIX II: QUESTIONNAIRE

This research questionnaire is aimed at gathering data for a study on factors influencing utilization of electronic tax register by Small Medium Enterprises in Nairobi. This study is purely for academic purposes and respondents are assured of uttermost confidentiality of information provided. Please answer the questions as honestly and objectively as possible. Do not indicate your name anywhere in the questionnaire.

### SECTION A: DEMOGRAPHIC INFORMATION

**Instructions:** Please answer the questions below by putting a tick in the appropriate statement.

1. What is your Gender?
  - a) Male
  - b) Female
2. What is your Age?
  - a) 20 – 25
  - b) 26 – 30
  - c) 31 – 35
  - d) 36 – 40
  - e) 41 – 45
  - f) Above 45
3. How long have your Business been in operation?
  - a. Less than one year
  - b. Between 2-3 years
  - c. Between 4-5 years
  - d. Between 6-7 years
  - e. Between 8-9 years
  - f. Above 10 years
4. What is your highest level of education?
  - a. Diploma
  - b. Degree
  - c. Masters

**SECTION B: UNDERSTANDING OF OPERATION OF TAX SYSTEM AND  
UTILIZATION OF TAX REGISTER**

What is your opinion on the effects of Understanding of Operation on utilization of tax register? Indicate the level of your agreement/disagreement with the following statements by ticking the most appropriate box. Where **strongly agree (5) Agree (4) Undecided (3) Disagree (2) Strongly Disagree (1)**

SN	Understanding of Operation of Tax System	1 SD	2 D	3 U	4 A	5 SA
1	I understand the <b>online tax return process</b>					
2	I no longer visit KRA offices to seek help in registration process since I understand the electronic tax payment system and its use					
3	I no longer visit the cyber of KRa of for electronic tax registration since I understand the procedures					
4	It is much easier to amend filing details on the iTax system					

In your own opinion indicate the effects of understanding of operation on utilization of tax register?

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**SECTION C: COST AND UTILIZATION OF TAX REGISTER**

What is your opinion on the Effects of Cost on utilization of tax register? Indicate the level of your agreement/disagreement with the following statements by ticking the most

appropriate box. Where strongly agree (5) Agree (4) Undecided (3) Disagree (2) Strongly Disagree (1)

SN	Effects of Cost on utilization of Tax Register	1 SD	2 D	3 U	4 A	5 SA
1	Cost of compliance affect my company's utilization of tax register					
2	Cost of Employing professional staff for tax filling affect my company's utilization of tax register					
3	Software and Internet expenses affect my company's utilization of tax register					
4	The costs of Book Keeping for tax filling affect my company's utilization of tax register					

In your own opinion indicate the effects of cost on utilization of tax register?

.....  
 .....  
 .....

**SECTION D: USER PERCEPTIONS AND UTILIZATION OF TAX REGISTER**

What is your opinion on the effects of User Perceptions and utilization of tax register?  
 Indicate the level of your agreement with the following statements by ticking the most appropriate box. Where strongly agree (5) Agree (4) Undecided (3) Disagree (2) Strongly Disagree (1)

SN	User perception on Utilization Of Tax Register	1 SD	2 D	3 U	4 A	5 SA
1	Tax morale and compliance level is influenced by fairness of the tax administration system					
2	I always declare the right amount of tax due when filing on iTax					
3	Tax register has improved my business compliance status since I always file on time					
4	Payment is faster and saves time spent on the iTax system hence has increased chances of paying taxes.					

In your own opinion indicate the effects of user perceptions and utilization of tax register?

.....  
 .....  
 .....

**SECTION F: UTILIZATION OF TAX REGISTER**

What is your opinion on the utilization of tax register? Indicate the level of your agreement with the following statements by ticking the most appropriate box. Where strongly agree (5) Agree (4) Undecided (3) Disagree (2) Strongly Disagree (1)

SN	Utilization of Electronic Tax Register	1 SD	2 D	3 U	4 A	5 SA
1	I believe that the tax return process is simple					
2	I have the knowledge to file my returns online					
3	I believe that the manner in which information is disseminated across taxpayers is fair					
4	I believe the information of income taxes is available					
5	I understand that current tax laws don't require me to pay more than my fair share of income taxes					