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# Online Tax System and Tax Compliance by Small and Medium Enterprises: Case of Kitui County in Kenya

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## Abstract

**Purpose**: Technology has significantly impacted the efficiency of conducting business, among them, the digitalization of tax functions, which has led to the creation of operational efficiencies in terms of filing tax returns. The purpose of this research is to evaluate the effect of online tax system on tax compliance in Kitui County's SMEs. Specifically, the study focused on effect of online tax filling and online taxpayer registration on tax compliance in Kitui County.

**Methodology:** This research was hinged on theory of Technological Acceptance Model, Diffusion of Innovation Theory and Theory of planned behavior. A descriptive research design was used in this study. The owners of the 442 small and medium businesses in Kitui County was the study's unit of analysis. A sample population of 206 is determined using the stratified proportionate random sampling technique. Self-administered questionnaires were used to collect primary data. The Statistical Package for Social Sciences was used to examine the data (SPSS Version 25.0). For all quantitative variables, descriptive statistics such as frequencies, percentages, average score, and standard deviation was computed after data cleaning, which includes checking for entry mistakes. The information was presented in tables and graphs. The relationships between the independent and dependent variables were established using multiple regression analysis.

**Findings:** The study concluded that a unit increase in online tax registration leads to 0.807 increase in tax compliance by small and medium enterprises in Kitui County. The study revealed that a unit change in online tax filing leads to 0.731 change in tax compliance by small and medium enterprises in Kitui County.

**Unique Contribution to Theory, Practice and Policy:** The study concludes that the KRA officials in Kitui county should conduct awareness programs among SMEs regarding the

importance of online tax registration. The study informs policy as it seeks to help Kenya Revenue Authority in using effective measures to mobilize and motivate small tax payers to register online for turnover tax, value added tax among other taxes in order to increase tax compliance.

**Keywords:** *Online Tax System, Online Tax Filling, Online Taxpayer Registration, Tax Compliance*

## 1. INTRODUCTION

### 1.1 Background Information

Taxation "is essential for sustainable economic development and tax administration is a basic function of a successful state. Taxation remains to be the main source of government revenue in both developed and developing economies. It also provides an important avenue for financial independence of nations from external assistance". Hence, the governments mandate that all persons in their jurisdiction pay taxes in accordance with their particular country's tax rules (Lee, 2015). It is the responsibility of individuals to be tax compliant in order for the agencies tasked with enforcing tax laws to deem them compliant. Non-compliant individuals are those who do not declare their taxable activities and then fail to pay the required taxes. As a result, each jurisdiction has established procedures for dealing with non-compliant individuals.

The tax system provides public funding for development projects such as the construction of infrastructure such as good roads, reliable power, and reliable water supplies, among other things. All of these factors work together to produce a favorable climate for businesses and, as a result, the economy as a whole (Night and Bananuka, 2019). Governments rely on taxpayers' voluntary compliance, in which taxpayers freely and totally meet their tax obligations. However, noncompliance among taxpayers makes it difficult for growing economies to raise sufficient tax income to fund ever-increasing governmental spending (Sadress et al., 2019).

Throughout the world, billions of monies are lost through inefficient tax collection mechanisms. Lack of effective tax collections coupled with complex and ambiguous tax laws have always hindered tax collection (Tanui, 2016). Emerging technologies have provided diverse opportunities not only for business but also for tax authorities who have been able to transform their tax-related operations. Numerous systems have been developed overtime intended to optimize efficiency the taxation systems to cover up most of the taxation areas (Khan, Khwaja and Olken, 2015). Most of the tax authorities, however, begin their tax digitalization journey with IT-enabled filling systems for filling tax returns, which are later extended to cover source data submission via e-fillings. Currently, many states have incorporated the latest technology in tax collections, which are user-friendly, with customized self-care to solve most of the non-complex issues (Serem, Robert and Phillip, 2017). This study looked at how online tax system is related to tax compliance.

Across the globe, "tax authorities around the world are using electronic tax administration systems to interact with taxpaying public in tax collection, administration and compliance settings. iTax system was first tested in the United States, where the Internal Revenue Service began offering tax return e-filing for tax refunds only which has now grown to the level that currently approximately one out of every five individual taxpayers are now filing returns electronically (Eboibi and Richards, 2019)". The online tax system has played a huge role in ensuring tax compliance (Crandall and Cottarelli, 2010).

In Uganda, electronic tax system forms part of the revenue collection reforms by Uganda Revenue Authority whose main motive is enhancing tax collections and increase revenue collection and thus, tax revenues have been increasing rapidly due to the country's rapid economic development accelerated by the new systems. "Okwir (2018) while studying the effects of electronic tax filing system on tax compliance amongst small and medium enterprises within Kampala CBD, established that electronic tax filing system has improved tax compliance as it is easy for tax payers to assess their tax obligation accurately and enable them file their returns on time". In Rwanda, Alm *et al*. (2019) notice that the vast majority of the SMEs don't have the information of tax guidelines and in this manner doesn't intentionally consent. SMEs in Zimbabwe as per Nyamwanza et al. (2014), do not implement tax regulations to the letter. During their investigation, they discovered that the majority of SMEs avoid paying taxes by paying incentives, moving, or temporarily closing their doors during a compliance rush. In Tanzania, Lubua (2014) points out that SME taxpayers did not willfully document their profits as legally necessary.

Research by Mohammed and Muturi (2018) noted that major challenges experienced in tax revenue collection include tax evasion, administration inefficiencies, corruption, insufficient tax education, ignorance on tax, and inadequate auditing. With more than thirteen million people owning a smartphone and 91% mobile penetration in Kenya, efforts to customize and education on tax has major area of focus by the Kenya revenue authority. This has allowed the Tax authority to avail smartphone applications and websites where one can apply, file returns, amending returns, and attach e-tax data. In addition to this, most businesses in Kenya use automated accounting packages especially those dealing in manufacturing and retailing, to facilitate tax reporting and compliance.

SMEs have a substantial influence in availing savings used to generate employment opportunities, diversifying goods and services available for export through continuous research and development which also increases consumption of local materials. They significantly contribute to poverty alleviation by providing basic health, shelter and food security through earning from these businesses sustained by Kenya's small-scale economy (Gitaru, 2017). Their ability and scale which allows them to reach areas lacking infrastructure for the big businesses creates the need for tax policies that enhance voluntary tax compliance. This can only be accomplished after a thorough evaluation of the impact of the online tax system on tax compliance

### 1.2 Statement of the Problem

Technology has significantly impacted the efficiency of conducting business, among SMEs. The digitalization of tax functions, which has led to the creation of operational efficiencies in terms of filing tax returns. Technology has leveraged diverse knowledge, skills, information, and other resources. This has led to creating opportunities in a variety of sectors in the economy. However, ignorance of taxation and filing tax returns has led to loss of billions of monies, subsequently impacting the overall economic growth (Night and Bananuka, 2019).

Taxation contributes the largest amount of resources for government projects hence accurate and efficient collection is paramount which can be achieved through the inclusion of more Kenyans into the tax base, tailored service delivery form KRA and equitable resource distribution. With the increased tax base, compliance especially, on the fast-growing SME sector, has been key to maximizing collection and achieving revenue targets (KPMG, 2017a; KPMG, 2017b). However, some regions like Kitui County are yet to benefit fully from technological application in taxation and awareness (Republic of Kenya, 2018). This is because of inadequate access to internet whose cost is very high and also increased computer illiteracy. Muturi and Kiarie (2015) argue that even though revenue collection and regulation are urgent for public services, developed countries remain confronted with the challenges of low tax and tax compliance. Some concerns contribute to tax compliance, including digital literacy of taxpayers, the inability to integrate tax information on fiscal enforcement and opposition to a change of culture among small firms, resulting in high taxation and a burden. Small and medium-sized businesses are constantly expanding, yet they are excluded from the tax base, despite the fact that they have the potential to increase income. If this sector remains untaxed, the government will lose billions in revenue, reducing the government's ability to provide. The majority of Kitui County's taxpayers are in the SMEs category.

Several studies have been conducted on the impact of an online tax system on tax compliance. Wasao (2014), for instance, investigated the influence of an online tax system on small taxpayer compliance in Nairobi's East Tax District, while Muturi and Kiarie (2015) investigated the impact of an online tax system on small taxpayer compliance in Kenya's Meru County. Mwangi (2014) looked into the factors that influence small and medium-sized businesses' tax compliance in Nairobi's Industrial Area, Kenya, and Kabaka (2019) looked into the impact of Kenya's (Itax) system on tax compliance: a case study of selected large taxpayers. However, the studies did not look at the impact of the online tax system on tax compliance in Kitui County's small and medium businesses. This study focused on establishing whether or not online tax system has any effect on tax compliance of SMEs in Kitui County.

### 1.3 Objective of the Study

The aim of this research was to evaluate how the online tax system affects tax compliance in Kitui County's small and medium enterprises. Specifically, the study sought:

i. To establish whether online tax registration affects tax compliance in SMEs in Kitui County.
ii. To examine how online tax filing affect tax compliance in SMEs in Kitui County.

## 2. LITERATURE REVIEW

### 2.1 Theoretical Review

A theory is typically defined as a set of hypotheses, assertions, or established facts aimed at explaining the cause-and-effect links between a set of observed occurrences in a plausible or

rational manner. The theories of Technological Acceptance Model, Diffusion of Innovation Theory, and Theory of Planned Behavior are the subject of this study.

### 2.1.1 Theory of Technological Acceptance Model (TAM)

This hypothesis was devised in 1989 to explain consumer acceptance and adoption of new technologies in the course of the Theory of Reasoned Action (TRA) (Hanlon, Maydew & Saavedra, 2013). The apparent simplicity of use and utility of the Technological Acceptance Model (TAM) are its defining characteristics.

When a client is exposed to different innovations, the model suggests that various factors influence their decisions about when and how to use them. This is what makes it appear to be useful and convenient. This resulted from social clinical hypothesized activity. Davis' research identifies two key components: perceived usefulness and accessibility. TAM has been related to haddocks, according to Azmi and Bee (2010), since it fails to evaluate the organization's environment, generality, and parsimony during the early phases of model construction and misses the elements that restrict Information and Communication Technology (ICT) adoption.

According to Azmi and Bee (2010), this hypothesis has influenced technology acceptance research. TAM will be used in this study to investigate how people have been gradually embracing the usage of itax technology in order to save time and money, resulting in better tax compliance. As a result, TAM will be used to see how the implementation of an online tax system improves voluntary tax compliance in Kenya, particularly for small and medium businesses in Kitui County.

### 2.1.2 Diffusion of Innovation Theory

The theory may be traced to Rogers, examining how the invention spreads and at what rate. Many elements affect the spread of new thinking, including invention or a new idea, the means of communication, the period for adoption and lastly the structure of society. In a five-stage procedure, knowledge, conviction, choice, execution and confirmation are distributed. As a consequence, six different user groups are: innovative, early adopting, early, late, laggard and leapfrogged (Kahneman &Tversky, 1979).

Early adopters are thought leaders who make recommendations and post favorable feedback about new products. They don't require much argument because they are already open-minded and may be open to change. Skeptics make up the late majority, who are wary of any changes unless they are significantly harmed. Finally, the underperformers will always cling to tried-and-true methods of operation. They rely on their previous experiences and only adopt new things when they are open for adoption (Hanlon, Maydew & Saavedra, 2013)

The spread of innovation hypothesis, according to Piolatto and Rablen (2017), is a sort of creative destruction in that it develops a new one while destroying the old one. The diffusion innovation theory was first applied to marketing and consumer behavior, but since the introduction of the Bass Diffusion Model, which established a link between technology and how it is used, the idea has

been applied to marketing and consumer behavior as well (Kahneman &Tversky, 1979). The theory is relevant to the study as it highlights the effects from online tax filing, online taxpayers' registration and online tax remittance on tax compliance in Kitui, Kenya.

### 2.2 Conceptual Framework

In a hypothetical and diagrammatic fashion, a conceptual framework displays the relationship between the study's dependent and independent variables (Salkin et al., 2018). Figure 1 illustrates the link between the dependent variable (tax compliance) and the independent variables (online tax filing and online taxpayer registration).

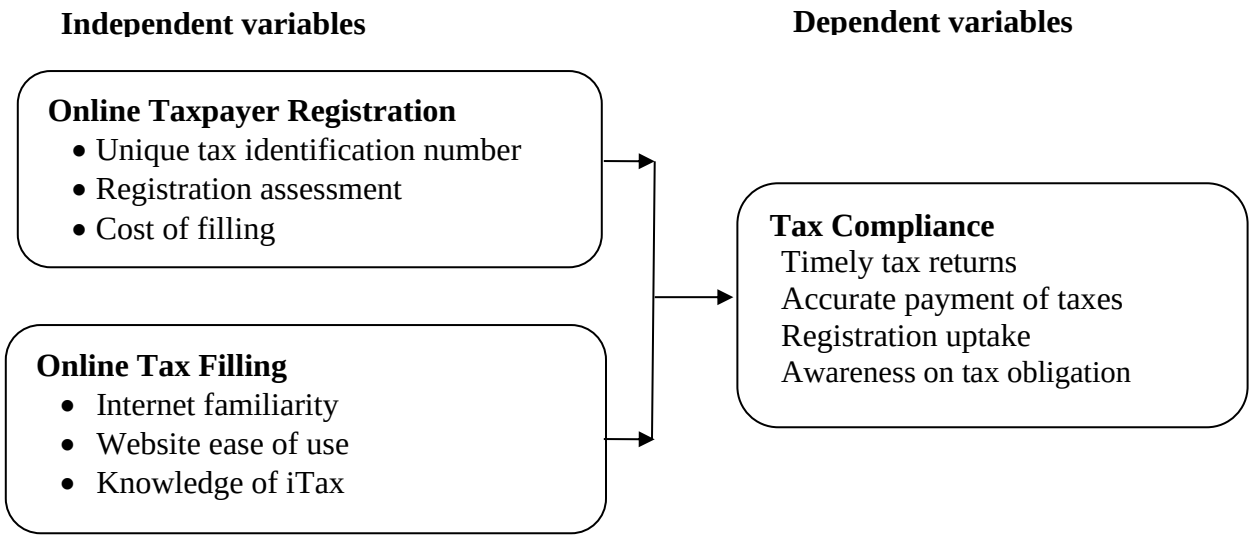


**Figure 1: Conceptual Framework**

#### 2.2.1 Online Tax Registration

Taxpayer registration is the process of recording information about persons and businesses based on their unique identification numbers (KRA, 2019). Moving to an online tax payer registration system that uses a single Personal Identification Number (PIN) for all tax payers, regardless of whether they are enrolling for individual tax, corporation tax, or Value-Added Tax (VAT) (Célimène et al., 2016) can improve tax collection and administration. One of the most important duties of tax administration is the registration and collection of information from taxpayers, which is a major driver of the completion of other essential administrative tasks. A faulty taxpayer database is unquestionably the cause of ineffective compliance programs. If basic information is collected and documented in a timely and reliable manner, tax management will be able to better understand its taxpayer base and the staff themselves, as well as plan other fundamental tax administration activities (Alhaleh, 2018).

Government cannot manage its contributions unless it knows who it is, where it is living, or if it is active or inactive. The improvement of revenue means that the tax base is increased by the

aggressive recruitment and registration of new taxpayers. This can be done effectively by recruiting and registering voluntarily online (Manaye & Alemu, 2018). Governments around the world use more and more electronic tax systems to collect tax money. Governments such as these systems reduce the number of manual filing errors and avoid tax evasion by matching data (Berger & De La Riva Torres, 2016).

Borrego, Lopes and Ferreira (2018) report, names, addresses and legal entities are used to register taxpayers by the tax administration. The contributors have been registered. These data may be used by the tax authorities to determine who they contribute, where they live, and whether they are active or inactive. The planning of future compliance activities will include modern tax administration data such as business activities and expected turnovers. Most tax administrations offer the registration of the new taxpayers a unique PIN, registration certificate and details of filing and payment requirements.

The core ability of the online tax system to register comprises storing and maintaining information identifying taxpayers, automatic issuance of PINs and taxpayer's certificates and automatic filing requirements for taxpayers. Effective online tax registration uses unique PINs in order to simplify the transmission of information between government authorities, enable the taxpayer to have a single look at the audit or collection process and to centralize the data base of registration to allow efficient monitoring of non-conformity. It also provides the contributor with a unique registration facility for all fees and facilitates compliance with the e-tax system, which permits the registration of taxpayers online (Awasthi & Engelschalk, 2018).

Research in Kenya on tax expenditures and compliance has been conducted in Abdul and Wang'ombe (2018). The study employed a descriptive design of research concentrating on quantitative components and current condition of revenue collection methods at KRA for improvements in revenue collection. The sample of 154 workers in the region of Nairobi was selected using a stratified random selection procedure. In person interviews and a questionnaire, the information was collected. The survey found that online taxpayer registration has resulted in greater income efficiency, a fairer distribution of the tax burden among the public, a greater consistency and fairness for businesses and individuals, better fiscal reform capacity, lower taxpayer compliance costs and higher taxpayer registration.

The registration module uses unique identifier numbers and companies and persons are registered. The first person to go live is the registration module, and the first time taxpays are registered. As stated earlier, data collection should be kept to a minimum and information from any module in the system should be updated and verified. The result is either lack of care or malice in multiple recordings. Some taxes are subject to certain thresholds or tax brackets and provide an incentive to reduce taxes by disassembling smaller corporations. Many tax agencies require a PIN registration of the holder of a vehicle. This significantly increases the number of persons registered and endangers the quality of the data since the person concerned can register for registration in

motor vehicles and register for another business with different data (Marjit, Seidel & Thum, 2017). Failure to collect reliable, usable data will also hinder it.

The combination of first, middle and last names is responsible for the erroneous entries; the absence of date of birth makes distinguishing between individual taxpayers with the same name difficult. The aim of iTax is to register all contributions on a domestic database and to issue a national PIN to all. In order to encourage people to register with the national Tax Authority, if there is political will to register all taxpayer, but not all the citizens, under national PINs In addition, as the wage tax is payable by the employer (Pay as you earn= Paye), many tax authorities do not enroll employees. In most cases, the employee cannot submit a tax return for reimbursement of taxes at year-end (Budak & James, 2018).

Only certain security level groups have access to certain iTax modules. Each user is a member of a group with a specific access level that grants them the ability to view or update specific data. Each group member is limited to using the files and displays that correspond to his or her task and capacity. This security concept, such as the ability to write-protect or show only certain input fields based on the security status, can be further improved if required. Security clearance is organized using official capacity. Managers can only read data; assessors can only enter and update data on their area of business, and accountants can track and manage all payment transactions. In addition to limiting possible user actions, every user behavior is traced and logged for security audits (Farrell, 2016).

Tax rates and laws alter often to account for inflation, for example. Without updating the code of the program using iTax's design, changes to legal taxes and changes can be quickly incorporated into the system. The database also includes a history of tax legislation. As a result, even before new tax legislation takes effect, values and key variables can be merged without interfering with prior and ongoing computation functions (Gitaru, 2017).

In the selection of audit cases, the iTax audit and risk analysis tool assists in generating a risk classification list of taxpayers. It also helps to create a business plan for the audit. This system provides the taxpayer with a notice and follows up on the length of time it takes to complete both the audit and the audit results. Each audit can be accompanied by a narrative 20-page audit report. It also allows human resources to be allocated to audit cases. The findings of an audit, including revenue recovered, are summarized in final audit reports, which also reveal the time required to conclude a case. The ability to handle objections and appeals in an integrated tax administration system is a useful feature (Kipkemoi, 2015).

According to Lee (2016), taxation has three major objectives: economic and economic activity management, government income generation and control of revenue and work. The amount of revenue that may be obtained through taxation is determined by a number of factors, the most important of which are the tax base and rate. The tax base specifies the minimal amount that is taxable, whereas the tax rate specifies the amount that is levied per unit of base. The things from

which tax money is derived are known as tax bases (Mandola, 2013). This will ensure that the tax system complies with the overall economic policies, including objectives such as the promotion of private investment and the promotion of consumption savings. Taxes have an impact on payers, irrespective of their nature or management method. Tax effects are the economic changes that occur in connection with taxation.

A single, centralized registration database allows for efficient planning that enables the IRS to rationalize manpower and resources on the basis of the active taxpayer population's size and geographical location. Without an internet tax system, many of these transactions would be difficult. For example, an online tax system can automatically assure a unique incoming PIN, but human checks are not practicable if the number of taxpayers is significant (Serem, Robert & Phillip, 2017).

The reform of tax administration can have a wide array of advantages according to Walsh (2012). Improved income performance, a fairer distribution of the Community fiscal burden, better and fair trade, improved capacity for reform of the fiscal system, a lower cost of taxpayer compliance, an increase in the number of taxpayers registered, lower tax evasion and fraud, improved management of tax arrears, better service and increased income are all important factors to improve management.

Yesegat and Joseph (2017) looked into the relationship between taxpayer registration and compliance and found that there was a strong positive relationship between the two. Their research presented recommendations to government policymakers to guarantee that policies are developed to examine the potential impact of registration on tax collections in order to improve compliance (Chowdhury, 2015).

According to Kenya's 2017 Doing Business report, the ease with which businesses can register has an impact on how many businesses open in the formal sector, resulting in more jobs and money for the government. Registration of a business name with the company registrar, acquiring a PIN and VAT from the KRA, obtaining a Trade License from the Trade Ministry, and ultimately receiving authorization from local governments are all legal criteria for SME registration. However, SMEs in Nairobi's Central Business District (CBD) benefit by not declaring and submitting their returns on tax in the KRA, most of them being tax noncompliant. The goal of taxpayer education is to increase their understanding of the importance of paying taxes to the government.

### 2.2.2 Online Tax Filing

Electronic tax filing, often called e-filing, is the mechanism by which tax documents or returns are sent electronically, usually without the written return requirement. The term "electronic filing system" refers to the use of Internet technology, the World Wide Web, and software for a variety of tax administration and compliance purposes. Due to variations in electronic taxes, the name of

the system also differs from nation to nation. Electronic declaration is also known as electronic tax filing, according to Serem, Robert, and Phillip (2017).

When the internal revenue service (IRS) started authorizing the e-filing of tax returns for tax refunds only, the term "electronic tax filings" was introduced in the United States (Lee, 2015). This is now almost one in five individual taxpayers electronically submitting their documents. This is owing, on the other hand, to the numerous improvements and innovations introduced throughout the years. Other industrial countries such as Australia, Canada, Italy, the United Kingdom, Chile, Irelands, Germany, France, Holland, Finland, Sweden, Switzerland, Norway, Singapore, Brazil, Mexico, India, China, Thailand, Malaysia, and Turkey have embraced electronic filing (Night & Bananuka, 2019). Developing countries have embraced computerized submission of tax returns as well. Uganda, Nigeria, Rwanda, and Kenya are among the countries that have adopted electronic filing (Sadress, Bananuka, Orobia & Opiso, 2019).

The tax landscape is rapidly shifting around the world. The expansion of information and communication technology (ICT) is posing a challenge to tax revenue systems' operation (Lamberton, De Neve & Norton, 2018). The maintenance of a contemporary and responsive tax administration system is a challenge for tax authorities. Since the 1990s, many tax authorities, especially those in industrialized countries, have gradually used ICT power through electronic tax filing (Olaoye & Kehinde, 2017). The modern approach for tax authorities to connect with taxpayers is through electronic filing.

Electronic filing, according to Fernández-Albertos and Kuo (2018), is reliant on the use of technology. Computers, the internet, and software programs are all employed in e-filing. When the intended outputs are achieved, electronic filing can be measured. Some of the advantages of electronic filing, according to Muiru (2012), include a shorter tax life, increased efficiency, less procedural errors, increased tax officers' multipurpose capabilities, and easier compliance with tax legislation for taxpayers. The creation of a single database comprising all the procedures for taxable activity such as valuing, billing, collecting and enforcement is one of the cornerstones of e-filing. The existence and importance of tax costs cannot be recognized as a new phenomenon. Four famous best practice good tax maxims began in 1776 by Adam Smith (equity, certainty, convenience and economy).

The concept of autonomy has been introduced by e-filing and has many consequences for compliance. The taxpayer calculates the amount of tax and ensures that self-assessment payment requirements have been met, not the income authorities (Alm, Schulze, Von Bose & Yan, 2019). This simply means that, although the system automatically calculates the liabilities of the taxpayers, the proper liability shall be determined by supplying exact financial statistics on tax formats. This strategy carries a high chance of noncompliance, which is comparable to tax evasion.

The main goal of this e-filing tax reporting service is to assist taxpayers in providing Substantial Presence Test (SPT) reporting facilities to taxpayers electronically or via the internet, thereby

reducing the costs and time required for taxpayers to prepare, process, and submit SPT to the tax office because it can be completed effectively and efficiently with ease through the internet. The benefits of the e-filing system include the ability for taxpayers to file SPT at any time, in a secure manner. Furthermore, because this approach uses a computer system, tax calculations are more precise (Hardika, Sukayasa & Yintayani, 2018).

E-filing is advantageous to taxpayers since it allows them to lodge online tax returns with ease. Taxpayers also pay fewer costs than if they reported manually. Furthermore, because the taxpayer submits his own SPT, the reporting procedure is speedier and more accurate. The Directorate General of Taxation has established a new system to make it easier for taxpayers to meet their duties. The Director General of Taxes' decision to use the E-filing method may have an indirect impact on the image of the tax authorities. The Director General of Taxes' behavior on tax satisfaction through the E-filing system evokes imagery (Owigar, 2016).

The South African Revenue Service (SARS) extremely manual tax system has found that it spends a significant part of SARS' payroll on the processing of hard copies and data in machine-readable form, according to Ishola, Bello and Raheed (2020). The data transcription processes are sensitive to error and are likely to result in considerable delays in handling and checking returns according Nyamwanza et al. (2014). They say that, until the mid-1980s and computerized operations were carried out exclusively by major enterprises, the return preparation industry saw limited application of computing and communication technologies. Any business, organisation, or government body that still uses manual operating systems in the 21st century is considered to undermine and refuse to grow its competitiveness. Lubua (2014) reports the full adoption of e-filing by at least 74 World Bank Group economies by 2011. Accordingly, only about one per cent of taxpayers use papers on hand to produce their returns according to Mohammed and Muturi (2018). This is a significant increase over the 98.8% that used these broadcasts in 2006.

### 2.3 Empirical Review

Several studies have been conducted on the impact of an online tax system on tax compliance. The study will look into online tax filing, online taxpayer registration, and online tax remittance in particular. The purpose of this thesis was to examine how tax compliance has changed throughout time. The majority of the information was gathered using a questionnaire. Statistical Package for the Social Sciences (SPSS) Version 20 and Excel were used to evaluate the findings. According to the findings, electronic filing has an impact on tax compliance. Customers were also happy about electronic filing, according to the study. The simplicity of doing business has also been substantially aided by electronic reporting. The relationship between proper tax assessment and business ease was shown to be positive (0.533). The report advises research on the influence of electronic filing on tax evasion and avoidance payment of electronic filing, with a focus on significant clients and a compliance component that places less emphasis on other compliance factors.

Gwaro, Maina, and Kwazera (2016) also investigated the impact of online tax filing among SMEs in the city of Nakuru, Kenya, on tax enforcement. The thesis used a survey as a descriptive research method, collecting quantitative data utilizing primary data gathering methodologies. Primary data was gathered via questionnaires. 100 respondents from Nakuru's small and medium businesses were utilized as samples. According to the data, only computer literacy had a substantial impact on the degree of tax compliance among small and medium businesses in Nakuru. The multiple correlation value of 0.953 suggests that the three independent factors have a relatively strong positive association effect on the dependent variable. The estimate coefficient (R Square) represents the variation of the variable as a function of the three independent variables, and it was 0.911, contributing up to 91.1 percent of the difference in the dependent variable.

Wasao (2014) also looked at the impact of online tax enforcement on small taxpayers in the Nairobi Tax District's east. As a sample methodology, the thesis employed descriptive and quantitative approaches. Data obtained from 160 sampled contributable individuals located in the east of Nairobi Tax District using a standardized survey covering all the variables from the report. Results indicated that the electronic system affects tax execution rates for low, non-taxpayers in the east of Nairobi with respect to registration, reporting and payment; tax enforcement, based on regression analysis, is valued at 3.663. Growing on-line tax registration units will raise tax compliance by .051 and raise the unit of taxation registrations by 0.161 for small taxpayers in the east of Nairobi, as well as increase tax adherence by 0.086 for a tax payment unit.

A study by Kabaka (2019) examined the effect of (Itax) system on tax compliance in Kenya: a case study of selected large taxpayers in Kenya. Descriptive survey design was used to solve this research issue. Primary data is the key basis of information. There were 1,238 relatively large taxpayers in the sample community. The study concludes that tax compliance in Kenya is influenced by taxpayer registration, taxpayer verification, taxpayer enforcement and taxpayer reporting. Furthermore, the study reveals that when it comes to tax compliance, reporting is the most influential component, followed by enforcement, registration, and finally taxpayer verification. According to the report, KRA should improve compliance levels by focusing on taxpayer registration and verification.

The results of the study on the manner of payment have a significant contribution to the revenue collection and the authority specifies the quantity to be paid by firms for tax collection. A statistically relevant favorable association exists between protection and revenue generation. Second, the study's results showed that iTax is convenient to impose on source payments on time. The beneficial association between convenience and revenue collection was also statistically important. The conclusions revealed that KRA has assistance services that simplify taxpayers' tax problems. The study recommends that iTax systems should be upgraded so that to allow taxpayers access services online more effectively and efficiently.

## 3. RESEARCH METHODOLOGY

A descriptive research design was used in this study. As a result, all of Kitui County's small and medium businesses were the target population. The owners of the 442 small and medium businesses in Kitui County was the study's unit of analysis. A sample population of 206 is determined using the stratified proportionate random sampling technique. Self-administered questionnaires were used to collect primary data. The questionnaires were administered using drop and pick approach in order to allow respondents have enough time to think about their responses. The Statistical Package for Social Sciences was used to examine the data (SPSS Version 25.0). To make data entry easier, all completed surveys were referenced, and the questionnaire items were coded.

For all quantitative variables, descriptive statistics such as frequencies, percentages, average score, and standard deviation was computed after data cleaning, which includes checking for entry mistakes. The information was presented in tables and graphs. The qualitative data from the closed-ended questions were evaluated using content analysis. The relationships between the independent and dependent variables were established using multiple regression analysis.

The associations between independent and dependent variables were determined using multiple regression analysis. Multiple regressions were employed since they are a way for predicting a dependent variable with two or more independent variables. Multiple regression analysis was used to analyze the data collected. Multiple regression was used by Ghauri, Gronhaug, and Strange (2020) to examine if a set of variables can predict a single dependent variable. The following model was applied:

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

Where: -

Y= Tax compliance by small and medium enterprises in Kitui County

$\beta_0$=constant

$\beta_1$, $\beta_2$, and $\beta_3$ = Beta coefficients

$X_1$= Online tax registration

$X_2$= Online tax filing

$\varepsilon$ = Error term

## 4. RESULTS AND DISCUSSIONS

### 4.1 Descriptive Statistics for Online Tax Registration

The respondents were requested by researcher to indicate their level of agreement with various statements on the extent to which online tax registration affects tax compliance by small and medium enterprises in Kitui County using 1-5 Likert scale where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is agree and 5 is strongly agree. The findings are shown in Table 1.

***Table 1: Agreement with Statements on Online Tax Registration***

| | Mean | Std. Dev. |
|---|---|---|
| iTax has enabled me to capture all income from different sources in my tax return | 4.007 | 0.740 |
| iTax has enabled me to keep proper records pertaining to income and expenditure for a period of seven years after submission of the return. | 3.893 | 0.727 |
| iTax has enabled me to understand the tax laws in regards to Notice of Assessment and the stipulated periods | 3.839 | 0.945 |
| iTax has enabled me to understand the need to obtain PIN numbers for every tax head | 4.054 | 0.504 |
| iTax has enabled me to know which income should be included or excluded in determining the taxable income | 2.725 | 1.077 |
| My business is registered for VAT with KRA | 3.799 | 0.822 |
| We have an Electronic Tax Register Machine (ETR) for the business | 2.168 | 0.857 |
| My basic information is accurately captured in the system | 3.839 | 0.679 |
| It is easy to register and get a KRA pin online | 3.839 | 0.780 |
| We subject our ETR machines to KRA for checks | 3.926 | 0.871 |

From the findings, majority (89.9%) of the respondents agreed that iTax has enabled them to understand the need to obtain PIN numbers for every tax head as shown by a mean of 4.054, that iTax has enabled them to capture all income from different sources in my tax return as shown by a mean of 4.007 and that they subject our ETR machines to KRA for checks as shown by a mean of 3.926. The respondents also agreed that iTax has enabled them to keep proper records pertaining to income and expenditure for a period of seven years after submission of the return as shown by a mean of 3.893 and that iTax has enabled them to understand the tax laws in regards to Notice of Assessment and the stipulated periods as shown by a mean of 3.839. The findings concur with Alhaleh (2018) who asserts that if basic information is collected and documented in a timely and reliable manner, tax management will be able to better understand its taxpayer base and the staff themselves, as well as plan other fundamental tax administration activities.

Further, most (67.8%) of the respondents agreed that their basic information is accurately captured in the system as shown by a mean of 3.839, that it is easy to register and get a KRA pin online as shown by a mean of 3.839 and that their business is registered for VAT with KRA as shown by a mean of 3.799. However, the respondents were neutral that iTax has enabled them to know which income should be included or excluded in determining the taxable income as shown by a mean of 2.725 and disagree that they have an Electronic Tax Register Machine (ETR) for the business as shown by a mean of 2.168. These findings corelate with Bett, Osodo, and Tanui (2017) who found that complete integration of those two elements into iTax's program would significantly improve revenue generation, paying for the charges charged, taxpayers' protection, taxpayer service delivery and enforcement at KRA.

In addition, the respondents were asked to indicate whether online tax registration ensure the tax compliance by small and medium enterprises in Kitui County. The findings are shown in Table 2.

***Table 2: Whether Online Tax Registration ensure the Tax Compliance***

| | **Frequency** | **Percent** |
|---|---|---|
| Yes | 125 | 83.9 |
| No | 24 | 16.1 |
| **Total** | **149** | **100** |

From the findings, majority of the respondents indicated that online tax registration ensures the tax compliance by small and medium enterprises in Kitui County as shown by 83.9% while 16.1% of the respondents indicated that online tax registration does not ensure the tax compliance by small and medium enterprises in Kitui County. This implies that online tax registration ensures the tax compliance by small and medium enterprises in Kitui County. The findings agree with Awasthi and Engelschalk (2018) who notes that effective online tax registration uses unique PINs in order to simplify the transmission of information between government authorities, enable the taxpayer to have a single look at the audit or collection process and to centralize the data base of registration to allow efficient monitoring of non-conformity.

### 4.2 Descriptive Statistics for Online Tax Filing

Further, the respondents were requested by researcher to indicate their level of agreement with various statements on the extent to which online tax filing affects tax compliance by small and medium enterprises in Kitui County using 1-5 Likert scale where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is agree and 5 is strongly agree. The findings are shown in Table 3.

***Table 3: Agreement with Statements on Online Tax Filing***

| | Mean | Std. Dev. |
|---|---|---|
| Server downtime makes online payments a nightmare | 4.054 | 0.837 |
| Accessing online payments during due dates is very hectic | 4.054 | 0.226 |
| We ensure that all VAT returns are made on I-Tax every month | 2.389 | 1.155 |
| All transactions are posted through the I-Tax | 2.477 | 1.154 |
| The time take in filling tax returns in I-Tax is very short | 3.893 | 0.571 |
| It is less expensive to do manual filing of tax returns than on-line filing | 2.362 | 1.035 |
| On-line filing of returns has improved our compliance levels | 4.074 | 0.717 |

From the findings, most (84.6%) of the respondents agreed that on-line filing of returns has improved our compliance levels as illustrated by a mean of 4.074 and that server downtime makes online payments a nightmare as illustrated by a mean of 4.054. Additionally, most of the respondents agreed that accessing online payments during due dates is very hectic as illustrated by a mean of 4.054 and that the time take in filling tax returns in I-Tax is very short as illustrated by a mean of 3.893. However, most of the respondents disagreed that all transactions are posted through the I-Tax as illustrated by a mean of 2.477 and that they ensure that all VAT returns are made on I-Tax every month as illustrated by a mean of 2.389. The respondents also disagreed that it is less expensive to do manual filing of tax returns than on-line filing as illustrated by a mean of 2.362. The findings concur with Kiring'a and Jagongo (2017) who notes that MSE tax enforcement with understanding of electronic tax filing and technical skills in the preparation of tax returns have impacted electronic tax filing. The findings disagree with Serem, Robert and Phillip (2017) who notes that online tax system ensure business transactions are posted through the I-Tax and that ensure that all VAT returns. Creation of a single database comprising all the procedures for taxable activity such as valuing, billing, collecting and enforcement is one of the cornerstones of e-filing.

Further, the respondents were asked to indicate whether online tax filing ensure the tax compliance by small and medium enterprises in Kitui County. The findings are shown in Table 4.

***Table 4: Whether Online Tax Filing ensure the Tax Compliance***

| | Frequency | Percent |
|---|---|---|
| Yes | 119 | 79.9 |
| No | 30 | 20.1 |
| **Total** | **149** | **100** |

From the findings, majority of the respondents indicated that online tax filing ensures the tax compliance by small and medium enterprises in Kitui County as shown by 79.9% while 20.1% of the respondents indicated that online tax filing does not ensure the tax compliance by small and medium enterprises in Kitui County. This implies that online tax filing ensures the tax compliance by small and medium enterprises in Kitui County. The findings concur with Kiring'a and Jagongo (2017) who established that online tax filing significantly affect tax compliance among small and medium-sized businesses (SMEs) in Kenya's Kibwezi Subcounty.

### 4.3 Multiple Regression Analysis

The researcher conducted a multiple regression analysis to test the relationship between the variables. The findings are illustrated in Table 5, 6 and 7.

***Table 5: Model Summary***

| Model | R | R Square | Adjusted R Square | Std. Error |
|---|---|---|---|---|
| 1 | .862[a] | .743 | .740 | .236 |

a. Predictors: (Constant), Online Tax Remittance, Online Tax Registration, Online Tax Filing

From the findings, the R square was 0.743. This showed that 74.3% of the variations in tax compliance by small and medium enterprises in Kitui County are explained by online tax registration, online tax filing and online tax remittance. This implies that 25.7% of the variations in tax compliance by small and medium enterprises in Kitui County are attributed to other factors.

***Table 6: Analysis of Variance (ANOVA)***

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 23.725 | 2 | 11.863 | 211.494 | .000[b] |
| | Residual | 8.189 | 146 | 0.056 | | |

| | | |
|---|---|---|
| **Total** | **31.913** | **148** |

a. Dependent Variable: Tax Compliance

b. Predictors: (Constant), Online Tax Remittance, Online Tax Registration, Online Tax Filing

From the ANOVA Table, p-value was 0.000 and F-calculated was 211.494. Since p-value was less than 0.05 and the F-calculated was greater than F-critical (2.6670), then the regression model was significant. This implies that tax compliance by small and medium enterprises in Kitui County is significantly predicted by online tax registration and online tax filing.

***Table 7: Regression Coefficients***

| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | **t** | **Sig.** |
|---|---|---|---|---|---|---|
| | | **B** | **Std. Error** | **Beta** | | |
| 1 | (Constant) | .934 | .265 | | 3.525 | .000 |
| | Online tax registration | .807 | .083 | .428 | 9.723 | .000 |
| | Online tax filing | .731 | .064 | .312 | 11.422 | .000 |
| a. Dependent Variable: Tax compliance | | | | | | |

The established model for the study was:

$\mathbf{Y} = 0.934 + 0.807\mathbf{X_1} + 0.731\mathbf{X_2}$

Where: -

**Y**= Tax compliance by small and medium enterprises in Kitui County

$\mathbf{X_1}$= Online tax registration

$\mathbf{X_2}$= Online tax filing

From the findings, the study showed that a unit increase in online tax registration leads to 0.807 increase in tax compliance by small and medium enterprises in Kitui County. Since the p-value (0.000) was less than 0.05, the study rejected the null hypothesis and concluded that online tax registration significantly affects tax compliance in SMEs in Kitui County. The findings concur with Lunani, Ayuma, and Tanui (2019) who investigated the impact of tax enforcement on small and medium-sized businesses in Eldoret City, Kenya and established that electronic tax registration has a significant impact on tax compliance.

Moreover, the study revealed that a unit change in online tax filing leads to 0.731 change in tax compliance by small and medium enterprises in Kitui County. Since the p-value (0.000) was less than 0.05, the study rejected the null hypothesis and concluded that online tax filing significantly affects tax compliance in SMEs in Kitui County. The findings corelates with Kiring'a and Jagongo (2017) who established that online tax filing significantly affects tax compliance among small and medium-sized businesses (SMEs) in Kenya's Kibwezi Subcounty.

## 5. CONCLUSIONS

The study concluded that online tax registration significantly affects tax compliance in SMEs in Kitui County. It is clear that iTax has enables SMEs to understand the need to obtain PIN numbers for every tax head, to capture all income from different sources in my tax return. iTax has enabled SMEs to keep proper records pertaining to income and expenditure for a period of seven years after submission of the return, to understand the tax laws in regards to notice of assessment and the stipulated periods and to know which income should be included or excluded in determining the taxable income. The basic information is accurately captured in the system and it is easy to register and get a KRA pin online.

The study concluded that online tax remittance significantly affects tax compliance in SMEs in Kitui County. On-line filing of returns has improved SMEs compliance levels and time take in filling tax returns in I-Tax is very short. It is clear that all transactions are not posted through the I-Tax and SMEs do not ensure that all VAT returns are made on I-Tax every month. It was also established that it is not less expensive to do manual filing of tax returns than on-line filing and accessing online payments during due dates is very hectic as server downtime makes online payments a nightmare.

## 6. RECOMMENDATIONS

The study recommends that the KRA officials in Kitui county should conduct awareness programs among SMEs regarding the importance of online tax registration. This will ensure that SMEs capture every income from different sources in the tax returns and acquire electronic tax register machine (ETR) for the business.

The study also recommends that Kenya Revenue Authority should use effective measures to mobilize and motivate small tax payers to register online for turnover tax, value added tax among other taxes in order to increase tax compliance. The study further recommends that small and medium enterprises should keep detailed records of all input tax and output tax to facilitate the completion of VAT returns.

The study also recommends that more training and marketing of the online system should be done by KRA to ensure that taxpayers who embrace the online tax system. The government should also improve internet connectivity in the rural areas to foster growth in online tax filing and online tax remittance. This can be done by use of enterprise collaboration with telecommunication firms.

The study recommends that SMEs should be encouraged to file their taxes online as it positively influences tax compliance among SMEs in Kitui county. This will ease and simply filing of tax returns, facilitate convenient filing of tax returns, ensure accuracy in tax payments as a result of matching of returns against filing requirements.

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