



RESEARCH ARTICLE

IMPACT OF ONLINE TAX FILING ON TAX COMPLIANCE AMONG SMALL AND MEDIUM ENTERPRISES (MSE) IN KIBWEZI SUB-COUNTY IN KENYA

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ABSTRACT

On-line tax filing is one of the e-government services that is gaining importance for public to perform their responsibility to the country. In an effort to maintain a modernized tax administration system, the Kenya Revenue Authority developed iTax, an online filing (e-filing) that integrates the processes of registration for tax purposes, tax preparation, tax filing and consequently tax payment. Despite the rapid adoption of e-filing in Kenya, the filing system is still unreliable especially at peak period and on voluntary usage which lead to low level of compliance perceived by taxpayers. The study investigates the impact of online tax filing on tax compliance among MSE in Kibwezi sub-county. The study outlines a detailed literature review and identifies the variables for this research to be taxpayers' perception towards online filing, taxpayers' technical skills of filing tax returns and tax compliance. The study was based on descriptive survey research design. The information required for the study was collected from primary sources using the self administered questionnaire and interview schedule. A target population was 1,800 MSE. A total sample size of 316 was picked as representative of the target population. Simple random sampling was used to get respondents. Data was collected by means of questionnaire constructed by the researcher and administered on three hundred and sixteen MSE in Kibwezi Sub County. Pilot study was carried out to guard against using unreliable instruments. Descriptive statistics and inferential statistics were used to analyse the data. The validity of the instruments was tested by research experts from Kenyatta University and KRA. Reliability of data collection instrument was through split-half testing. The Statistical Package for Social Sciences (SPSS) version 21.0 was used to analyse the data collected. Data was analysed using t-test at coefficient alpha ( $\alpha$ ) level of 0.05 to test the relationship between independent and dependant variable. The findings of this study will serve as a useful guideline not only for devising strategies to promote e-government services, particularly tax e-filing service but also to improve the performance of the e-filing system. The public at large will benefit from the adoption of online tax filing while KRA will improve tax compliance. The findings of the study was that online tax filing do affect tax compliance level among MSE as far as perception on online tax filing and technical skills of filing tax returns were concerned. The correlation analysis indicate that there was negative correlation between perception towards online tax filing and tax compliance while there was a positive correlation among technical skills of filing tax returns. From regression analysis, it was revealed that holding perception on online tax filing and technical skills of filing tax returns to a constant zero, tax compliance will stand at 0.712. The summary, conclusion and policy implication have been done. Finally, the area for further research has been identified.

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INTRODUCTION

Taxation is essential for sustainable economic development and tax administration is a basic function of a successful state. In Kenya, taxation is the single largest source of government budgetary resources. Given its central role, taxation has been applied to meet two objectives. First, taxation is used to raise sufficient revenue to fund public spending without recourse to excessive public sector borrowing. Second, it is used to mobilize revenue in ways that are equitable and that minimize its disincentive effects on economic activities (Moyi and Ronge, 2006). 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 (OECD, 2009). However one of the biggest threats to this method of financing governments is tax avoidance and evasion. Developing economies are worst affected by this challenge. While Developing countries record relatively higher tax compliance levels (35%), African countries report less than 23% (GIZ, 2010). Budgetary shortfalls and taxation gaps prevail in fiscal plans, resorting to dependence on unsustainable financial sources such as Bank loans and multilateral donors. Developing countries therefore need to develop and implement policies that reduce prevailing shortfalls and unhealthy dependence on donor funds. According to Ochieng *et al.* (2014), the Kenya government has been pursuing tax reforms in order to design a system that is viable and productive to finance and sustain government expenditure without recourse to deficit financing. With the devolved structure of governance spelt out in the country's

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constitution, there has been need for increased revenue collection to sustain the activities for both the devolved and central governments. One way to boost a tax authority's efficiency is by expanding its use of information and communication technology. Such technology can facilitate a broad range of services, including registering taxpayers, filing returns, processing payments, issuing assessments and checking against third-party information. There have been little published empirical studies on the reactions of taxpayers towards online filing system in enhancing compliance among medium and small enterprises. Therefore, in considering that e-filing is the direction global tax authorities is taking, this study has emerged to find out how taxpayers and tax practitioners in Kenya as a developing nation, respond to online tax filing endeavours put in place by KRA to enhance compliance to address a research void, in order to fill up a knowledge gap. This study's aim was to establish the impact of online tax filing on tax compliance among the MSE in Kibwezi Sub-County.

### **Online tax filing system**

Electronic tax filing was first coined in United States, where the Internal Revenue Service's (IRS) began offering e-filing for tax refunds only (Muita, 2011). This has now grown to the level that currently approximately one out of every five individual taxpayers is now filing electronically. This however, has been as a result of numerous enhancements and features being added to the program over the years. Online tax filing (Electronic tax filing or e-filing) is a process where tax documents or tax returns are submitted through the internet; usually without the need to submit any paper return (Wasao, 2014). The e-filing system encompasses the use of internet technology, the Worldwide Web and Software for a wide range of tax administration and compliance purposes. Countries have given different names to online tax filing system, for instance (Gellis, 1991), electronic declaration is named electronic tax filing. UN, (2007) refers to it as online taxation payment while Turner and Apelt (2004), names e-tax lodgement and i-Tax (KRA, 2014). 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.

### **Tax compliance**

Tax compliance is the timely filing and reporting of required tax information, the correct self-assessment of taxes owed, and the timely payment of those taxes without enforcement action (Jones, 2009). From this definition, there are three dimensions

of tax compliance: filing, reporting, and payment compliance. Therefore, a taxpayer would be called non-compliant if the three dimensions are not properly accomplished. The aim of tax reforms in many countries is to achieve higher voluntary compliance and one way to do this is by introducing electronic filing system (Khadijah, 2013). No matter what the justifications advanced, a tax fails to the extent that it is avoided or evaded (Shultz and Harris, 2004). The aim of tax reform in many countries is to achieve higher voluntary compliance and one way to achieve this is by introducing a self-assessment system (SAS) (Khadijah, 2014).

### **Benefits of Online Tax Filing**

#### **Tax Administrators' Perspective**

The Benefits of online tax system from tax administrators' perspective is that the goal of any tax authority is to establish a system of tax administration that allows for the collection of required taxes at minimum cost. The online tax filing system shortens the time taken to extract data and information on revenue for example processing returns and related information from taxpayers, entering tax return data into a database, matching returns against filing requirements, processing tax payments and matching them against assessments, and issuing assessments and refunds.

#### **Taxpayers' Perspective**

The benefits of online tax system from taxpayers' perspective are the system enables taxpayer internet based pin registration, return filing, payment registration to allow for tax payments and status inquires with real-time monitoring of accounts. The online tax filing will simplify tax processes and make it easy for taxpayers to comply. To add to that it reduces time taken by taxpayers when dealing with KRA. KRA (2014) notes that online tax filing systems will re-engineer business processes for effectiveness and efficiency. On the same note it enhance accuracy of tax payers to account for taxes for instance the system inbuilt software that has been pre-approved by the relevant tax authority to assist the taxpayers in calculating and consequently submit the correct amount of tax due.

### **Statement of the Problem**

Worldwide, taxpayers' resistance, underutilization and reluctance to use electronic filing system remain a great concern and still plague various tax agencies which are embracing electronic tax administration systems (EATAAC, 2002). Electronic filing in Kenya was introduced in the year 2007, initially on a voluntary usage basis for all categories of income tax payers, through an online system called KRA Online. But in the year 2013, a new online system called iTax was introduced with improved qualities and features to make it simpler for taxpayers to e-file their tax returns and remit taxes as they fall due. At the end of the first year of its inception, 479,592 Medium and Small taxpayers had used ITMS to register for tax purposes while only 24,626 had used it for online filing. Four years later, the number of taxpayers who had registered using ITMS had increased to 790,048 whereas those using the system for e-filing had reduced to 7,832 (KRA, 2012). The challenge of lack of knowledge on the impact of online tax filing on tax Compliance is serious on the grounds that it may have played part in the Kshs 60 billion in half year tax collection short fall in 2012/2013 financial year (Standard

Newspaper, January 15, 2013) and Ksh. 11.47 billion tax collection short fall in 2011/2012 financial year (Standard Newspaper, July 21, 2012), and even after aggressive marketing by KRA in the print and electronic media, The existing tax compliance gap in Kenya has been 40% (price-water house coopers, 2009). According to the information obtained from Makueni county council, only about 70% of the business communities that are subjected to tax are paying their tax obligation regardless of the existing powerful tax proclamation (Makueni county council 2014/2015 financial report). This clearly shows that relying solely on legal enforcement (stick approach) may not work always and forever. In this regard, this study was conducted, focusing on impact of online tax filing and tax compliance among MSEs in Kibwezi Sub County, with an aim to assess the taxpayers' willingness to file tax returns online.

### Purpose of the study

The objective of the study was to investigate the impact of online tax filing on tax compliance among MSE in Kibwezi sub-county, Makueni County, Kenya. The specific objectives that the study analysed were: - To determine taxpayers' perception towards online tax filing influence on tax compliance and to establish the technical skills of filing tax returns influence on tax compliance. This study is significant since the Kenyan government relies heavily on taxes to fund its development expenditure. An increase or decline in tax revenues has a direct bearing on the economy. Hence the study will enable government to curb corruption by reducing face-to-face interactions between the taxpayer and tax authorities thus the government will boost tax collection in our country and consequently propel economic growth. The budget deficit will be curtailed and the government will provide essential services to its citizens with ease. On the same note due to availability of funds, the goals of vision 2030 will be achieved as planned for instance alleviation of poverty, employment creation, education for all, improved maternal care among others. The study is likely to reveal the strengths or weaknesses associated with implementation of new technology thereby enriching knowledge to other government institutions planning to embark on similar modernization programs. It will enable the KRA in putting in place motivational measures to enhance the adoption of online tax filing system by taxpayers and to seal any revenue loss loopholes like tax evasion. Finally, the government can use the findings to enhance future policy formulation and highlight issues of interest that need further redress.

### Literature Review

#### Theoretical literature

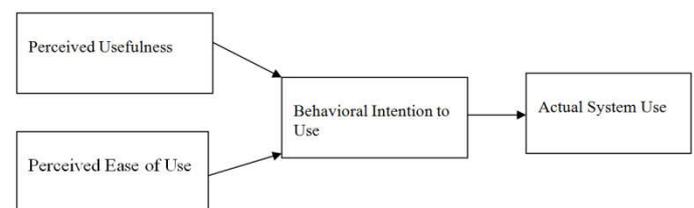
This study borrows heavily from existing research theories which have been put across by various scholars with regard to adoption of technology in society and tax compliance. The theories used for these study were Technology acceptance model (TAM), Diffusion of Innovation (DOI) Theory, Unified Theory of Acceptance and Use of Technology (UTAUT) and Theory of Reasoned Action (T.R.A). The theories were suitable for this study in that they explain taxpayer's behaviour when adopting new technology. Online filing being new technology to use was explained well by these theories on adoption process. The tax compliance theories of the Social

Psychological approach and Economic approach were well illustrated on how they influence taxpayers' tax compliance

### Theories of adoption of online filing technology

#### Technology acceptance model (TAM)

This theory was advanced by Venkatesh and Davis. The TAM has been validated as a powerful and parsimonious framework to explain the adoption of information technology by the users. The TAM postulates that user adoption of a new information system is determined by their intention to use the system, which in turn is determined by their beliefs about the system. The TAM further suggests that two beliefs-perceived usefulness and perceived ease of use-are instrumental in explaining the variance in the users' intention. Perceived usefulness is defined as the extent to which a person believes that using a particular system will enhance his or her job performance, while perceived ease of use is defined as the extent to which a person believes that using a particular system will be free of effort. Among the beliefs, perceived ease of use is hypothesized to be a predictor of perceived usefulness. TAM can be used with confidence to examine the effect of individual differences that is computer self efficacy on users' acceptance of electronic tax-filing systems through three beliefs - perceived usefulness, perceived ease of use, and perceived credibility. The users' perceived credibility of Web systems has a marked influence on user willingness to engage in online exchanges of money and personal sensitive information (Miyazaki and Fernandez, 2001).



Source (Venkatesh, 2000)

#### Diffusion of Innovation (DOI) Theory

This theory which seeks to describe the patterns of adoption of technology, explaining the mechanism of the adoption and further predicting whether and how a new invention or innovation was successful, was advanced by Everett Rogers in 1962. The DOI theory proposes that technological innovation is communicated through particular channels, over time, among the members of a social system. Based on this definition, using e-filing technology is a fairly new practice in Kenya and can be seen as an innovation for each individual internet user.

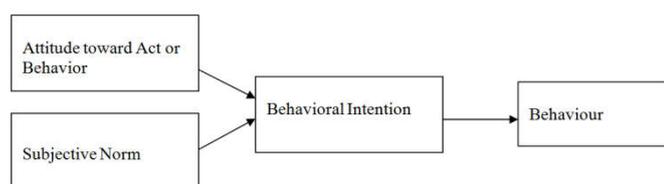
#### Unified Theory of Acceptance and Use of Technology (UTAUT)

This model was formulated by Venkatesh and others and it aims to explain user intentions to use an information system and subsequent usage behaviour. The goal of UTAUT is to understand one's intention to use an information system and the actual usage of the system (Venkatesh *et al*, 2003). The theory holds that four key constructs (performance expectancy, effort expectancy, social influence, and facilitating conditions) are direct determinants of usage intention and behaviour. Gender, age, experience, and voluntariness of use are posited to mediate the impact of the four key constructs on usage

intention and behaviour (Venkatesh, 2003). Performance Expectancy in this theory has been defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance like i Tax.

### Theory of Reasoned Action (T.R.A)

This theory was advanced by Fishbein and Ajzen in 1975. The theory is based on the proposition that an individual's behaviour is determined by his / her behavioural intention to perform that behaviour, which provides the most accurate prediction of behaviour (Fishbein and Ajzen, 1975). Behavioural intention is a function of two factors: one's Attitude toward the behaviour and subjective norm. Attitude toward the behaviour is defined as "a person's general feeling of favourableness or unfavourableness for that behaviour" (Ajzen and Fishbein, 1980). Subjective Norm is defined as a person's "perception that most people who are important to him think he should or should not perform the behaviour in question" (Ajzen and Fishbein, 1980). This can result into behaviours such as voluntary registering as a tax payer, making tax assessments and filing returns and finally paying taxes due to the tax authority. The figure below is a diagrammatic representation of the theory



Source: (Ajzen, 1975)

### Theories of Tax Compliance

The main theoretical approaches to tax compliance have commonly been divided into the 'economic deterrence' approach, and the wider behavioural approach which incorporates both social and fiscal psychological approaches.

#### The Social Psychological approach of Tax Compliance

This theory focuses on psychological variables which include moral values and the perception of fairness of the tax system and the tax authorities. Social psychology models inductively examine the attitudes and beliefs of taxpayers in order to understand and predict human behaviour. The studies based on these models are many and varied in terms of the methodologies employed and the potential compliance factors examined. In this regard, the focus of this study is to analyse the studies which examine the human factors that affect taxpayers' compliance attitudes and behaviour. The model has been looked by various scholars, for instance a study done by Schmolders (1960) argues that every evaluation of the taxpayers' tax compliance behaviours should start from the answer to the question "How is the state mirrored in taxpayers' minds?" He further argues that "Consciousness about the state leads to citizens' civic and tax 'sentiments' and to a fundamental attitude with regard to problems of 'their' state". In other words, the way people express their attitudes, act, interact, react, and generally behave is grounded on the way they think rather than on reality. What happens in citizens' minds when dealing with issues like tax policy, public goods, tax regulations among others, constitutes the social psychological determinants of tax compliance behaviour.

### Economic approach of tax compliance

The economic definition of taxpayer compliance views taxpayers as 'perfectly moral, risk-neutral or risk-averse individuals who seek to maximize their utility, and chose to evade tax whenever the expected gain exceeded the cost (Milliron and Toy, 1988). Thus, a pure 'cost-benefit' approach is given for why or why not taxpayers may comply with the tax laws. Some researchers propose that individuals are expected to weigh 'the uncertain benefits of successful evasion against the risk of detection and punishment (Fischer et al, 1992). Consequently, a penalty structure forms part of the punishment, and is a critical factor in an individuals' choice to evade tax. The models which have been based on the economic theory of compliance generally focus on deterrence. Deterrence can be achieved through a number of approaches, punitive and persuasive. That is, deterrence may take on the form of increasing the probability of detection, increasing the tax rate or by the imposition of tougher penalties (Fischer et al, 1992). Alternatively, it may take on the form of better education, increased advertising/publicity and incentives (Hite, 1989). The economic deterrence model has been commonly used to examine tax evasion and compliance from a theoretical perspective (Jackson & Milliron, 1986. According to Porschke and Witte (2011) they established that majority of taxpayers will always mention fairness as one of the most important issues that influence tax compliance. Where taxpayers perceive that there is fairness in taxation, they comply voluntarily, and the reverse is also true.

### Empirical Literature

#### Taxpayers perception towards online filing technology

Perception and attitude towards online filing has been identified as one of the major factors that influence the adoption of a new innovation or technology (Mandola, 2013). Although, the e-filing system may offer potential benefits to improve administrative compliance efficiency, the benefits gained may be obstructed by tax users' unwillingness to accept and use the new tax technology. In essence, the move to adopt an e-filing system is neither hassle free nor well accepted by all tax parties, particularly the tax agents and professionals (Kamarulzaman, 2010). According to Palmer (2002) electronic tax filing systems can be evaluated in terms of usability, design and performance including download delay, navigability, site content, interactivity, responsiveness, user satisfaction, the likelihood of return to the website and frequency of use. Another critical issue on e-filing is that the KRA has to ensure the confidentiality and privacy of the information submitted through the Internet is preserved For example, empirical study found that American taxpayers vary widely in their attitudes, technology readiness, acceptance and utilization of e-filing technologies (Walsh and White, 2000). Several studies uncovered that taxpayer groups vary in their technology readiness and willingness to automate, especially older taxpayers and pensioners who are much more comfortable handling paper filing and are accustomed to paper products (Fatimah, 2007). According to the definition of Rogers (1983) in the DOI theory, the use of iTax as an e-filing system in Kenya can be considered a novel approach since it is perceived as an innovation by its users. Rogers proposes that there are five distinct categories of adopters: innovators, early adopters, early majority, late majority and laggards. Use of iTax in Kenya can be said to be still in the early stage of adoption. For

instance a study on the antecedents of paperless income tax filing by young professionals in India (Amitabh *et al*, 2009). The objective of this study was to study how young Indian professionals will adopt or behave towards paperless or online filing of tax returns with the aim of enhancing compliance. The regression analysis carried out found that the antecedents of young Indian professionals depended on the perceived ease of the tax system, personal innovativeness in information technology, relative advantage, performance of filing service, and compatibility. The implication of the findings to the current study is that for any online system to succeed whether for small, medium or large taxpayers' category there must be the ease of use, innovativeness and accessibility.

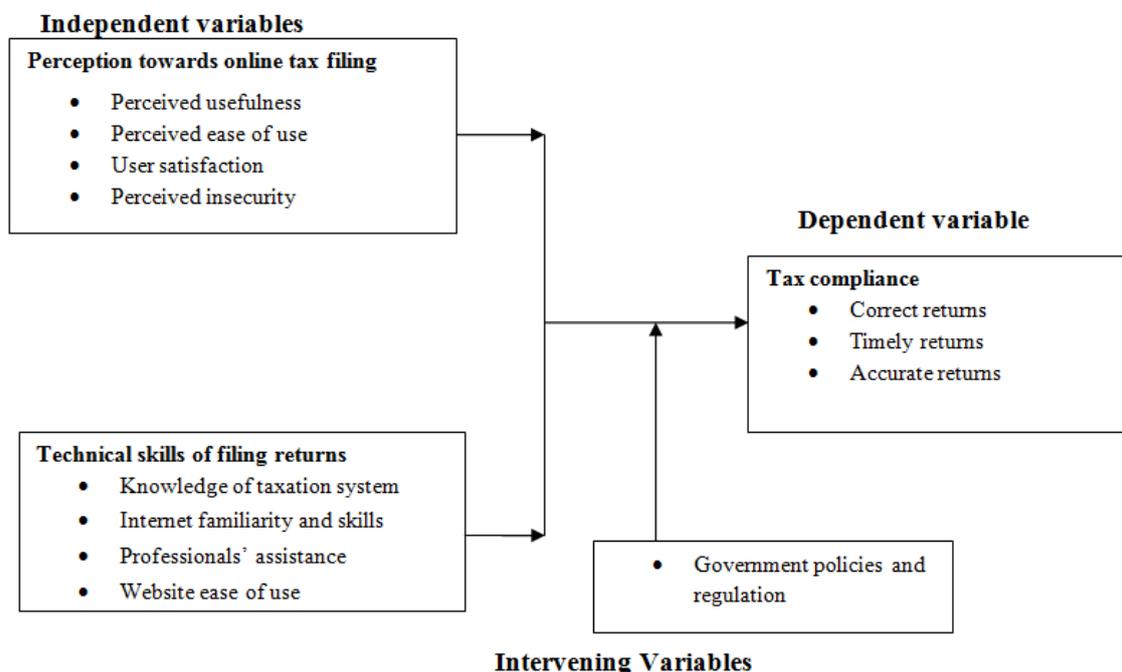
**Technical skills of filing returns**

According to Mandola (2013), there has been little research exploring the possession of technical skills of filling in and filing tax returns as a factor that affects the adoption of online filing system by citizens, especially in developing countries. Lee *et al*. (2008) on user evaluation of tax filing web sites in South Korea and Turkey, to compare the design and the complexity of the web sites and the ease with 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.

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 users of the system need to have. Failure to consider such skills may make the intention of the system not to be realized (Maede, 2002). He confirmed that despite the heavy investment, 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 (2010) also did 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.

**Conceptual framework**

A conceptual framework is described as a set of broad ideas and principles taken from relevant fields of enquiry and used to



**Fig.1. Conceptual Framework**

Having in place an electronic tax filing system is one thing, but being able to be used by taxpayers is another thing. This has influence on the current study in a way that the tax website ease of usage must be considered before such a system is rolled out to taxpayers. Other factors to consider should also be the capacity of the system and the efficiency (Lee *et al*, 2005). Based on the survey carried out in Malaysia by Ling and Nawawi on Integrating ICT Skills and tax software in tax education (Ling & Nawawi, 2010). The respondents were the

structure a subsequent presentation (Raichel and Ramey, 1987). This study proposes a framework that incorporates the significant effect of, taxpayers' perception towards online tax filing and technical skills of filing the tax returns which is a significant on tax compliance. The intervening variables are the moderating factors that affect an individual's preference to tax compliance. The dependent variable is a result of the interaction between the inputs (independent variables) and the intervening variables. The government and other tax agencies

can enhance compliance by education and training, tax amnesty and technology. The conceptual framework as illustrated in Figure 1 is a diagrammatic representation of the variables that determines the online tax filing that enhances tax compliance.

## Research Methodology

### Research Design

The research design that was used in this study was descriptive survey design. Descriptive methodologies, as noted in Saunders *et al.* (2000), were seen as being appropriate for this type of study where the researcher needs to capture the state of affairs as it exists. This design was used when collecting information about people's attitudes, opinions, habits or any of the variety of education or social science issues (Orodho & Kombo, 2002). A survey was used as a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. The design discovers and measures the cause and effect of relationships between variables in this case online tax filing and tax compliance.

### Model Specification

A Multiple Linear Regression Model was used to study the variables i.e.  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon$

Where

Y is Dependent Variable (Tax Compliance)

$X_1$  is Independent Variable (Perception towards online tax filing)

$X_2$  is Independent Variable (Technical skills of filing tax returns)

$\beta_0$  is Constant

$\beta_1$  and  $\beta_2$  are Regression Coefficients

$\epsilon$  is Error term

The Ordinary Least Square (OLS) was used to estimate the model since the model deal with continuous data. To determine if any of the independent variables influences the behaviour or outcome of the dependent variable the t- test was carried out on the model assuming a 95% confidence interval, with significant differences being recorded at an alpha level of 0.05. Each of the regression coefficients was tested for significance using a t test and insignificant regression coefficient was dropped from the model and a new model was generated based on remaining independent variables. Correlation coefficient was used to test the strength of association between variables. Correlation analysis was done in order to eliminate multicollinearity. The dependent and independent variables was measured on ratio scale since this level gives more precision. Data was presented in form of frequency tables.

### Definition and Measurement of Variable

The measurement of variables in the study and relationship between the variables and the analysis tool are illustrated in Table 1.

### Study Area

Most of the taxpayers in Kibwezi Sub-County fall under the small and medium taxpayers' bracket. According to Kamleitner *et al.* (2010), this category of taxpayers is

characterised by rapid business expansion, unstructured management hierarchy and poor record keeping and generally non-compliance with tax matters hence adopting electronic filing may be a blessing in disguise for the government.

### Target Population

The population of the study consisted of Small and medium Taxpayers in Kibwezi sub county Tax District in Kenya which currently is approximated to be 1,800 taxpayers (Domestic Taxes Report, 2015).

### Sample Size and Sampling Procedures

The sample size of the study was 316 respondents which were selected from a total population of 1,800 MSE that operate in the area of study. Sampling procedure was base on a formula (Mugenda and Mugenda, 2003).

$$n = \frac{Z^2 pq}{d^2}$$

Where:

n = the desired sample size (if the target population is greater than 10,000).

Z = the standard normal deviation at the required confidence level.

d = the level of statistical significance set (0.05).

p = a proportion in target population (50% = 0.5).

q = 1- p=0.5

Therefore the desired sample size was;

$$n = \frac{(1.96)^2 (0.50) (0.50)}{(0.05)^2} = 384$$

Given that the target population is less than 10,000. Therefore the actual sample size was;

$$nf = \frac{n}{1 + n/N}$$

Where nf = desired sample size (when population is less than 10,000).

n = desired sample size (when population is more than 10,000).

N = the estimate of population size.

The target population for the study was 1,800 MSE

$$nf = \frac{384}{1 + \frac{384}{1800}} = 316$$

Systematic simple random sampling was employed to select 316 MSE out of possible 1800 MSE.

## FINDINGS AND DISCUSSION

### Descriptive Results

The study sought to establish the impact of online tax filing on tax compliance among MSE in Kibwezi sub-county. Three main categories of questions were framed and the same given to the respondent that is perception towards online tax filing, technical skills of filing tax returns and tax compliance. Each question had several components tested in order to realize the objectives of the study. In order to present the descriptive results of the variables of the study, an analysis of the Means, Standard Deviations, Skewness and Kurtosis was done (Appendix I). Online tax filing had a mean of 2.75 (SD = 0.98). Tax Compliance had a mean of 1.51 (SD = 0.55). Since

this study employs quantitative data analysis, two statistical values were checked to assess the normality of the distribution of the variables: Skewness and kurtosis. A criterion from the literature is that a Skewness statistic bigger than 3.0 or a kurtosis statistic bigger than 8.0 would imply that the distribution is non-normal (Kline, 2005). The Skewness and kurtosis statistics for variables in this study were within these acceptable ranges of normality as shown in appendix I.

### Perception towards online tax filing

With regard to perceived ease of use, the more an individual feels that a particular filing method is easier to use, the more likely they are to use (Boone, 2012). The researcher sought to determine how taxpayers' perception towards the online tax filing influenced tax compliance. The results are presented in Table 2. The results of the findings reveals that majority of the respondents who strongly agreed that indeed online tax filing is faster accounted for 66.90% followed by 28.06% who also agreed, 5.40% who disagreed and none of the respondent strongly disagreed. It can be concluded that majority of the taxpayers find the online tax filing of tax registration and submission of returns is efficient. In regard to whether it is easy and simple to file tax returns online, the results of the findings indicated that 62.23% of the respondents agreed with the statement followed closely by 10.07% who strongly agreed. A further 13.31% disagreed with the statement; none of the respondent strongly disagreed with the statement and 14.39% were not sure whether or not it is easy and simple to file a tax return online. It can therefore be observed that most of respondents feel that it is easy and simple to file a tax return online. The findings whether the online tax filing is secure to use revealed that that most of the respondents agreed with a representation of 45.68% followed in a distance by 6.12% who strongly agreed. 18.71% of the respondents disagreed and 5.04% strongly disagreed. The study further revealed that 24.46% were not sure whether or not the online system was secure. It can therefore be deduced that majority of the taxpayers agree that the online system is secure, which is one of the major reason that led to the inception of the online tax filing. On the same note the question on whether the design of online tax filing is user friendly. The results of the findings as shown in Table 2, revealed that majority (51.44%) of the respondents disagreed with the statement, followed by 1.80% who strongly disagreed. The respondents who were not sure accounted for 14.75% as to whether the design of online tax filing is user friendly. 25.54% of the respondents agreed with the statement and 6.47% strongly agreed. Therefore it can be concluded that majority of the taxpayers find the design of online tax filing for tax registration and submission of returns is not user friendly. The studies done by Boone, (2012) came up with similar results and found that with regard to perceived ease of use, the more that an individual feels that a particular filing 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. The study of Mahadeo (2009) also concurs with the findings that user's attitude towards the e-tax filing and payment system remains the most powerful predictor for user intention (Mahadeo, 2009). Intention to use an e-tax filing system is largely influenced by perceived use, perceived ease of use and positive attitude.

### Technical skills of filing tax returns

Azmi and Kamarulzaman in their study of the Malaysian e-filing system (Kamarulzaman, 2010) also point out the technical aspect of the filing process as a challenge facing taxpayers with regard to its use. It is in this regard that this research sought to investigate the technical skills of filing tax returns as a factor that influences tax compliance. The results are presented in Table 3.

On the first question, as to whether the respondents can accurately determine their tax obligations and file returns on time using the online tax system, 36.33% confirmed yes 12.95% strongly agreed and 23.38% agreed, only 15.47% were not sure with another 42.09% who disagreed with the statement while 6.12% arguing the contrary strongly disagreed that they can accurately determine their tax obligation and file a return on time using the online tax system. Perhaps those who were not sure, have never embraced online tax filing and are not using it so they could not take a stand on it. On the question as to whether the respondents can file a return without anybody's help, majority (85.97%) disagreed and 9.07% supported 7.55% strongly agreed while 2.52% agreed, meaning the respondents cannot file online return without help. When asked as to whether the technical competence of filing tax returns influences their use of iTax, the findings were as follows, 56.47% agreed with the statement while 7.19% strongly agreed. A further 10.07% disagreed with the statement while 16.9% strongly disagreed. The finding of the study also revealed that 10.07% were not sure as to whether the technical competence of filing tax return influences the use of iTax. It can be deduced that while majority of the respondents agreed that technical competence of filing a tax return influences the use of iTax. Finally as to whether the information on online tax declaration is easy to comprehend, 41.01% did not support the idea thus they disagreed while 18.35% strongly disagreed with the statement. On the same note 22.30% accounted for those who agreed while 8.99% strongly agreed. The study done by Ling and Nawawi, (2010) came up with similar results and found that one must not ignore the mandatory skills users of the system need to have. Failure to consider such skills may make the intention of the system not to be realized (Maede, 2002). Therefore, the more one has technical skills of filing tax returns will lead to increased tax compliance.

### Inferential analysis

Correlation analysis and regression analysis were both done to establish the relationship and strength of such relationships among the variables in the study.

### Correlation analysis

The one consistency of the subscales was neither agrees nor disagrees: Cronbach's alphas results for internal consistency and reliability during piloting, for tax compliance  $\alpha = .84$ , for perception of online tax filing  $\alpha = .81$  and for technical skills of filing tax returns.  $\alpha = .91$ . All these findings agreed with Cronbach and Meehl (1955) who found that cronbach of .70 and above is a good measures of internal consistency and reliability. The correlation analysis of the variable that is perception towards online tax filing and technical skills of filing tax returns was correlated with tax compliance as indicated in Table 4.

**Table 1. Definition and Measurement of Variable**

No.	Variable	Indicator	Scale and Analysis tools
1	Perception towards online tax filing	<ul style="list-style-type: none"> <li>• Perceived usefulness</li> <li>• Perceived ease of use</li> <li>• User satisfaction</li> <li>• Safe to use</li> </ul>	<ul style="list-style-type: none"> <li>• Ratio scale</li> <li>• Descriptive statistics</li> <li>• Inferential Statistics</li> </ul>
2	Level of technical skills	<ul style="list-style-type: none"> <li>• Internet familiarity and skills</li> <li>• Professionals' assistance</li> <li>• Knowledge of taxation system</li> <li>• Website ease of use</li> </ul>	<ul style="list-style-type: none"> <li>• Ratio scale</li> <li>• Descriptive statistics</li> <li>• Inferential Statistics</li> </ul>

**Table 2. Perception towards online tax filing**

Questions	Response	Frequency	Percentage
Online tax is faster	Strongly agree	186	66.90
	Agree	78	28.06
	Not sure	0	0.00
	Disagree	14	5.04
	Strongly disagree	0	0.00
Total		278	100
It is easy and simple to file tax returns online	Strongly agree	28	10.07
	Agree	173	62.23
	Not sure	40	14.39
	Disagree	37	13.31
	Strongly disagree	0	0.00
Total		278	100
The online tax filing is secure to use	Strongly agree	17	6.12
	Agree	127	45.68
	Not sure	68	24.46
	Disagree	52	18.71
	Strongly disagree	14	5.04
Total		278	100
The design of online tax filing system is user friendly	Strongly agree	18	6.47
	Agree	71	25.54
	Not sure	41	14.75
	Disagree	143	51.44
	Strongly disagree	5	1.80
Total		278	100

**Table 3. Technical skills of filing tax returns**

Questions	Response	Frequency	Percentage
I Can accurately determine my tax obligations and file returns on time using the online tax system	Strongly agree	36	12.95
	Agree	65	23.38
	Not sure	43	15.47
	Disagree	117	42.09
	Strongly disagree	17	6.12
Total		278	100
I can file tax returns without anybody's help	Strongly agree	21	7.55
	Agree	7	2.52
	Not sure	11	3.96
	Disagree	239	85.97
	Strongly disagree	0	0.00
Total		278	100
The technical competence of filing tax returns influence my use of iTax	Strongly agree	20	7.19
	Agree	157	56.47
	Not sure	28	10.07
	Disagree	28	10.07
	Strongly disagree	45	16.19
Total		278	100
The information on online tax declaration is easy to comprehend	Strongly agree	25	8.99
	Agree	62	22.30
	Not sure	26	9.35
	Disagree	114	41.01
	Strongly disagree	51	18.35
Total		278	100

**Table 4. Correlations analysis**

		Perception	Technical Skills	Compliance To iTax
Perception	Pearson Correlation	1	-.014	-.034
	Sig. (2-tailed)		.810	.577
	N	278	278	278
Technical Skills	Pearson Correlation	-.014	1	.573**
	Sig. (2-tailed)	.810		.000
	N	278	278	278
Compliance To iTax	Pearson Correlation	-.034	.573**	1
	Sig. (2-tailed)	.577	.000	
	N	278	278	278

**Table 5. Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.819 <sup>a</sup>	.671	.666	.982

a. Predictors: (Constant), Access to internet, Perception, Cost of online tax filing, Technical skills of filing tax returns.

**Table 6. Model Coefficient**

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.712	.480		1.482	.139
Perception	-.009	.032	-.010	-.274	.784
Technical Skills	.104	.029	.154	3.592	.000

a. Dependent Variable: Tax Compliance

$$Y = 0.712 - 0.009X_1 + 0.104X_2$$

Analysis of correlation shows that the perception towards online tax filing influence on compliance is not significant at alpha level of 0.01. The technical skills of filing tax returns had a significant correlation with tax compliance at alpha level 0.01 with a correlation coefficient of 0.541. The correlation coefficients are within the acceptable range of between -1 and 1. It can therefore be deduced with confidence that there is a genuine positive relationship between technical skills of filing tax returns on tax compliance while there is negative significant relationship between perception of online tax filing and tax compliance. The study done by Mandola (2013) came up with similar results that there is a positive correlation between technical skills of filing tax returns. Also the study revealed that perception towards online tax system had a positive correlation but in this case it has a negative correlation.

### Regression analysis

Linear regression was done in order to determine the explanatory power of independent variables (online tax filing) in the variance of dependent variable (tax compliance). Adjusted R squared is the coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in the above, the value of R squared was 0.671, an indication that there was a variation of 67% on tax compliance due to change in perception on online filing and technical skills of filing at 95 confidence interval. R is the correlation coefficient which shows the relationship between study variables. From the finding shown in the table above, there was strong positive relationship between online tax filing and compliance by 81.9%. The study done by Muturi and Kiarie (2015) came up with similar results and found that there was a positive relationship between online tax filing and tax compliance. From the above regression equation, it was revealed that holding perception on online tax filing and technical skills of filing tax returns to a constant zero, tax compliance would stand at 0.712. A unit increase in perception towards online tax filing would lead to increase in tax compliance among MSE in Kibwezi sub-county by factor of -0.009 and a unit increase of technical skills of filing tax returns would result to increase in tax compliance by factor of 0.104. This shows that there was a

positive association between technical skills of filing tax returns and tax compliance. The study found that technical skills of filing tax returns significantly influenced tax compliance while perception towards online tax filing was insignificant. The studies done by Karingi and Wanjala (2005) came up with similar results and found that, a positive correlation will exist between online tax filing and tax compliance if parameters are properly in place.

### Conclusion

In conclusion the study reveals that all the identified variables have a direct influence on the tax compliance. The correlation analysis reveals that the perception by MSE on online filing is negative while technical skills of filing had a positive correlation. The perceptions of taxpayers towards the online filing as well as its perceived ease of use and perceived usefulness greatly determine the use of online tax filing. Majority of the interviewed taxpayers consider that it is easy to file tax return online. However, they feel KRA has not put in place enough measures to ensure that taxpayers have technical skills to file tax returns online. This could also be a reason as to why those who do not feel the online tax filing is efficient are yet to appreciate it and use it. The technical skills of the filing tax returns can also be identified as a challenge facing taxpayers as many of them fear the notion and consequences of errors from online filing such as keying-in incorrect information in tax returns that could lead to the wrong calculation of tax payable (Fu, 2004). The taxpayers' lack of confidence in their ability to correctly calculate the tax payable causes them to hire experts to file for them at a cost. The study therefore deduces that the technical skill of filing tax returns is a factor that influences the tax compliance. In addition, the knowledge and skill of using internet also remains limited to a few individuals who have access to internet (Group, 2010). The concern as to whether online tax filing enhances compliance among MSE in Kibwezi sub-county has been confirmed.

### Recommendations of the study

Based on the findings of this study, the researcher came up with several recommendations to encourage the use of iTax that will improve tax compliance. Tax authority should undertake intensive and increased sensitization of taxpayers to make them aware of the online tax filing, how it works and the advantages of using it so that taxpayers can understand and appreciate it. The authority should also frequently be involved in capacity building programmes for instance holding training seminars countrywide on the online tax filing process. KRA should undertake thorough taxpayer education from high school level so that taxpayers gain knowledge and understanding of the taxation system, appreciate it and be able to comply with the tax obligations. The online tax filing process should be simplified with clear instructions and guidelines provided on the website and the system server should be upgraded to reduce on the system downtimes experienced. Tax consultation centres should be increased in the country so that each county has at least two centres where taxpayers can acquire knowledge and filing skills. This study proposes the following areas for further study. To begin with further research should be done to establish the impact of online tax filing on tax evasion and avoidance. Finally, the effect of online tax filing on tax compliance among other sectors of the economy like transportation and communication can be investigated.

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## Appendix I: Descriptive statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Perception Toward Online Filing										
Online Tax Faster	278	1.00	2.00	356.00	1.2806	.45009	.982	.146	-1.043	.291
Easy And Simple To File Tax Returns	278	1.00	4.00	642.00	2.3094	.82689	.789	.146	.086	.291
Online Filing Is Secure	278	1.00	5.00	753.00	2.7086	1.00432	.546	.146	-.466	.291
Online Filing Is User Friendly	278	1.00	5.00	874.00	3.1439	1.03415	-.568	-.146	-1.006	.291
Valid N (List wise)	278				2.3	0.8289				
Average					606					

Technical Skills Of Filing										
Tax Returns										
Can Determine Accurately	278	1.00	5.00	3.0504	.07147	1.19157	-.343	.146	-1.100	.291
My Tax Obligation										
Can File Tax Returns	278	1.00	4.00	1.3345	.05221	.87047	2.436	.146	4.351	.291
Without Help										
Technical Competence	278	1.00	5.00	2.7158	.07408	1.23509	.845	.146	-630	.291
Influence Use Of Online										
Filing										
Information Online Filing Is	278	1.00	5.00	3.3741	.07568	1.26190	-.452	.146	-1.011	.291
Easy To Comprehend										
Valid N (List wise)	278			2.6187		1.1398				
Average										
Tax Compliance										
Using Online Service Portal	278	1.00	2.00	445.00	1.6007	.49063	-.414	.146	-1.842	.291
Tax Online Services	278	1.00	5.00	387.00	1.3921	.69621	2.072	.146	4.834	.291
File Tax Returns Online	278	1.00	3.00	315.00	1.1331	.44993	3.432	.146	10.758	.291
Often Use Internet	0									
Can Submit Correct And	278	1.00	5.00	527.00	1.8957	.58246	1.780	.146	9.634	.291
Accurate Returns Online										
Valid N (List wise)	0				1.5054	0.5548				
Average										

\*\*\*\*\*