



E-GOVERNANCE IN REVENUE COLLECTION AND CUSTOMS ADMINISTRATION IN SIERRA LEONE – A SURVEY

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Abstract:

The willingness of taxpayers to comply with their obligations depends to a large extent upon the perception that the funds collected are put to good use. It also depends on how easy and convenient it is for the taxpayer to comply. Hence getting taxpayers to voluntarily pay their correct taxes at the right time is the dream of every government. The four key research objectives are: to find out whether the implementation of ICT will improve the performance of public enterprises; to investigate whether there is a link between the tax filing system and revenue collection; to determine the significance of tax compliance and performance of the National Revenue Authority (NRA) and to examine the relationship between tax administration and revenue collection. Data was collected through questionnaires from selected tax administrators and taxpayers in Freetown and two provincial locations, Bo and Makeni, using convenience sampling. Descriptive statistical analysis techniques were employed for data analysis. Findings from the study revealed that a vast majority of the respondents believe that the implementation of ICT results in better performance of public enterprises; and that there is a link between the tax filing system and revenue collection which allows refunds to be deposited directly into taxpayers' bank accounts; the level of tax compliance is significant to the performance of the National Revenue Authority; and adoption of ICT has positive impact on a country's tax collection rate. The paper recommends that the Government of Sierra Leone should embark on public sensitisation on the benefits of the adoption and use of ICT infrastructure that aids easy tax administration and collection in the other rural regions of the country.

Keywords: tax administrators, taxpayers, ICT infrastructure and revenue collection

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1. Introduction

'Electronic Government' (or 'e-Government') is mainly about *“the utilization of Information and Communication Technologies (ICTs), and other web-based telecommunication technologies to improve and/or enhance the efficiency and effectiveness of service delivery in the public sector”* (Jeong, 2007). The revolution of Information Technology (IT) nowadays, is fundamentally changing how we work. Government, as head of the nation, must undertake the challenge of implementing IT at all levels of the administration. However, there is a trade-off to be made between implementing e-government and the public's ability to reach and access electronic information, especially in developing countries in Africa. Access to all official information and service offerings of a public agency is generally of e-government's primary focus.

Sierra Leone is a developing country, which had just recently recovered from a 10-year civil unrest; she has not done much in the introduction and availability of ICT infrastructure in all public sector services. Sierra Leone's level of development in ICT needs to be established if we have to meet the pace of global technological changes; especially in the generation of national revenue to enhance development. The Government of Sierra Leone has achieved not much in ICT except for the two strides taken – the development of the National ICT Policy in 2009 and the landing of fiber optics in 2011; their potential benefits are yet to be seen. The recommendations in the National ICT especially on the education sector have not been adhered to particularly, the introduction of ICT Modules at the fundamental level of education. The non-implementation of the Policy document to date makes it just another document.

In Sierra Leone, however, some sectors fully rely on the use of ICTs in their functions, especially the financial sector, and the fact that ICTs now account for rapid improvements in general service delivery, within the context of public sector performance, they are also increasingly being seen as the magic solution to the many problems that governments face in serving their constituencies effectively. This is especially so in revenue and tax collection, where revenue authorities like the National Revenue Authority (NRA) frequently encounter problems of trust and partnerships, without which it would be difficult to improve collaborative operations and service delivery to the citizens. As such, the National Revenue Authority implemented the Automated System of Customs Data (ASYCUDA ++) in 2010. This system has increased the generation of revenue over the past few years. In such cases, e-government has been touted as a means to save costs while at the same time improving quality, efficiency, and effectiveness in service delivery. Current trends in tax administration emphasize the need for a system of tax assessment and collection that involves Internet services. Using the Sierra Leone National Revenue Authority (NRA) as a case study; this study attempts to research the issues regarding the role of e-governance in tax and Customs administration - looking at the challenges that will be encountered in implementing e-governance, its impact on revenue collection and the perception of the public.

2. Materials and Methods

2.1 Definition and Purposes of Tax

Silvani and Alberto (1992) have a strong conviction that taxation is a sovereign right the state uses to transfer resources from private use to public in order to achieve its economic goals. According to Heek (2006), taxation is the imposition of duties to raise revenue. Furthermore, Mikesell (1998) contents that taxation is a compulsory contribution imposed by a public authority irrespective of the exact amount of service rendered to the taxpayer in return. Eriksen and Fallan (1996) state that taxes serve two main purposes; firstly, as a tool to protect infant industries wherein these industries are given tax holidays in order to make them more competitive with their existing rivals. Secondly, taxes are also used as revenue for financing government expenditure. The just mentioned authors further argue that the imposition and collection of taxes is simply one of the fundamental policy instruments used by governments to achieve their social and economic goals. Therefore, Silvani *et al.* (1997) pointed out that a good tax system should be designed in such a way that it meets efficiency in resource allocation, macro-economic policy goals as well as tax administration. The objectives of tax policy are similar to those of public policy in developing countries, and overlap with the purposes of the tax system or the purpose of most governments (Saitoti, 2002).

2.2 Tax Attitudes

According to Azjen and Fishbein (2000), attitude is an individual's salient belief about whether the outcome of his action will be positive or negative. The beliefs are rated for the probability that engaging in the behaviours will produce the believed outcomes whether positive or negative. According to Bird (2010), attitudes are related to values, perceptions, and group belonging but can be modified by environmental changes and new information. Azjen and Fishbein (2000) believe that attitude is the degree of favourableness and un-favourableness of an individual's feelings toward a psychological object. This can result in behaviours such as voluntarily registering as a taxpayer, making tax assessments and filing returns, and finally paying taxes due to the tax authority. Bird (2003) stresses that the willingness of the taxpayers to comply with their obligations depends to a large extent upon the perception that the funds taken from them are put to some good use. Similarly, the seriousness with which the government enforces the revenue laws will also have a profound effect on public attitudes (Gordon, 1990). In the view of Gale (1999), attitudes affect intentions and intentions affect behaviour. Attitudes are formed in a social context by such factors as the perception of the tax system, the perceived fairness of the tax structure, and its complexity and stability (Saitoti, 2002) Government policies affecting any of these factors may influence taxpayer attitudes and hence the observed level of taxpayer compliance (Alm *et al.*, 1993; Bird, 2003).

Interestingly, Cullis and Lewis (1997) point out that taxpayers most of the time will undertake a cost/benefit analysis and will comply if the benefit exceeds the cost of compliance. This implies that the taxpayer is a utility maximizer. Moreover, Gale (1999)

asserts that taxpayers' behaviour of non-compliant is dependent on their belief of the probability of being detected through an audit and the severity of legal penalties imposed.

Attitude can be portrayed by perceptions of the usefulness of taxes, perceived ease of assessment, tax administration system, and any other taxpayer preference (Torgler, 2003). McKerchar (2003) on the other hand argues that voluntary compliance depends on national attitudes toward the tax system and tax administration and those national attitudes can be affected by the administration and vice versa. If the administration brings about stability and honesty in its operations, the self-respect thus achieved can form the basis for respect and compliance from the taxpayer. Furthermore, Richardson and Sawyer (2001) conducted research wherein they identified numerous factors that affect taxpayers' attitudes toward compliance. These factors, according to the authors, are categorised in broad terms as structural, economic, demographic, and attitudinal traits and often these factors overlap.

Gale's (1999) views are based on the premise that tax evasion will respond to sanctions. According to Bird (2010), there is no single prescription, no magic wand, and no secret recipe that, once introduced, will ensure improved tax compliance in any country.

2.3 Tax Compliance

In the view of McKerchar (2003), tax compliance can either be through voluntary tax compliance or involuntary tax compliance. Voluntary tax compliance involves obeying the tax laws without any state enforcement actions that lead to maximizing revenues because administration costs are low in both the economic and psychic sense. The government wastes little money and time in collecting the tax and taxpayers suffer little alienation in parting with their money. Additionally, the just mentioned Author points out that compliance builds an atmosphere of trust and cooperation because a person feels that others are accounting reciprocally. Tax compliance is defined as paying taxes on time and timely reporting of correct tax information. Therefore, tax compliance means seeking to pay the right amount of tax (but no more) in the right place at the right time. Where right means that the economic substance of the transaction undertaken coincides with the place and form in which they are reported for tax purposes.

According to Brown and Mazur (2003), tax compliance is categorized into three multi-faceted components; filling, reporting, and payment. Holtzman (2007) states that tax compliance is the value of the taxpayer's own time and resources along with any out-of-pocket costs paid to the tax preparers and other advisors, invested to ensure compliance with the laws while Gilligan and Grant (2005) assert that tax compliance is the provision of tax information at the proper time and ensuring returns accurately report tax liability.

Orviska and Hudson (2002) assert that compliance is still low because tax authorities have not sufficiently addressed the key shortfalls in the administration systems which include unregistered taxpayers, inadequate clear tax literature, tax

evaders, and as well delinquent taxpayers. According to Jackson and Million (1986), the major influences on tax compliance are age, gender, income levels, education, income source, occupation status, sanctions, peer influence, ethics, complexity, probability of detection, tax rates, and contact with tax authorities.

2.4 Facilitating Tax Payer's Compliance

Modern tax administrations have limited resources and recognize that effectively following up with the obligations of every taxpayer is a costly task. Rather than 'policing' tax compliance, modern tax administrations focus on three key objectives: facilitating voluntary compliance, selectively monitoring compliance, and selectively enforcing compliance (Lewis, 1982).

- **Facilitating Voluntary Compliance:** Modern tax administrations proactively facilitate compliance by simplifying processes, providing information, education, and support to taxpayers, and directing their limited compliance monitoring and enforcement resources to the areas of greatest risk to revenues (Saitoti, 2002). Furthermore, the tax administrators adopt a compliance risk management approach that recognizes a spectrum of compliance behaviour and an opportunity to foster a cooperative relationship with taxpayers. This risk management approach is structured to systematically identify, assess, rank, and treat tax compliance risks. This approach recognizes that tax administrations must be thoughtful in how they deploy their limited resources. Rather than focusing on enforcing compliance throughout the compliance risk spectrum, tax administrations focus on enforcement in areas of greatest risk and facilitate voluntary compliance in remaining areas.
- **Monitoring Compliance:** Tax administrations utilize information systems to monitor taxpayer accounts and an audit strategy to detect non-compliance. A highly visible audit program is essential to ensuring that taxpayers understand and are exposed to the consequences of non-compliance (Joulfaian, 2000). An audit strategy that focuses on the areas of greatest risk to revenues not only increases the return on the use of limited audit and other compliance resources but also facilitates voluntary compliance by reducing the intrusion of the tax administration into the affairs of compliant taxpayers.
- **Enforcing Compliance:** Traditionally, tax administrations have relied on recourse to legal remedies to enforce taxpayer compliance, which has been described as a "*classic enforcement mentality, built upon the fundamental assumption that a ruthless and efficient investigation and enforcement capability will produce compliance through the mechanism of deterrence*" (Brown and Mazur, 2003). Today, tax administrations focus on facilitating and encouraging voluntary compliance. However, where appropriate, the full rigor of the legal system is brought to bear on taxpayers who do not comply, thereby instituting some level of uniformity in the application of the law and a perception of fairness among taxpayers (Brown and Mazur, 2003).

2.5 Electronic Tax Filing System

Electronic tax filing, or e-filing, is a system for submitting tax documents to a revenue service electronically, often without the need to submit any paper documents (Bird, 2003). The e-tax system offers electronic registration, filing, and payment, as well as education and information to taxpayers (Klun, 2002). Broadly, the e-tax system is a comprehensive Internet portal that forms a suite of secure self-service options to taxpayers, may provide a single point for information and actions is typically available 24 hours a day and 7 days a week, and does not require intervention from tax administration staff (Joulfaian, 2000). An e-tax system is not necessarily a standalone IT component. For example, the e-tax system must be integrated with the core tax system to provide the taxpayer with services, such as the ability to view account information and the status of refunds. The e-tax system, according to Gilligan Richardson (2005) e-tax filing system should be clear. Furthermore, the e-tax systems do more than provide information, education, and assistance to taxpayers. With components such as electronic registration and filing, they also reduce the cost of administering taxes (Kertesz, 2003). Electronic tax filing systems are an e-government application that is being utilized with increasing frequency all over the world.

Such systems are particularly favourable for governments because they avoid many of the mistakes taxpayers make in manual filings, and they help to prevent tax evasion by data matching (Kertesz, 2003). The data houses developed using electronic tax filings can allow tax inspectors to analyze declarations more thoroughly, and enable policymakers to develop fairer and more effective (Gilligan Richardson (2005). Problems such as high costs for collection, fraud, underpayment, and leakage in revenue could be made worse without the use of adequate computerized solutions.

The problems of tracking and identifying fraud or rogue revenue collectors are only compounded by the usage of manual and centralized systems due to the resources and overhead needed. With the current manual system of revenue collection, it is not always clear where and when under-collection takes place. When payments are missed or collected after the due date without penalty, cash flow is adversely affected resulting in reduced or late revenue. This inefficiency in revenue collection can be minimized using an automated system. Leakage that occurs because of untimely collection, fraud, and under-collection could be reduced by streamlining and automating the revenue collection process. Penalties may be automatically applied to late payments. The process of revenue collection can be tightly controlled to avoid fraud, evasion, and under-collection.

2.6 Application of IT in Tax Administration

The Tax Administration is the department of the government responsible for the management of tax obligations specified by the tax law (Calder and Watkins, 2006). Its primary task is to ensure that the right amount of tax is paid by the right taxpayer at the right time, providing the government with the needed revenue to deliver goods and services as planned. An administration that achieves this task is effective. An

administration that does so at a reasonable, minimal cost to the government is efficient. In addition, for reasons beyond the scope of this thesis, tax administrations are expected to impose minimal costs on taxpayers and maintain a business-friendly and even-handed environment. According to Calder and Watkins (2006), effective IT and information processing, as well as a more comprehensive infrastructure, are significant factors in the conduct of government administration, decision-making, and service delivery. Historically, the most prevalent use of IT systems in tax administrations has been to underpin the core tax administration tasks of processing returns and payments and collecting relevant information. Furthermore, according to Bagga *et al.* (2006), the 'core tax' component of contemporary Information Technology (IT) systems continues to provide support for these tasks, enabling the tax administration to move away from heavy manual processing and to direct its resources to facilitating, monitoring, and enforcing compliance.

Today, IT also facilitates voluntary compliance by opening multiple interactive and electronic channels with taxpayers. This component of modern IT systems may include support for electronic registration, filing, payment, information dissemination, and other functions. To have an effective tax system in which all taxpayers are covered, every taxable person has to be registered. An efficient way of registration is in the issue of the unique Tax Identification Number (TIN) by the government revenue service. This will provide easy and complete access to taxpayer information nationwide, which can be achieved by the efficient use of information technology.

3. Research Methodology

Two methodologies were used for this study – pre-survey interviews with experts in tax administration and revenue collection and some key ICT staff in both private and public sectors. A field survey entailed the administration of a questionnaire after all recommendations on errors were taken into consideration in order to increase the credibility of the questionnaire. The pre-survey interviews lasted for 1 week while the field survey was conducted over a 2-week period mainly in Freetown and 2 provincial locations, Bo and Makeni, in October 2023.

The sampling method used was by approaching prospective respondents in some recognized private and public institutions. The selected respondents were those who agreed to be interviewed and the majority of the respondents were from the registered and legitimate private institutions from the Western Urban Area of Freetown and some private institutions in other selected rural areas of Sierra Leone.

The primary data were collected using the structured questionnaire, which comprised two parts with a total of six sections – A, B, C, D, E, F, and G. The general information about respondents was given in part I of the questionnaire, while part II comprised 6 sections consisting of statements regarding the 6 key variables needed to provide answers to the research questions. The structured questionnaire designed for this research is mostly made up of 5-point Likert scale options. The values of the options were

apportioned in this manner: 1 represents 'strongly agree', 2 for 'agree', 3 'not sure', 4 for 'disagree', and 5 for 'strongly disagree'.

A final sample size of 129 was obtained out of 200 questionnaires circulated. After the collected data had been coded, edited, compiled, and computerised, it was analysed using SPSS version 20 was used to analyse the questions and statements therein. In this sense, statistical techniques were used – frequencies, percentages together with mean, standard deviation, skewness, and kurtosis. In sections B, C, and D, tables and bar charts were used to provide analyses for these variables whereas, in sections E, F, and G, tables and histograms were used for analyses.

4. Findings and Discussions

4.1 Demographic Characteristics

Data were obtained from 129 respondents out of 200 questionnaires circulated; representing a 65% response rate. The 35% of non-responsive respondents were unable to complete the questionnaire as a result of the high illiteracy rate in basic ICT literacy and those who evade payment of taxes in general in Sierra Leone. The demographical factors revealed that the majority of the responsive respondents were male (63%) while the rest were female (37%). This disproportion in the gender of respondents could be a result of the gender gap both in the national workforce and entrepreneurs in the country.

The analyses revealed that 10.9% of the respondents, which is the highest, were business entrepreneurs. Contractors and Government officials respectively account for 8.5% each, Importers and Exporters account for 5.4% and 4.7% respectively, Accountants and Tax Administrators account for 7.0% and 7.8% respectively, 7.8% of respondents were those whose professions were not indicated as options in the questionnaire while Economists account for only 2.3%.

The analysis revealed that the highest number (30.2%) of responses fall within the 31 – 40 age group followed by the 21 – 30 group (24%). These two groups accounted for 54.2% of the respondents. The reason for this could be attributed to the fact that the youth population of Sierra Leone is about 50%. The category with the least responses is 'the above 61' age group – 3.9%. This can be interpreted to mean that, in most formal working environments, this age group is getting closer to retirement which means a smaller number of them in employment. Also, the study presents a fair and balanced report of the very limited ICT Infrastructural availability, and low literacy in adopting ICT-related platforms by the aging group in Sierra Leone.

4.2 Data Analysis Techniques of the 6 Key Variables

For the analysis of the key 6 variables, a five-point Likert scale option was used – namely: 1 for strongly agree, 2 for agree, 3 for not sure, 4 for disagree, and 5 for strongly disagree.

Six key variables were constructed to provide answers to the 4 research questions developed from the review of the literature. These variables are:

- The Employment of ICT by the Government;

- Electronic Tax Filing System;
- Tax Compliance and its Attributes;
- ICT, Tax Administration and Revenue Collection;
- Taxpayers Perception and Acceptance of E-taxation; and
- Taxpayers' Knowledge of Access to the Internet.

4.2.1 V1 - The Employment of ICT by Government (EMPTOICTBGOVT)

Seven (7) statements were constructed for this variable. In order to indicate the strength of agreement or disagreement with the statements used for this variable, the scores for each statement used were averaged to obtain the final score for this variable. The statements are given below:

- ICT creates a link between the government and citizens which enables citizens to benefit from efficient delivery services;
- ICT expands the availability and accessibility of public services thereby improving service quality;
- Rapid growth of ICT and its adoption in governance would help in bringing government machinery to the doorsteps of the citizens;
- The use of ICT tools helps in making the interactions between government and its employees fast and efficient;
- ICT creates a more transparent business environment when dealing with the government; and
- The use of IT can increase the satisfaction levels of government employees.

For the analysis of the **EMPTOICTBGOVT** variable; It should be noted that the statements, concerning this variable, are skewed towards the strongly agree and agree on options. Cumulatively, these two options account for 74.4 % of the responses. The interpretation of this could be that respondents agree with the statements used to construct this variable, which ultimately means that respondents agree with this variable. Despite the overwhelming agreement by respondents, some respondents disagree and strongly disagree with these statements. However, these respondents constitute 17.1% of the total responses while 8.5% of respondents were not sure about the statements used to construct this variable.

4.2.2 V2 - Electronic Tax Filing System (ELECTTXFLSYST)

Eight (8) statements were constructed for this variable and the statements given are:

- IT filing system helps to reduce mistakes taxpayers make in manual filings;
- Electronic tax filings can allow tax officials to analyze tax declarations more thoroughly;
- IT filing system should be made simple to use;
- The contents of the website should be simpler to understand;
- The taxpayer should find the tax website interactive to use;
- Computer-generated returns are easier to process than paper returns;
- IT filing system can be done anywhere there is Internet connectivity; and

- IT tax filing system allows refunds to be deposited directly into taxpayers' bank accounts.

The analysis of this variable revealed that responses were skewed towards the strongly agree and agree options and cumulatively, these two options account for 75.2 % of the responses. The interpretation of this could be that respondents agree with the statements used to construct this variable, which ultimately means that respondents agree with this variable. Despite the overwhelming agreement by respondents concerning the statements, some respondents disagree and strongly disagree with these statements and they constitute 14% of the total responses. The analysis also revealed that 10.9% of respondents are not sure about the statements used to construct this variable.

4.2.3 V3 - Tax Compliance and its Attributes (TXCOMPLNATRB)

Six (6) statements were constructed for this variable and the given statements are:

- Tax compliance increases when the tax system is made simple;
- Tax compliance is dependent on peer influence;
- The level of education of the taxpayer is a factor that affects tax compliance;
- If the chance of detection of those who do not pay is low, then potential taxpayer compliance decreases;
- The fairer the tax system, the higher the tax compliance; and
- Tax evasion is dependent on the use of tax by the government.

The analysis revealed that the responses for the propositions/statements were skewed towards the strongly agree and agree options and cumulatively these account for 73.6%. The interpretation of this could be that respondents agree with the statements used to construct this variable, which ultimately means that respondents agree with this variable. Despite the overwhelming agreement by respondents concerning the statements, some respondents disagree and strongly disagree with these statements. However, these respondents constitute 14.8% while 11.6% of respondents are not sure about the statements used to construct this variable.

4.2.4 V4 - ICT, Tax Administration and Revenue Collection (ICTXADMNRVCOL)

Seven (7) statements were constructed for this variable and the given statements are:

- ICT has a positive impact on a country's tax collection rate;
- Misuse of funds by tax collectors can be reduced by the adoption of an ICT system of paying taxes;
- The adoption of ICT means fewer hands are required to perform particular duties and thus increases efficiency;
- The efficiency brought about by ICT can enhance economic development;
- ICT use in tax administration can bring new opportunities for economic growth and development;
- The efficiency provided by IT services is critical to the international competitiveness of a country; and
- The adoption of IT can facilitate international trade.

The analysis revealed that the responses for the propositions/statements, concerning this variable are skewed towards the strongly agree and agree options. Cumulatively, these two options account for 72.1% of the responses. The interpretation of this could be that respondents agree with the statements used to construct this variable, which ultimately means that respondents agree with this variable. Despite the overwhelming agreement, some respondents disagree and strongly disagree with these statements. These respondents constitute 14.7% of the total responses while 13.2% of respondents neither agree nor disagree with the statements used to construct this variable.

4.2.5 V5 - Taxpayers' Perception and Acceptance of E-taxation (TXPRPNCPTOETX)

Seven (7) statements were constructed for this variable and the given statements are:

- It is safe to file taxes online;
- Government or tax officials should not use taxpayers' information for anything other than issues related to tax;
- Online filing of tax returns saves time and money for the taxpayer;
- e-taxation will encourage better compliance from taxpayers;
- It is easier for taxpayers to use e-tax services than go to NRA offices to file tax returns;
- Taxpayers will prefer to use e-tax services if it is simple, reliable, and easy to use; and
- The use of Information and Communication Technology (ICT) can positively affect the activities of the NRA.

The analysis revealed that statements, concerning this variable are skewed towards the strongly agree and agree options and cumulatively, these two options account for 72.9 % of the responses. The interpretation of this could be that respondents agree with the statements used to construct this variable, which ultimately means that respondents agree with this variable. Despite the overwhelming agreement by respondents about the statements, some respondents disagree and strongly disagree with these statements constituting 17.1% of the total responses while 10.1% of respondents were not sure about the statements used to construct this variable.

4.2.6 V6 - Taxpayers Knowledge of Access to Internet (TXPRKWNACTINT)

Four (4) statements were constructed for this variable and the given statements are:

- Most taxpayers own at least one of these devices – computer, tablet, and smartphone;
- Most taxpayers know how to operate at least one of these devices – computer, tablet, and smartphone;
- Most taxpayers know how to access the Internet using one of the above devices; and
- Most taxpayers find the cost of Internet access affordable.

The analysis revealed that the responses for the propositions/statements, concerning this variable are skewed towards the strongly agree and tend to agree options and cumulatively, these two options account for 54.3% of the responses. The interpretation of this could be that respondents agree with the statements used to construct this variable, which ultimately means that respondents agree with this variable. It is interesting to note that disagreement with this by respondents is greater than the previous five (5) variables. Some respondents disagree and strongly disagree with these statements – 38 responses, which is 29.4% of the total number of respondents. The analysis also revealed that 16.3% of respondents are not sure about the statements used to construct this variable.

4.3 Descriptive Statistics of the Variables

The variables are thus illustrated with their associated mean, standard deviation, and skewness. The respondents were asked to indicate their strength of agreement or disagreement concerning the statements in the questionnaire.

Table 1: Descriptive Statistics of the Key Variables

	Mean	Std. Deviation	Skewness	Std. Error
EMPTOICTBGOVT	2.3643	1.03786	1.179	.213
ELECTTXFLSYST	2.2558	1.07732	1.186	.213
TXCOMPLNATRB	2.2946	1.01090	1.084	.213
ICTXADMNRVCOL	2.2248	1.11971	1.002	.213
TXPRPNCPTOETX	2.3023	1.10117	1.014	.213
TXPRKWNACTINT	2.7752	1.11271	.561	.213

Source: Survey Data.

As Table 1 shows, respondents were skewed towards the strongly agree option. The table shows that the skewness statistics for all five variables, except TXPRKWNACTINT, is above 1. Furthermore, since these means are above 1, this means that the responses were biased towards agree and strongly agree options. The statistics support the biased towards these options. In this sense, the Employment of ICT by the Government will ultimately reduce corruption. Furthermore, electronic tax filing system and tax compliance and its attributes are essential for both tax administrators and taxpayers. Finally, ICT will increase the performance of employees at the National Revenue Authority, and this will subsequently lead to higher revenue collection.

5. Discussion of the Results

5.1 Discussion of the Results of Research Question 1

The first research question of this study is:

- What are the benefits of adopting an ICT programme for public enterprises?

While the first variable developed for this study is *'The Employment of ICT by Government'*. It was meant to find out whether the implementation of ICT will improve

the performance of public enterprises. It is fascinating to compare the findings of this study with those of Brown and Mazur (2003) and Orviska and Hudson (2002) wherein they suggest that ICT expands the availability and accessibility of public services thereby improving service quality. Additionally, the rapid growth of ICT and its adoption in governance would help in bringing government machinery to the doorsteps of the citizens. It is compelling to associate the results of this study with the one carried out by Gilligan (1999), Bird (2003) and Gilligan and Grant (2005) in which the authors contend that ICT creates a more transparent business environment when dealing with the government and the use of IT can increase satisfaction levels of government's employees. The results from studies carried out by researchers such as Bagga (2006), Holtzman (2007), and Brown and Mazur (2003) in which they contend that the use of ICT tools helps in making the interactions between government and its employees fast and efficient.

5.2 Discussion of the Results of Research Question 2 (Electronic Tax Filing System)

The second research question was meant to investigate whether there is a link between the tax filing system and revenue collection.

- Can the tax filing system lead to an increase in revenue collection for the NRA?

It is important to note that the result of this study aligns with studies undertaken by Palmer (2002) and Belanger *et al.* (2006) wherein they argue that IT filing system should be made simple to use and the contents of the website should be simpler to understand. Moreover, according to Bagga (2006), the IT filing system helps to reduce mistakes taxpayers make in manual filings. Additionally, electronic tax filings can allow tax officials to analyze tax declarations more thoroughly. It is interesting to note that the results of the just mentioned studies are not different from the results of this study.

Furthermore, it should be underscored that the taxpayer should find the tax website interactive to use, and computer-generated returns are easier to process than paper returns (Kun *et al.*, 2008). The results from previous studies carried out by researchers such as Heeks (2006) and Kertesz (2003) have shown that IT filing systems can be done anywhere there is Internet connectivity.

5.3 Discussion of the Results of Research Question 3 (Tax Compliance and its Attributes)

The third research question was meant to find out the significance of tax compliance and the performance of the NRA.

- How can tax compliance improve the revenue base of the NRA?

Belanger *et al.* (2006), McIntyre (1999) and Simpson *et al.* (1999) are the researchers who suggest that tax compliance increases when the tax system is made simple. This implies that there is a link between tax compliance and the design of the system. Moreover, tax compliance is dependent on peer influence (Heeks, 2006; Kertesz, 2003). The results achieved by the above-named researchers conform with the results of this study. The results from studies carried out by researchers such as Simpson *et al.* (1999), Surrey (1967), and Coleman and Evans (2003) contend that the level of education of the

taxpayer is a factor that affects tax compliance. In this regard, if the chance of detection of those who do not pay is low, then potential taxpayer compliance is decreased (McKerchar, 2003; Orviska and Hudson, 2002). The result of this study is similar to the results of the studies carried out by the above-mentioned authors.

It is important to note that the result of this study is similar to studies done by Cavallo (2000) and Azjen and Fishbein (2000) in which they suggest that the fairer the tax system, the higher the tax compliance. It is fascinating to compare the findings of this study with those of Saitoti (2002), Silvani *et al.* (1997), and Cooley (2003) wherein they argue tax evasion is dependent on the use of tax by the government. This can be interpreted to mean that if taxpayers are not satisfied with the government's spending, then they are not likely to comply with their tax obligations. The discussions above have shown the significance of tax compliance and the performance of the NRA.

5.4 Discussion of the Results of Research Question 4 (ICT, Tax Administration and Revenue Collection)

The fourth research question is meant to examine the relationship between tax administration and revenue collection.

- RQ4: Is there is relationship between tax administration and revenue collection?

The results from previous studies carried out by different researchers - have pointed to the fact that misuse of funds by tax collectors can be reduced by the adoption of an ICT system of paying taxes. The result of this study is similar to the results of the studies carried out by others. It is important to note that the result of this study aligns with studies done by Bird and Gendron (2006) in which they suggest that the adoption of ICT means fewer hands are required to perform particular duties and thus increases efficiency. In addition, the adoption of IT can facilitate international trade and the efficiency brought about by ICT can enhance economic development (Gendron, 2006; Kertesz, 2003). It is interesting to note that the results of the just mentioned studies are not different from the results of this study.

Furthermore, it should be underscored that ICT has a positive impact on a country's tax collection rate (Bagga, 2009; Bird (2003). In addition, the efficiency provided by IT services is critical to the international competitiveness of a country. As a consequence, ICT use in tax administration can bring new opportunities for economic growth and development (Kertesz, 2003; Azjen and Fishbein, 2000).

5.5 Discussions of the results of Research Questions 4 and 5 (Taxpayer's Perception and Acceptance of E-taxation and Taxpayer Knowledge of and Access to the Internet)

These questions have also aided the achievement of the aim of this study.

However, the theories used to develop the statements in these sections were not obtained from previously published or unpublished academic works; they were instead developed by the researcher to gauge respondents' perceptions of and readiness for e-taxation. In this regard, their discussions are somewhat different from the discussions on the previous four research variables. According to the results obtained for the other 4

variables, it was clear that respondents' perceptions were skewed towards agree and strongly agree options for these statements. Therefore, the results show that:

- It is safe to file taxes online;
- Government or tax officials should not use taxpayers' information for anything other than issues related to tax;
- Online filing of tax returns saves time and money for the taxpayer;
- E-taxation will encourage better compliance from taxpayers;
- It is easier for taxpayers to use e-tax services than go to the NRA offices to file tax returns;
- Taxpayers will prefer to use e-tax services if it is simple, reliable, and easy to use; and
- The use of ICT can positively affect the activities of the NRA.

However, results were obtained about the *taxpayers' knowledge of and access to Internet*. It is designed to test respondents' knowledge of how to access the Internet and whether they have easy access to the Internet. According to the results, it can be interpreted that respondents agreed with the statements used to develop these variables. As a consequence, the results show that:

- Most taxpayers own at least one of these devices – computer, tablet, and smartphone;
- Most taxpayers know how to operate at least one of these devices – computer, tablet, and smartphone;
- Most taxpayers know how to access the Internet using one of the above devices; and
- Most taxpayers find the cost of the Internet affordable.

The discussions on the 4 variables have underscored the similarities between the results of studies carried out by diverse researchers and the results of this study. On the whole, the discussions on the last six sections (i.e. the variables) have thus far enhanced the provision of answers for the four research questions developed for this study. In this regard, since the research objectives were developed with the research questions acting as a launch pad, it can be implied that the objectives of this study have been achieved. Given that the objectives were developed to achieve the aim of the study. It can then be concluded that the aim of this research has been ultimately achieved.

6. Conclusion and Recommendations

It is fascinating to know that ICTs create a more transparent business environment when dealing with the government and the use of IT can increase the satisfaction levels of government employees. Additionally, the rapid growth of ICTs and their adoption in governance would help in bringing government machinery to the doorsteps of the citizens. It should be underscored that ICTs create a link between the government and citizens which enables citizens to benefit from efficient delivery of services. In this regard, the use of ICTs helps in making the interactions between the government and its

employees fast and efficient. As a consequence, the implementation of ICTs in public enterprises will result in better performance:

- Electronic filing (e-tax) systems should be made simple to use and the contents of the website should be simple to understand. Moreover, e-tax systems help to reduce mistakes taxpayers make in manual filings. Additionally, electronic tax filings can allow tax officials to analyze tax declarations more thoroughly. Furthermore, it should be underscored that the taxpayer should find the tax website interactive to use, and computer-generated returns are easier to process than paper returns. Respondents believed that the IT filing system can be done anywhere there is Internet connectivity. Moreover, the IT tax filing system allows refunds to be deposited directly into taxpayers' bank accounts. Interestingly, the results also show that there is a link between the tax filing system and revenue collection;
- Respondents believe that tax compliance increases when the tax system is made simple. This implies that there is a link between tax compliance and the design of the system. Moreover, tax compliance is dependent on peer influence. Also, the level of education of the taxpayer is a factor that affects tax compliance. In this regard, if the chance of detection of those who do not pay is low, then potential taxpayer compliance is decreased. Tax evasion is dependent on the use of tax by the government. In this regard, the level of tax compliance is important for the performance of the National Revenue Authority; and
- It is important to note that the adoption of ICT means fewer hands are required to perform particular duties and thus increases efficiency. The misuse of funds by tax collectors can be reduced by the adoption of an ICT system for paying taxes. In addition, the adoption of IT can facilitate international trade and the efficiency brought about by ICT can enhance economic development. Furthermore, it should be underscored that ICT has a positive impact on a country's tax collection rate. As a consequence, ICT use in tax administration can bring new opportunities for economic growth and development. The findings have shown that there is a relationship between tax administration and revenue collection and, a relationship between ICT and economic development.

Conflict of Interest Statement

The author declares no conflicts of interest.

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