CATHOLIC UNIVERSITY COLLEGE OF GHANA

IMPROVED TAX ADMINISTRATION AND TAX COMPLIANCE: THE CASE OF VALUE ADDED TAX, GHANA

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BY

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DECLARATION

Candidates Declaration

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature: …………………… Date: ……………………………

Name: Bridget Ziema

Supervisor's Declaration

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the Catholic University College of Ghana.

Supervisor's Signature: …………………… Date: …………………………...

Name: Mr. Isaac Appiah Amankwa

ABSTRACT

This study sought to provide an empirical evidence on how the improved tax administration and improved tax processes have affected tax compliance and revenue mobilization in the Sunyani Tax District. Mixed research design was adopted in which purposive and quota sampling techniques were employed to select 15 GRA tax office staff (Revenue Collectors) and 152 VAT registered members. The results of the data analysed showed that high tax rate, business non-profitability, low integrity of tax officials, low educational level on the tax system, and distance to pay taxes contributed significantly to tax non-compliance. This shows that non-compliance of tax payments is an urgent issue in Ghana, as the government has been suffering from a widening fiscal deficit and a rising debt burden. However, the study found that improved tax administration has significant impact on tax compliance. The regression result showing the effects of improved tax administration on tax compliance was also significant. A strong positive relationship was observed between digitization of tax administration and revenue mobilisation of GRA over the past five (5) years. The study further observed that the challenges of the improved tax administration system were in two-folds: those from taxpayers and those from tax authorities. Each of these challenges has its underlying cause which were also in two-folds. The researcher recommends among others that: GRA should organize workshops for businesses to train tax subjects on the need to pay their taxes and keep proper records of their transactions, and increasing the rate of audits of businesses. Appropriate reviews of tax processes should be integrated into the entire tax system to encourage taxpayers' compliance.

KEY WORDS

Tax

VAT

Tax Compliance

Tax Administration

Tax non-compliance

Digitization of Tax Administration

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DEDICATION

To my parents and my siblings.

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LIST OF ACRONYMS

ANOVA	Analysis of Variance
CEPS	Customs, Excise and Preventive Service
CD	Customs Division
DTRD	Domestic Tax Revenue Division
FACT	Factual Accurate Complete Timely
GAO	Government Accountability Office
GDP	Gross Domestic Product
GRA	Ghana Revenue Authority
ICT	Information and Communication Technology
IRS	Internal Revenue Service
ITAS	Integrated System of Tax Administration
LTU	Large Taxpayer Unit
NGO	Non-Governmental Organizations
NHIL	National Health Insurance Levy
PAYE	Pay As You Earn
PNDCL	Provisional National Defense Council Law
RAGB	Revenue Agencies Governing Board
SBIE	Small Business Income Earners
SMEs	Small and medium-sized enterprises
SMID	Suame Magazine Industrial Area
SPSS	Statistical Package for Social Sciences
TAM	Technology Acceptance Model
TIN	Taxpayer Identification Number
UNCTAD	United Nations Conference on Trade and Development

VAT	Value Added Tax

CHAPTER ONE

INTRODUCTION

The capacity of a country to provide for the welfare and security of its citizens, as well as to develop and consolidate representative democracy, is determined by its ability to raise enough resources. Democracies are not only built on periodic elections, but also on a social contract between governments and citizenry regarding the collection and spending of public revenue. Public revenues in Ghana depend on taxation. Many and varied factors underpin a country's ability to collect enough tax revenue from domestic sources. Paramount among these is citizens' level of compliance, often influenced by the efficiency of the institution responsible for tax administration, the structure and magnitude of tax rates, and the ability and willingness of citizens to pay (Armah-Attoh & Awal, 2013).

Background to the Study

Tax systems aim to increase much-needed revenues for good governance. To achieve this objective, the system must be designed to promote good relations and understanding between the taxpayer and the tax administration, as well as guaranteeing efficiency in the system. Tax fees are, therefore, an accepted basic principle to achieve this objective. They were stated by the renowned British economist, Adams Smith in the book entitled "The Wealth of Nations" (1776) (Danquah, 2015).

Ghana is facing the problem of matching revenue generated with its expenditure. Governments' budgeted revenues are mostly lower than actual expenses. This for example was indicated in the 2014 budget statement of Ghana by the Minister of Finance that – considering the intended expenditure and revenues, there would be budget deficit of GH¢8.8 billion equivalent to

6.5% of Gross Domestic Product (GDP). Over the years, government of Ghana has consistently experienced budget deficit and this deficit has been financed with foreign debt (Osei & Quartey, 2005). To curb this problem, a major reform in recent times (2009) has taken place by government. That is the integration of the three major tax revenue institutions – Internal Revenue Service (IRS), the VAT Service and the Customs, Excise and Preventive Service (CEPS) - into a single agency - The Ghana Revenue Authority (GRA). The GRA aims to modernize tax revenue collection and administration as well as improve customer service (Armah-Attoh & Awal, 2013).

In lieu of this, the government of Ghana through legal instruments imposes various taxes on income and property, domestic goods and services, and international trade. In addition, citizens must pay Value Added Tax (VAT), including the VAT flat rate scheme, the National Health Insurance Levy (NHIL) and GetFund levy. Besides, there are other indirect taxes such as the petroleum tax and communication taxes, as well as other local taxes and fees (e.g. property rates, business registration fee, per head tax, market tolls, etc.) levied by local government bodies. In general, seven in every ten Ghanaians know that they are obligated to pay property rates or taxes, 79 %; license fees, for example for a bicycle, cart, business or market stall to local government, 77% and Value Added Tax on items bought from shops or traders, 72%. Also, a small majority of those interviewed, 56% know they are expected to pay taxes on earnings from their businesses or jobs (though 29% are not self-employed).

Another 48% know they have an obligation to pay income taxes, which employers normally deduct from wages or salaries (43% do not have paid employment). It is worth noting, however, that sizeable minorities (from 7% to

24%) say that they do not know that the law requires them to pay these taxes (Armah-Attoh & Awal, 2013). Ghanaians appear to have accepted with little difficulty the civic responsibility of tax payment to the state. Generally, Ghanaians are favourably disposed towards paying taxes and more so, paying taxes in return for public services (Armah-Attoh & Awal, 2013).

When presented with two statements “Statement 1: Citizens must pay their taxes to the government in order for our country to develop and Statement 2: The government can find enough resources for development from other sources without having to tax the people”, an overwhelming majority of Ghanaians, 84% “strongly agree or agree” that citizens ought to pay taxes to support government development efforts (i.e. Statement 1). Less than a fifth, 15% think government should look to other sources for funds for development rather than demanding taxes from citizens (i.e. Statement 2) (Ghana Afrobarometer survey, 2012 p5).

In spite of the general willingness to pay taxes, some Ghanaians either evaded or were willing to evade taxes owed the state in the past year (Armah-Attoh & Awal, 2013). While 8% of Ghanaians said they actually evaded taxes or fees owed the state in the past year, 15% said they did not but would do so if they got the opportunity. The majority, 75% however said they would never refuse paying taxes or fees they owed to the state. One possible reason for high self-reported levels of tax compliance is the recognition on the part of Ghanaians that tax evasion is morally wrong. Some 63% believe such conduct is “wrong and punishable”. Note, however that one third, 35% claimed tax evasion is either “not wrong at all” or “wrong but understandable.” (Ghana Afrobarometer survey, 2012).

From the above, in terms of restructuring of tax administration and the digitization of tax processes, improved tax administration is outlined. From regulatory policy perspective, Income Tax Act, 2015 Act (896) of Ghana defined tax compliance as the ability and willingness of taxpayers to comply with tax laws, declare the correct income in each year and pay the right amount of taxes on time. Okpeyo, Musah and Gakpetor (2019) observed that compliance cost, tax rates, tax audits and morals of taxpayers significantly influenced tax compliance. Wahabu (2017) found a significant relationship between tax knowledge and tax compliance. Again, Trawule (2017) indicated that tax education affects tax compliance among the self-employed; however, the nature of the relationship depends on the type of the content of tax education and the type of compliance to be achieved.

Statement of the Problem

Prior to the integration of the revenue agencies into Ghana Revenue Authority (GRA), the Internal Revenue Service (IRS), the VAT Service and the Customs, Excise and Preventive Service (CEPS) were challenged with the inability to keep up with rapid growth in the size and form of business conducted over the internet and other communication networks, continued struggle in attaining full integration of the different tax agencies, as well as lack of effective teamwork with other significant branches of government (Danquah, 2015). In view of this, Appiah (2013) posited that the CEPS and IRS were unable to plan or carry out reforms to improve revenue collection.

The new administration, GRA, has improved the willingness of Ghanaians to pay taxes by 84% (Armah-Attoh & Awal, 2013). The improved administration has also helped in ensuring that revenue mobilization procedures are effective, and tax payers are able to pay their taxes easily (Asamoah-Mensah, 2015). The improved administration has increased the number of tax payers compared to previous years before the amalgamation as well as tax compliance which has helped ensure proper bookkeeping by tax payers (Asamoah-Mensah, 2015). The reason for the willingness to pay taxes according to the Ghana Afrobarometer Survey (2012) is that most Ghanaians, 90%, still accept the institution's legal mandate to demand taxes from citizens. According to Atuahene, Yusheng and Bentum-Micah (2018), this high compliance level means an improved tax administration. The high willingness to pay means that with right policies and incentives, the GRA can optimize its revenue collection. However, that seems not to be the case. Because the GRA has not been able to take advantage of this, they are unable to meet their budget targets and as a result, the top management was changed to bring dynamism into the tax administration.

The integrity of Ghana Revenue Authority (GRA) officials are very low in the eyes of Ghanaians. Half of Ghanaians, 50% perceive *"some"* tax officials to be involved in corruption. Another 41% also consider *"most or all"* of these officials to be corrupt. Thus, to the ordinary Ghanaian, the Ghana's tax administration stinks with graft. It is not surprising therefore to find that 58% have little or no trust at all in the GRA; just 40% trust the institution. This makes an appreciable minority 19% think it is *"very easy or easy"* to evade income and property taxes (Ghana Afrobarometer Survey, 2012).

Armah-Attoh and Awal (2013) explain why some Ghanaians avoid paying taxes and fees that they owe the state. Among the reasons given by respondents were the following: taxes are too high, 25%; people cannot afford to pay, 21%; poor government service delivery, 14%; wasteful use of tax money by government, 10%; unfair tax system, 9%; stealing of tax money by government officials, 4%; and offenders being sure they will not be caught, 3%. In sum, taxes are considered unfair and unaffordable and therefore their introduction or revision of rates upwards has always been met with resistance from either the general public or interest groups (Rebecca, 2010).

Mantey (2015) looked at tax compliance of small-scale business in the Suame Magazine Industrial Area in the Kumasi Metropolis of Ghana. Mantey (2015) found that Small Business Income Earners (SBIE) usually register with authorities but do not declare their incomes. SBIE barely understand the tax system in the country. They do not know much about the income tax laws and regulations and computing of tax liabilities is always difficult for them. The study has also revealed that, SBIE in the area have negative attitude towards the Ghanaian tax system. However, Mantey (2015) did not consider tax compliance and digitization of tax processes.

Again, Owusu (2019) examined tax compliance and revenue mobilisation and possible challenges confronting Tax Auditors. Again, Owusu (2019) The study found a positive significant relationship between compliance level and external auditor type. Also, the study found that Tax Audit in itself enhances compliance as well as revenues mobilization. Various challenges the tax auditors encounter includes; the unwillingness of tax payers to corporate with auditor, taxpayer being economical with respect to information and tax payers deliberating delaying the process. Owusu (2019) did not look at tax compliance and digitization of tax processes.

Okpeyo et al. (2019) examined the factors that influence tax compliance by small and medium tax payers, the difference in the level of compliance between small and medium tax payers and strategies to improve tax compliance in Ghana. Okpeyo et al. (2019) found a significance difference in the tax compliance level between small and medium scale enterprises. The difference can be largely attributed to the inability of small enterprises to file their tax returns on due dates and also to keep proper books of records of their business transactions. However, Okpeyo et al. (2019) did not consider tax compliance and digitization of tax processes.

The new administration has introduced digitization of tax processes and it is expected this will enhance compliance and revenue mobilization. However, none of the above studies and in fact, no study has attempted to explore how the improved tax administration has affected tax compliance and revenue mobilization. This study therefore seeks to provide empirical evidence on how the improved tax administration and improved tax processes have affected tax compliance and revenue mobilization in the Sunyani municipality.

Purpose of the Study

The purpose of the study is to assess contribution of the improved tax administration to tax compliance in Sunyani Tax District.

Research Objectives

The specific objectives of the study include:

1. To examine factors that contribute to tax non-compliance.
2. To analyse the effect of the improved tax administration on tax compliance.

3. To examine the impact of digitization of tax administration on revenue mobilisation.
4. To identify the challenges of the improved tax administration system.

Research Questions

To achieve the stated objectives, the research questions were:

1. What factors contribute significantly to tax non-compliance?
2. How does improved tax administration affect tax compliance?
3. How has the digitization of tax administration impacted on revenue mobilisation?
4. What are the challenges of the improved tax administration system?

Hypothesis

To address research questions two (2) and three (3), the study hypothesized that:

H_o: There is no significant relationship between tax administration and tax compliance.

H_1: There is significant relationship between tax administration and tax compliance.

H_o: There is no significant relationship between digitization of tax administration and revenue mobilisation.

H_1: There is significant relationship between digitization of tax administration and revenue mobilization.

Significance of the Study

This study would help the GRA to mobilize resources adequately based on the recommendation provided in the study. The results will have examine factors that contribute significantly to tax non-compliance; the effect of tax administration on tax compliance; and the impact of digitization of tax administration on revenue mobilisation. This study would not be beneficial to GRA in Sunyani only, but also other GRA offices that exhibit similar characteristics in the country and outside as well. The results of the study could be useful to Non-Governmental Organizations (NGOs), communities and their members, researchers, development partners, financial institutions and the central government as well. To policy makers, the findings will help them to fine-tune to their policies about the tax administration to ensure total compliance among citizens. It will be an added value to the knowledge base on tax administration and compliance and serve as an impetus for future research into similar areas especially revenue mobilization and GRA development.

Delimitations

The study does not cover other GRA offices in Ghana. The researcher limited the study to contribution of improved tax administration on tax compliance. Geographically, the study takes place in Sunyani District in the Bono Region.

Limitations

The researcher envisages challenges in the data collection process. To begin with, there will be limited time for the study to be conducted as deadline is given for us to submit the work. In addition to the limited time, is also the issue of how to reach all respondents who live at different part of the Municipality. Also, some respondents will fail to understand the essence of the work and therefore become very difficult in coming up with the requisite information necessary to complete the report on time.

Definition of Terms

Tax: Tax is a compulsory levy from persons who receive income from a country or whose income is brought to a country to the government for the purposes of redistributing income to the benefit of the entire citizenry (Kyereda, 2015).

VAT: Value added tax (VAT) is a tax applied on the value that is added to goods and services at each stage in the production and distribution chain imposed under the value added tax (VAT) Act 1998 (Act 546). It forms part of the final price the consumer pays for the goods or services.

Tax Compliance: Tax compliance is the degree to which the taxpayers comply with the law. It is the willingness of individual and taxable entities to act in accordance with the spirit as well as the tax law and administration without the application of enforcement activity (James & Alley, 2001).

Tax Administration: Tax administration is the assessment, collection, enforcement, litigation, publication, and statistical gathering functions under such laws, statutes, or conventions (Government Accountability Office (GAO) report cited in Atuahene, Yusheng & Bentum-Micah, 2018).

Tax non-compliance: It is a range of activities that are unfavourable to a government's tax system. This may include tax avoidance, which is tax reduction by legal means, and tax evasion which is the criminal non-payment of tax liabilities (Kyereda, 2015).

Digitization of Tax Administration: It places emphasis on collecting data and determining tax liabilities, which will result in a more secure collection and control of tax revenues (Kyereda, 2015).

Organisation of the Study

This study is organised into five chapters. Chapter one gives an introduction to the study. The chapter comprises the background to the study, statement of the problem, research objectives and questions, significance of the study, delimitations and limitations of the study, definition of terms and organisation of the study. Chapter two of the study reviews relevant literature. Chapter three is about the methodology used in gathering the relevant data for the study. Sub-topics seen under this chapter are research design, study area, population, sampling procedure, data collection instruments, data collection procedures, data processing and analysis and chapter summary. Chapter four is about results and discussions. Chapter five looks at summary, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The study is about the contribution of improved tax administration on tax compliance in Sunyani Municipality. Specifically, the study aims to: examine factors that contribute significantly to tax non-compliance; the effect of the improved tax administration on tax compliance; the impact of digitization of tax administration on revenue mobilisation and identify the challenges of the improved tax administration system. The researcher did this through the review of relevant literature from text books, journals, articles and other publications that were relevant to the topic under study. Hence, the literature review contains the theoretical framework, conceptual base of the study, empirical review and chapter summary.

Theoretical Framework

Technology Acceptance Model (TAM)

The TAM was originally proposed by Davis (1986) in a doctoral thesis and formally published in 1989 (Davis, 1989). The TAM is one of the most widely applied technology models and has proven to be a vigorous and influential theoretical model in predicting user behaviour of new information technology (Tome et al., 2014). The popularity of the TAM among information system researchers may be attributed to the TAM focusing specifically on information technologies, its proven validity and reliability, and its magnitude of empirical support (Sharp, 2007).

The TAM comprises six causally related constructs, namely external variables, perceived ease of use, perceived usefulness or relative advantage, attitude, behavioural intention to use a technology or system and actual system usage behaviour (Davis, 1989). According to the TAM, perceived ease of use and perceived usefulness influence an individual's attitude and subsequent behavioural intention to use a system (Surendran, 2012). Behavioural intention, in turn, predicts an individual's actual system usage behavior (Sharp, 2007). Perceived ease of use, perceived usefulness, attitude and behavioural intention represent the core functions of the TAM, whereas the external variables and actual system usage behaviour are used as input to or output from the model (Erasmus et al., 2015).

The influence of external variables on system usage behaviour is mediated through individual beliefs and attitudes. An individual's belief relates to the subjective assessment that undertaking some behaviour will have a particular outcome, whereas attitude is associated with an individual's favourable or unfavourable affective feelings about undertaking behavior (Park, 2009). In the TAM, perceived ease of use and perceived usefulness are belief constructs. Both these constructs are indirectly influenced by external variables in strengthening an individual's belief that using a specific system could enhance their performance and through their belief that using a specific system by implication, mobile banking will be free of effort (Surendran, 2012).

The technology adaptation model (TAM), according to Sangle and Awasthi (2011), was developed to explain the acceptance and usage of technology. This model explained that an individual customer system usage is decided by their personal likelihood which is consequently determined by the perceived benefits which is how much person believes that using a system will improve their job performance and secondly the perceived ease of use which is the magnitude a client thinks that utilising a system will be effortless. Tobbin (2012) further added that the technology acceptance model by stating that the measures of perceived usefulness include performance increase, productivity increase, effectiveness, overall usefulness, time saving and increased job performance. Also, measures of perceived ease of use have included, ease of control, ease of use, clarity, and flexibility of use.

Taxation in Ghana

The Income Tax Ordinance, 1943 (Ordinance No. 1943) was the first tax introduced in Ghana. Since then, this has been amended several times. The first amendment was in 1961, Act 68. This was followed by Acts 178 and 197 in 1963. Other taxes such as Property Tax, Entertainment Duty Tax, Airport Tax, Hotel Customers Tax, Standard Assessment and Excess Profit Tax were introduced in between 1961 and 1963. The PAYE was introduced in 1963. With the inclusion of several taxes, the Income Tax Department was renamed Central Revenue Department to reflect all other types of taxes other than the Income Tax only in 1963. The Income Tax Decree in 1966 No. 78 and the Income Tax Decree SMCD5 in 1975 followed thereafter. The Income Tax Decree 1975 section 71 made a Commissioner responsible for assessment and collection of taxes (Ohemeng & Owusu, 2013).

In 1986, the Internal Revenue Service Law of 1986 (PNDCL, 143) was passed. This brought about structural change for this reason the Department which was under the civil service department was transformed into the public service organisation. The Internal Revenue Service was then mandated to take charge and they had their own Board of Directors. The Internal Revenue Act, 2000 (Act 592) was amended in 2002 (Ali-Nakyea, 2008). The establishment of Ghana Revenue Authority (GRA) Act 2009 (Act 791) followed. Under this law, Domestic Tax Revenue Division (DTRD) was established to take care of the duties of Internal Revenue Service (IRS) and Value Added Tax (VAT) service. Customs, Excise and Preventive Service (CEPS) maintained its status and Management Support Unit was added to GRA. The Commissioner-General is the head of GRA and oversees the activities of the commissioners of the DTRD, CEPS and the Management Support Unit (Ohemeng & Owusu, 2013).

Definition of Taxation

The word tax is from a Latin word “taxo” which can be defined as a mandatory financial charge or some other type of levy imposed upon an individual or other legal entity (Taxpayer) by a governmental organization in order to fund various public expenditures (Wikipedia, 2020). Tax is a compulsory levy from persons who receive income from a country or whose income is brought to a country to the government for the purposes of redistributing income to the benefit of the entire citizenry (Kyereda, 2015). Shirley and Karen (2012) defined tax as a forced payment made to a governmental unit that is unrelated to the value of goods or services provided.

Taxation represents the inherent power of a state government to impose and demand monetary contributions from the public for the purpose of public good (Yin, Wemah & Abugre, 2016). Tax is a compulsory levy from the people of a country to the government for which nothing is received directly in return (James & Nobes, 1997). Stated differently, taxation is a compulsory levy imposed on the citizens of a nation by an authority so as to raise financial resources to finance the Government’s expenditure over a given fiscal year. Taxation has therefore been identified as the livewire of every country, without which the wheels of progress will stagnate. In collecting taxes, government can use direct or indirect approach, either progressively, proportional or regressive (Venter, Hamel & Stigingh, 2004).

Moving a nation with scarce financial resources is similar to the use of a car with less or no oil. Thus, taxes are the lifeblood of any economy (Otchere-Ankrah, Senior & Junior, 2014). Although a number of reasons have been adduced for taxation, the overriding objective of taxation is to generate revenue from citizens and economically active residents so as to finance government expenditures. In a general view, the benefits of taxation are not necessarily felt by the individual tax payer directly, the tax payer is under law to be responsible towards the financing of the state by contributing proportionately from the revenue he/she earns periodically. Without the required revenue generation through taxes, no government can accomplish anything important in terms of development such as schools, hospitals, roads, housing, water, sanitation and electricity. The current condition in most developed and developing nation has been an over concentration on the formal economy where only 20% of working population are identified and taxed (Agyei, 2004) leaving the self-employed who form the chunk of the working class untaxed (Naporow, 2015).

In light of this, a new paradigm of taxation is essential for government to ensure that every possible effort is made to ensure that every one including self-business owners is taxed through the appropriate tax procedures (Naporow, 2015). Stated differently, a country loses huge sum of revenue if the right actions are not taken to tax all active economic agents including self-employed particularly in the informal economy (Schneider & Enste, 2003).

Operationally, tax is defined as forced payment made to a governmental unit to finance government expenditures.

Value Added Tax

Value Added Tax (VAT) was first introduced in Ghana on 1st March, 1995 by VAT Act of 1994 (Act 486) as part of the Tax Reform Programme which began in 1993. It was however repealed by government on 14th June, 1995 in response to a general public outcry, including demonstrations, against a steady increase in the prices of goods (including food items) which was blamed mainly on the introduction of VAT. VAT was reintroduced in 1998 with the passage of the Value Added Tax Act, 1998 (Act 546). VAT replaced the sales tax in order to improve revenue administration. Sales taxation on domestic production was limited to the manufacturing sector, which put a disproportionate tax burden on their operations. Hence it was suggested that instead of relying on a system which taxes some forms of consumer spending but not others, it would be better to replace them with a general consumption tax that falls more evenly on a much wider range of consumer spending in the domestic economy, because low income people pay disproportionately high taxes under the current scheme (Egyin, 2011).

The VAT is generally believed to be non-distortionary, provided there are few exemptions and little zero-rating. However, it is increasingly accepted that zero-rating is necessary to achieve social justice and security in harsh economic conditions (Bird and Gendron, 2006) When the VAT on investment is fully credited, it is an improvement over older taxes on capital goods. The VAT generally replaces inefficient, distortionary, and badly administered taxes that cascade liabilities, use many tax rates, tax capital goods and exports, favour imported goods, reduce the base, and frequently involve an antiquated and corrupt administration.

With the introduction of the VAT, the economic costs and risks of collecting revenue will decline as the entire production and distribution chain becomes involved in collecting this tax, because this spreads the costs and risks of collection over a much larger number of transactions (Bird, 2005). The VAT has also helped to facilitate trade by exempting exports, removing hidden subsidies, and placing the taxation of imports and domestic production on the same level playing field.

Studies of the impact of the VAT in developing countries are still few, but there is growing evidence that the VAT is not an especially regressive tax. For example, studies in Cote d"Ivoire, Guinea, Madagascar, and Tanzania all show that the poor pay less than their share of total VAT revenues, when measured against their share of consumption. Hence the VAT has proved to be more progressive than the trade taxes it often replaced (Ebrill, 2002). In terms of simplicity, the VAT can facilitate substantial improvements in overall tax administration, particularly the establishment of more integrated tax administrative systems and the development of modern procedures based on voluntary compliance. In many countries, activities taking place in the informal sector of the economy generally escape the direct tax system. However, an indirect tax such as the VAT can be used to tax invisible taxpayers such as non-reporting plumbers and other home repair enterprises that buy supplies from registered taxpayers (Bird and Gendron, 2006).

As in many developing countries, VAT has become the workhorse of the revenue system in Ghana because direct taxation continues to be relatively ineffective. VAT is often thought to be an intrinsically complicated tax, cumbersome for both taxpayers and authorities. In developing countries, where even basic record-keeping abilities may be limited, it can be especially difficult to implement a VAT (Ebrill, 2002). The effectiveness of the VAT is further undermined by the difficulty of implementing workable self-assessment systems, under which taxpayers declare and pay taxes on the basis of their own calculations, subject to the possibility of later audit by tax authorities (Bird, 2005). Government's inability to give prompt refunds of excess credits to certain taxpayers, particularly exporters, reduces the effectiveness of VAT because exports are zero-rated, exporters have no output tax liability, and are entitled to a refund of the tax paid on their purchases. Failure to provide prompt refunds detracts from the merits of the tax (Ebrill, 2002).

Some analysts suggest that in the presence of a substantial informal sector, a tax like the VAT that falls on the formal sector impedes economic growth and development. Indeed, a recent study concludes that increasing consumption taxes definitely fosters the expansion of the hidden economy if the labour intensity of the production in that sector is greater than in the formal sector. The right way to implement VAT is through self-assessment. This has resulted in the erosion of the base of the VAT through concessions at many levels as well as through general administrative weakness (Bird, 2005).

A uniform VAT is likely to be regressive because it will necessarily increase the price of many goods essential to the poor, even though the poor will consume relatively small amounts of such products and much of the benefit of special exemptions or low rates may go to the non-poor (Bird & Gendron, 2006). Despite these criticisms of the VAT, the VAT is still the best form of general consumption tax for developing countries such as Ghana.

The Concept of Tax Compliance

From regulatory policy perspective, Income Tax Act, 2015 (Act 896) of Ghana defined tax compliance as the ability and willingness of taxpayers to comply with tax laws, declare the correct income in each year and pay the right amount of taxes on time. Tax Compliance includes registering or informing tax authorities of one's status as a taxpayer, submitting a tax return every year (if required) and following the required payment time frames (Ming et al., 2005). The regulation includes registering or informing tax authorities of status as a tax payer, submitting a tax return every year (if required), and following the required payment time frames (Ming et al., 2005). Tax compliance is the degree to which the tax payers comply with the law. It is the willingness of individual and taxable entities to act in accordance with the spirit as well as the tax law and administration without the application of enforcement activity (James & Alley, 2001). It is mandatory for every resident of Ghana to pay a fraction of his or her incomes to the state in a form of tax. (IRS Act 2000, Act 592).

Singh (2003) has listed multiple factors driving tax compliance such as demographic, income, compliance cost, tax agents, moral or ethical considerations. Kung (2016) further identified four main factors driving tax compliance behaviour which include: economic factors and non-economic factors including institutional factors and psychological factors.

Institutional drivers of tax compliance require a comprehensive responsibility of tax authorities to reduce the tax gap and increase voluntary compliance. According to Kirchler (2007) and Loo (2006) various institutional factors drive tax compliance behaviour among tax payers. Kirchler (2007) and Loo (2006) identified these institutional drivers to include the role of tax authorities, simplicity of the tax returns, administration and probability of detection. Consequently, Naporow (2015) questions the value of sanctions as a singular driver of tax compliance behaviour.

Consequently, Naporow (2015) shifted attention to emphasize the importance of voluntarisms, persuasion and cooperation, known as accommodative approach as a regulatory tool for encouraging people to comply with tax obligation. Naporow (2015) posits that State tax authorities supporting the accommodative regulatory enforcement tend to view individuals not as rational actors, but social actors who are inclined to comply with laws, partly because they believe in the rule of law, and partly as a matter of long-term self-interest. In view of Richardson (2008), regulatory authorities adopting the accommodative model are more oriented toward seeking results through voluntary systems and cooperation rather than by coercion. Simplifying tax returns and administration potentially could help taxpayers to complete their tax returns accurately, thus improving tax compliance.

Economic drivers of tax compliance explain the essential role emanating from the state government in ensuring tax compliance among the citizens. According to Kirchler (2007) and Loo (2006) essential economic drivers of tax compliance include: tax rates, tax audits and perceptions of government spending. In furtherance to the inroads in explaining tax compliance among self-employed, Hasseldine and Li (1999) were of the view that, government and the tax authority are the main parties in the tax system, thus these institutions must design an efficient and effective enforcement and collection mechanisms to minimize tax evasion. Some essential economic compliance drivers are taxation laws and systems (Keen, 2014), compliance cost (Laffer, 2014), tax laws, audits, detection possibility (Benk, Budak & Cakmak, 2012). Kirchler, Hoelzl and Wahl (2008) have further suggested that excessive tax penalties and fines result in more tax avoidance.

In effect, Alm, Jackson and Mckee (1992) support the evidence that fines do affect tax compliance though the impact was virtually zero. Ali, Cecil and Knoblett (2001); Torgler and Valev, (2007) have found that increasing tax rates is likely to encourage people to evade taxes while lowering tax rates does not necessarily increase tax compliance (Trivedi, Shehata & Mestelman, 2004; Kirchler, 2007). Inconclusively, Allingham and Sandmo (1972) concluded that taxpayers may choose either to fully report income or report less, regardless of tax rate. Dean, Keenan and Kenney (1980) agreed that financial hardship, government wastage, low chance of detection and the desire to break through the system as the factors that breed tax evasion in the informal economy.

Categorically, Kirchler (2007) and Loo (2006) explained that individual drivers of tax compliance are essential which includes personal financial constraints, awareness of offences and of penalties. In furtherance to that, Chan, Troutman & O'Bryan (2000) reported that Hong Kong taxpayers have less favourable attitude towards tax system resulting in lower compliance. Other studies have found essential individual drivers such as fear of penalties for non-compliance (Martinez-vazquez & Moreno-Dodson, 2012) as drivers of tax compliance. Again, ensuring effective tax compliance also requires that a taxpayer improve the internal business operation systems. For instance, Richardson and Sawyer (2001) suggested that good records keeping leads to more accurate reporting of income and expenses in business tax returns. Record keeping therefore becomes an essential element that helps business to meet their tax obligations. From another perspective, where a business keeps good records, it is quite likely that when these records are taken to the tax agency at the end of the year, the tax agency will have all the information needed to accurately complete the tax return. If good records are not kept, there are numerous adverse consequences for the individual taxpayer by preparing inaccurate tax returns, waste of time and other resources used in creating accurate financial records (Naporow, 2015).

Mbilla et al. (2018) discovered that undoubtedly, tax authorities are constraints in terms of logistics for filed inspection, audit and check tax evaders. Kirchler (2007) and Loo (2006) explained that social factors such as referent groups and associations, opinions of social leaders, ethics and attitude of the tax payer, perceptions of equity and fairness, and political affiliation drives compliance behaviour. These compliance drivers are important to enhance voluntary tax compliance among taxpayers. Further studies have identified other social drivers such as subjective norms and cultural differences (Benk, Budak & Cakmak, 2012) morality and ethical values of the tax payer and collectors, tax system equity (Murphy, 2004).

As observed by Braithwaite (2003), building strategic relationships to help shape tax agents' understanding of taxpayer motivations will improve the skills of the tax officials and enable them respond to different needs of different taxpayers and gain support for strategies that address particular industry issues and practices. Taxpayer compliance cannot be achieved coercively, but rather cooperatively through dialogue and understanding (Aryes & Braitewaite, 1992).

Operationally, tax compliance is defined as the ability and willingness of taxpayers to comply with tax laws, declare the correct income in each year and pay the right amount of taxes on time. The factors that influence voluntary tax compliance include tax knowledge, compliance costs, business size, industry, experience, penalties, capital structure, tax rates, tax audits, and morals of people.

Factors that Contribute to Tax Non-Compliance

Non-compliance of tax payments is an urgent issue in Ghana, as the government has been suffering from a widening fiscal deficit and a rising debt burden (Asiedu, Pavelesku, Sato & Tanaka, 2017). Besley and Persson (2014) attribute low tax collection in developing countries to their inadequate administrative capacity, the presence of a large informal sector, weak checks and balances, and the lack of social norms for tax compliance. Besley and Persson (2014) discussed how collecting income taxes are harder than collecting other taxes, such as trade taxes, because income tax collection requires a much more elaborate system of monitoring, enforcement, and compliance. Ahmed and Rider (2013) demonstrate that the evasion of income tax is estimated to be around 60% of potential revenues in Pakistan, which is much higher than the estimated evasion of indirect taxes.

Tax non-compliance encapsulates failure to submit tax returns when legally obliged to do so, understatement of income tax returns, overstatement of deductions on tax returns, and failure to pay assessed taxes by the due date (Abdallah, 2006). The types of noncompliance include the following: (i) the case of filing- this noncompliance refers to non-filing of returns to the tax authority which will lead to tax gap i.e. the amount of unpaid taxes due foregone. (ii) The non-payment compliance refers to untimely taxes paid. (iii). Issue on noncompliance and tax underreporting. The taxpayer practices no reporting by way of evasion and also avoidance, both are same except that the latter is legal while the former is illegal. This area of noncompliance poses a serious problem to tax authority because these taxpayers escape tax and their burden is pushed to the other complying taxpayers. This is where the fair and equitable tax system is questionable. A major difficulty in analysing noncompliance is in its methods of measurement (Feruta, 2014).

Taxpayers are likely to submit their tax returns late and pay their taxes after due dates, along with the observation that close to half of the study subjects have not yet registered their businesses. From the taxpayer's perspective, tax non-compliance is likely to occur if the tax payer is non-religious person and if the tax payer considers detection probability to be high while the perception of high compliance costs and tax knowledge increase non-compliance probability. Moreover, from the tax administrator's viewpoint, the compliance is likely to increase if prosecution is likely while non-compliance is most likely to happen if the tax payer sees no direct benefit accruing to him/her and if the level of his/her understanding of the need to pay is missing (Agyei, 2015). Government and tax authorities in Ghana are faced with the challenge of findings solutions to non-compliance (Oteki, & Ezekiel, 2014). Generally, small and medium tax payers do not comply with their tax obligations, even though it is also a fact that some do actually comply with the tax laws (Kamleitner, Korunka & Kirchler, 2012). The problem of tax non-compliance in Ghana is mainly as a result of the large informal sector and the lack of proper systems and structure to enforce tax laws (Aryee, 2007).

Seven variables were used by Kidder and Craig (1989) to assess the reason for which individual taxpayers would comply or not comply to payment of taxes. These variables, Kidder and Craig (1989) named as taxonomy or topology of tax compliance, are: procedural, brokered, unknowing, lazy accounting, protest or symbolic, asocial and habitual non-compliance. According to Feruta (2014), the procedure and requirements for filing an income tax return may be a hindrance for taxpayers in discharging their taxpaying obligations when it is perceived to be too bureaucratic and complex. Brokered non-compliance takes place when taxpayers refuse, reduce or defer the payment of taxes based upon the technical advice of a knowledgeable expert such as a tax accountant, lawyer or bond dealer. It is often believed that these experts have a significant influence on the taxpaying behaviour of corporate entities and individual taxpayers. Brokered non-compliance occurs when taxpayers become non-compliant because of expert advice (Feruta, 2014).

Unknowing noncompliance occurs when taxpayers are not aware of the changing rules in the tax laws that occur yearly. This arises when taxpayers fail to comply either in part or in whole with the tax laws mainly due to ignorance or complexity of some of the tax laws that do not lend themselves for easy comprehension (Picciotto, 2007). Lazy (Accounting) non-compliance is the inability of individuals to keep proper set of accounts or records may lead to noncompliance. It exists where individuals discover that they cannot document legitimate expenses for business or fail to keep track of other earnings for which there is no withholding tax (Azah, 2005). Protest or symbolic non-compliance may be triggered by taxpayers' perception of unfairness of the tax laws and inequity in the use of revenue from taxes. Protest against payment of taxes which is informed by these factors is referred to as symbolic noncompliance. The individuals in this case do not see the need for them to pay taxes. These taxpayers cheat the state by running their activities such that it is difficult, if not impossible, for tax officials to identify, let alone tax them (Thuronyi, 2003).

A social noncompliance is a classic type of tax evasion also known as "tax cheater". For instance, feeling a little if any sense of obligation to pay a share of taxes, a taxpayer may arrange his or her business so as to minimise its visibility to tax authorities and manages to avoid taxes altogether by accepting payment for his or her work in cash only, paying cash for supplies, and avoiding a written trail of his economic activity (Azah, 2005). Habitual noncompliance was also observed that some behavioural traits cultivated over time by respondents in underreporting income and evading taxes was a norm. Some self-employed persons simply did not have any tangible reason for failing to comply. Tax noncompliance has become part and parcel of them resulting from a long period of noncompliance. Noncompliance effectively can be said to have become their habit. For instance, taxpayers who rely on prior year tax reforms as beginning estimates in completing current year's tax form may result in underreporting incomes and deductions. This, if not curtailed, may develop into a habit (Feruta, 2014).

Essilfie-Afful (2018) posits that domestic, multi-national and private businesses have reduced government revenue in various ways by avoiding and evading tax. Some of the common ways are as follows: (i) Keeping two set of records for business transaction, one records the actual business and the other contain false records. (ii) Barter trade where payments are made in kind instead of money is not accounted for. (iii) Nondisclosure of major sources of income and vital information about their earnings. (iv) Submitting false statements on returns to GRA and other revenue agencies with sole aim of reducing tax liability. Essilfie-Afful (2018) therefore discovered that 43% of tax payers sampled said they have evaded tax in one way or the other. Among the factors contributing to tax non-compliance, Kyereda (2015) stated that high income tax, business non-profitability, distance difficulty in paying tax, unnecessary or misuse of tax income by government, tax non-compliance by other colleagues, low income tax education, advice from experts, non-registration of businesses and low educational level account for high income tax non-compliance.

Mantey (2015) observed from his study that Suame Magazine Industrial Area (SMID) usually registers with authorities but do not declare their incomes. Small Business Income Earners (SBIE) barely understands the tax system in the country. They do not know much about the income tax laws and regulations and computing of tax liabilities is always difficult for them. Mantey (2015) further observed that, SBIE in the area have negative attitude towards the Ghanaian tax system. Danquah (2015) observes why some taxpayers evade tax and gave the reasons as follows: no trust in government, high rate charged, unfair treatment of organizations by tax administrators, low level of knowledge on tax by tax payer, weakness in the laws against tax evaders, poor attitudes of tax collector towards tax payer, unskilled manpower/ personnel to collect the tax, and poor monitoring.

Operationally, tax non-compliance is defined as failure to submit tax returns when legally obliged to do so, understatement of income tax returns, overstatement of deductions on tax returns, and failure to pay assessed taxes by the due date. The factors causing tax non-compliance include inadequate administrative capacity, the presence of a large informal sector, weak checks and balances, lack of proper systems and structure to enforce tax laws and the lack of social norms for tax compliance.

The Concept of Tax Administration

Tax administration is the assessment, collection, enforcement, litigation, publication, and statistical gathering functions under such laws, statutes, or conventions (Government Accountability Office (GAO) report cited in Atuahene, Yusheng & Bentum-Micah, 2018). Tax administration is a difficult and unenviable task, but nevertheless critical for revenue generation required for accelerating growth and to improve the quality of life of the citizens (Gidisu, 2012). The main objective of tax administrators in any country is to improve on the level of voluntary tax compliance (Silvani, 1992). In 1970 the government of Ghana tried to regionalise tax enforcement to the local level. The aim was to achieve district focused public administration. In 2001, a new tax law, The Internal Revenue Act 2000 (Act 592), was passed to administer Direct Taxes.

The Internal Revenue Regulations, 2001 (L. I. 1675) was also introduced. There have been a number of amendments to the law and regulations. Bold changes in Ghana's tax administration played a key role in improving the country's revenue mobilization and overall fiscal health (Terkper cited in Atuahene, Yusheng & Bentum-Micah, 2018). In 2009, government integrated the three major tax revenue institutions – Internal Revenue Service (IRS), the Value Added Tax Service (VAT) and the Customs, Excise and Preventive Service (CEPS) - into a single agency - The Ghana Revenue Authority. The collection of taxes especially income taxes was hence delegated to the Metro, Municipal and District office of the Ghana Revenue Authority.

According to Atuahene, Yusheng and Bentum-Micah (2018), IRS and CEPS get information from taxpayers on taxpayers Files, through field exercises, Town and Market Survey, Income tax form 21, 22a and 22 completed by taxpayers. Other sources were through interview with the taxpayers through public informants that are media, which is both electronic and print media. Atuahene, Yusheng and Bentum-Micah (2018) posit that tax evaders are identified based on informant, external inspection and through registrar General Department of those registered business. Based on the above sources; understatement of returns and qualified taxpayers who have not registered with the offices could be detected.

The Ghana Revenue Authority relies mainly on office audit, which entails small business and company returns. This does not involve extensive scrutiny of the taxpayer's books and records. In this process the office of auditor examines the returns of individuals and companies under his schedules. In response to the proper accountability of tax officials, there it was discovered that the revenue or monies collected by the tax officials are paid to the office cashier who in turns makes the necessary entries in the cash book after which payments are affected or made into the consolidated fund. Payments sometimes are made twice a day; revenues received by the tax officials are paid to the office cashier to be paid into the consolidated fund before mid-day payments are again made. This is done with the view to meeting the target for the month and hence the years target. However, where money is brought in late and could not be paid in that same day, payment could be made on the next day with the next day’s date even where the next date is a new month. The mode of payment however, is mostly cash-basis (cash-basis taxpayers) but with a few cases of cheque by the tax payer (Atuahene, Yusheng & Bentum-Micah, 2018).

Operationally, tax administration is the assessment/audit, collection, enforcement, litigation, publication, tax rates, tax penalties and fines, tax education and statistical gathering functions.

Effects of Tax Administration on Tax Compliance

Owusu (2019) ascertained the role of tax audit in mobilizing tax revenue domestically. The research examined tax compliance and revenue mobilisation and possible challenges confronting Tax Auditors. Data was gathered from the Large Taxpayers Office on Tax Audit Assessment and Tax Revenue. Also, questionnaire was designed where 30 Tax Auditors were sampled to ascertain the challenges that confront tax audit. Probit regression, Descriptive statistics and Correlation coefficient was employed in this study. The study found a positive significant relationship between compliance level and external auditor type.

According to Owusu (2019), this can be explained that, there is a high probability of firms to comply with tax regulations if their external auditors are among the biggest four audit firms in Ghana. Big firms are capable of compelling tax payers to comply probably because of goodwill. The study further found that Tax Audit in itself enhances compliance as well as revenues mobilization. Various challenges the tax auditors encounter includes; the unwillingness of tax payers to corporate with auditor, taxpayer being economical with respect to information and tax payers deliberating delaying the process.

Okpeyo, Musah and Gakpetor (2019) examined the factors that influence tax compliance by small and medium tax payers, the difference in the level of compliance between small and medium tax payers and strategies to improve tax compliance in Ghana. The study through stratified sampling technique sampled 100 small and medium tax payers in Accra and other GRA officials for the study. Data was analyzed qualitatively and quantitatively. The results of the study showed that compliance cost, tax rates, tax audits and morals of taxpayers significantly influenced tax compliance.

Wahabu (2017) examined compliance with tax laws by small and medium-sized enterprises (SMEs) in Tamale Metropolis. It is fixated on tax knowledge, factors of tax compliance; the measures tax authorities adopt to encourage tax compliance and the relationship between components of tax knowledge and tax compliance. In an attempt to fill a gap in research regarding tax compliance of SMEs in the Tamale Metropolis, the study adopted the descriptive survey and cross-sectional study design. Stratified sampling and simple random sampling techniques were used to select a sample size of 265 from a total population of 851 small and medium-sized enterprises (SMEs).

A close-ended questionnaire was employed in gathering primary data for the study. The study was analysed using descriptive statistics and multiple regression. Key findings from the study suggest that the tax knowledge of owners/managers of SMEs is low and that major factors contributing to tax compliance among SMEs in the Tamale Metropolis include complexity of the tax laws, perception of government spending, profit level of businesses and the rate of tax. The study concludes that there is a significant relationship between tax knowledge and tax compliance (Wahabu, 2017).

It is thus recommended that, to improve voluntary tax compliance, tax authorities should simplify the tax laws and provide adequate tax training and education to SMEs to enhance efficient tax collection. SMEs should be encouraged to keep proper accounting records and file their tax returns promptly. Finally, promoting taxpayers' knowledge about awareness of offences and penalties could increase voluntary tax compliance by SMEs (Wahabu, 2017)

Trawule (2017) investigated the relationship between tax education and tax compliance among the self-employed in the Cape Coast metropolis. The study applied the quantitative approach by designing closed–ended questionnaires to collect the appropriate numerical data necessary to address the study objectives. Tax compliance is represented by committed, capitulative and creative compliances. Tax education is also represented by five proxies. A total of 400 respondents were drawn from the estimated self-employed population of 28,355. The study adds to the body of existing knowledge on tax education and tax compliance. The key findings from the study indicate that tax education affects tax compliance among the self-employed; however, the nature of the relationship depends on the type of the content of tax education and the type of compliance to be achieved.

According to Trawule (2017) generally, tax compliance segregation into committed tax compliance, capitulative tax compliance and creative tax compliance has significant bearings on overall tax compliance. The study recommends that the tax laws should be made less complex to ensure compliance, penalties must be enforced, and tax payers must educate themselves more on tax laws. The GRA must also organise seminars and conferences to educate tax payers.

A research conducted by Chepkurui, Namusonge, Oteki and Ezekiel (2014) on factors that influence tax compliance in Kenya, specifically focusing on SME's operating within Nairobi's Industrial Area. The researcher outlined a detailed literature review and identified the variables for this research to be tax rate, availability of tax information, tax compliance cost and attitude of SME's. The research was a descriptive survey. Given the large population of registered taxpayers in Nairobi, a sample size of 150 was picked as representative, to be the focus of this study. To ensure that various diverse categories of taxpayers and business entities were included in the survey, stratified sampling technique was adopted. Data was collected using self-administered questionnaires and an interview guide.

The collected data was consequently analyzed using Statistical Package for Social Scientist software and the findings of the research presented using tables. The findings of the study revealed that with regard to tax rate as a factor influencing SMEs compliance, the majority view that Kenya has high tax rates with several different tax heads and this consequently hinders their level of compliance. The lack of readily available information relating to tax matters accounted to a great percent as a reason for non-compliance. The lack of information contributed to the inability of the taxpayers to correctly calculate the taxes payable; another form of non-compliance. The SMEs view that if more information would be availed to them in form of tax seminars and literature, this would demystify the complex concept of tax and greatly motivate them to be compliant (Chepkurui et al., 2014).

The findings of this study further revealed that 47% of the SMEs interviewed incur more than Ksh.50, 000 monthly, as costs of tax compliance. Some of these costs include bookkeeping, installation of software and internet costs, additional cost of hiring professional staff such as auditors and tax experts, accounting for the largest proportion of these costs. With regard to SMEs attitude as a factor affecting tax compliance, the respondents do agree and feel that they do have access to public utilities which are made available by the taxes paid to the government; hence they enjoy benefits of the taxes they pay. These organizations do value the payment of taxes to the government to a great extent, which affects their level of tax compliance (Chepkurui et al., 2014).

The findings of the study further revealed that the respondents do feel that their counterparts, fellow SMEs, also value the payment of taxes to the government to some extent. However, the taxpayers do feel and strongly agree that the taxation system in Kenya is in great need of improvement. By gaining an understanding of these underlying factors, KRA and the government will be able to make changes that will greatly improve taxpayers' tax compliance level, with the end result being increased government revenues, allowing the tax authority to give quality service to taxpayers and the government as a whole providing more and improved utilities to the public (Chepkurui et al., 2014).

Onoja and Iwarere (2014) in their research examined the impact of tax audit on revenue mobilization in Federal Inland Revenue Service to American Journal of Business and Society. The objective of the study was to investigate the relationship between tax audit and revenue mobilization in Federal Revenue Service. The targeted population of the research includes staff of Federal Inland Revenue Service. Primary data collection techniques were employed to gather information (data) for the analysis. The research hypotheses were test by employing Analysis of Variance (ANOVA) technique. Result from the study indicated that, tax audit has a significant impact on revenue mobilization in Federal Inland Revenue Service.

Adediran, Alade and Oshode (2013) in a study examined the effect of tax auditing and investigation on revenue mobilization in Nigeria. The study sought to find out if tax auditing and investigations can actually result to an increase in government's tax revenue base and also if it can minimize the incidence of tax evasion. Data was obtained through primary source from three hundred and twenty respondents who were staff of the Edo State Board of Internal Revenue and Federal Inland Revenue service. The hypotheses of the study were tested using Pearson Correlation Coefficient. The outcome of the study indicated that, Tax audit and investigation have a high tendency to increase tax revenue mobilization and also minimize the incidence of tax evasion.

Atawodi and Ojeba (2012) conducted a study using SMEs in Zaria, North-Central Nigeria to evaluate and rank the factors that encourage non-compliance with tax obligation by SMEs. It was found that high tax rates and complex filing procedures are the most crucial factors causing non-compliance of SMEs. Other factors like multiple taxation and lack of proper enlightenment affect tax compliance among the SMEs surveyed only to a lesser extent. Therefore, it is recommended that SMEs should be levied lower percentage of taxes to allow enough funds for business development and better chances of survival in a competitive market. The government should also consider increasing tax incentives such as exemptions and tax holidays as these will not only encourage voluntary compliance but also attract investors who are potential viable tax payers in the future.

A study done by Bright et al (1988) which sought to statistically sample tax audit in the United State of America and also review whether using of sampling as a statistical tool for audit is enough a condition to determine the unpaid liability of taxpayers rather than the review of all transaction to ascertain the exact amount owed in terms of tax. A case studies approached was adopted, cases and data were secured from primarily sales, consumption tax and make use of taxes of three agencies including: the revenue department in New York, Internal Revenue Service (IRS), and revenue department in Pennsylvania. It was found from the outcome of the research that, assessment of audit based on a well analyzed and appropriately drawn statistical sampling never suffer the defect that have been correctly concluded by the courts mar assessments are based on non-statistical sampling.

In the absence of statistical sampling, it can become literally not possible for a tax official which has restricted staff strength to involve in auditing the entire period with regards to dealing with a taxpayer who possess a huge volume of transaction. It was further revealed by the study that, sampling techniques pave way for improved economies is using government limited resources in that tax administration to become more fair, effective, efficient and less intrusive if the technologies used to identify and measure tax deficiencies are expanded to cover controlled use of statistical sampling. Sampling techniques can be used to attain the common interest of minimizing the amount of time use for tax auditing for both the taxpayer and the tax administrator. Although the use of sampling approach has a deficiency of not providing the exact determination of tax owned and the uncertainty adjustment may forgo enormous amount of revenue (Bright et al., 1988).

Collins and Plumlee (1991) researched into the effect of tax audit schemes on the taxpayer's and reporting decision. The research sought to ascertain the effect of alternative tax rates and the levels of penalty on noncompliance. The study adopted experimental design and laboratory labour setting was employed to test the impact of tax rate, audit scheme and the sanctions levels of non-compliance. The outcome revealed that, audit scheme which incorporates some preliminary information signs from the taxpayers may be more fruitful in minimizing if not eradicating underreporting than purely audit models. Schemes that are non-random seem to be most effective at the time tax rate are low and penalty levels are at the very high side.

Smith and Stalans (1994) undertook a study into the strategies of negotiating preferred by auditors and taxpayers in resolving disputes associated with tax audit. A pre-audit open-ended interview was adopted by the study couple with a random selected sample of tax auditors and taxpayers that which was drawn from four field offices of the Oregon Department of Revenue. The outcome indicated that, the strategic preference by both auditors and taxpayers has been influenced by the type of dispute, the attitude of the taxpayer and the tax administration, the variation in in formal powers and the perceived responsibilities of the tax auditor.

As indicated by the study results, tax auditor has higher tendency of preferring the cooperation strategies whilst the taxpayers who think they can possibly alter the decision making of the auditors may prefer the assertive strategies. The outcome further indicated that tax payers sought to take advantage of gaps and uncertainties in the laws with regards to tax are likely to go for the strategies that are assertive in nature and others who sought to reduce their engagement are likely to prefer the cooperative strategies (Smith and Stalans, 1994).

Chan and Mo (2000) carried a research in China on the effect of tax holiday on foreign investors. A case study approach was adopted and the use of tax audit data totally 585 cases of 1996 tax returns of foreign companies audited in 1997. This case study selected the samples randomly and a non-compliance measurement was undertaken in terms of tax audit judgement which is an overstatement of cost of sales in pre-holiday period and over-provision for staff welfare in the post-holiday period. The study revealed that, tax holidays position of companies affects noncompliance. Organizations are least compliant at the period of pre-holiday whereas most compliant at the period tax exemption. It was further noted that, domestic market-oriented organizations, service firms, and joint ventures are less compliant relative to export-oriented organizations, manufacturing companies and wholly foreign owned companies.

From the above, there is a positive significant relationship between compliance level and external auditor type. Also, it was found that Tax Audit enhances compliance as well as revenues mobilization. Again, there was a significant relationship between tax knowledge and tax compliance. Once more, it was discovered from the above that tax education affects tax compliance among the self-employed, however, the nature of the relationship depends on the type of the content of tax education and the type of compliance to be achieved. Hence, the key findings from the studies indicate that there is a positive relationship between tax administration and tax compliance.

Digitization of Tax Administration

As part of the implementation of the e-Ghana project by the ministry of communications with the assistance of the World Bank, the Private Public Partnership (PPP) Automation of the revenue generating agencies is one of the projects being implemented. Through incorporating e-Ghana principles, e-Government services and electronic government Interoperability Framework (e-GIF) standards, this PPP will significantly improve the efficiency and effectiveness of tax administration as well as reduce the time and cost of registering a business. Additionally, it will result in a better designed and operated system which will enhance revenue mobilization and will give added value and convenience to the citizens of Ghana (Ahiavor, 2017).

The main objectives of this project are to automate the operations of the Ghana Revenue Authority (IRS, VATs, Revenue Agencies Governing Board (RAGB), Large Taxpayer Unit (LTU) and Registrar General's Department through a PPP arrangement, to provide e-government services to citizens and businesses in an efficient and cost effective manner in partnership with the private sector to increase government revenues and facilitate the development of private sector capabilities in the ICT sector. The automation will cause the operations of beneficiary agencies to be integrated in order to enhance the mobilization of national tax revenues. It will also reduce constraints people go through when registering their businesses, filing returns and paying taxes. The integrated tax administration software will include modules such as registration, returns processing, enforcement, audits, risk analysis and management and others (Ahiavor, 2017).

Tax administration and other responsibilities of customs are generally difficult and unenviable tasks, nonetheless very important for revenue generation that is needed for growth and improvement of the quality of life of citizens. Information Technology which leads to automation of systems which has become an important tool for achieving efficiency in tax administration (United Nations Conference on Trade and Development (UNCTAD), 2006 cited in Gidisu, 2012). The use of automated systems has been proven to be capable of introducing massive efficiencies to business processes at a minimal cost (Wasao, 2014), due to the bureaucratic structure of government which is costly to manage with little or no result, tax authorities as an agency of government are turning to e-government led solutions like electronic tax filing (e-filing) (Amabali, 2009), based on the arguments that it enhances the delivery of public services and fiscal profundity without incurring costly recurring overheads (Harrison & Nahashon, 2015). United Nations (2007) stated that e-taxation is a process where tax documents or tax returns are submitted through the internet, usually without the need to submit any paper return; it encompasses the use of internet technology, the World Wide Web and Software for a wide range of tax administration and compliance purposes.

Electronic tax filing was first coined in United States, where her Internal Revenue Services (IRS) began offering tax return 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 are now filing electronically. This however, has been as a result of numerous enhancements and features being added to the program over the years. Today, electronic filing has been extended to other developed countries like Australia, Canada, Italy United Kingdom, Chile, Ireland, Germany, France, Netherlands, Finland, Sweden, Switzerland, Norway, Singapore, Brazil, Mexico, India, China, Thailand, Malaysia and Turkey (Ramayah, Ramoo & Amlus, 2006). Nigeria and other developing countries such as Uganda, Rwanda and Kenya have also embraced electronic filing of tax returns (Muita, 2011).

Dowe (2008) disclosed that tax authorities around the world are using electronic tax administration systems to interact with taxpaying public in tax collection, administration and compliance settings so as to improve effectiveness and efficiency in tax administration. Globally, previous studies on the suitability of information technology complied tax system have it that; a positive impact of automation system usage and the cost of tax administration, automation and effectiveness of revenue collection of Ghana Revenue Authority using a case study of customs division (Gidisu, 2012). Wasilewski cited in Muthama (2013) with focus on the economic development and taxation system by comparing the case of Brazil and Japan. Japan's experience demonstrated that a country does not need to postpone a real change in the tax structure until it achieves a high stage of development, while in Brazil; low-income taxpayers bear most of the tax burden.

Gasteiger (2011) indicated that automated system enhances administration with the provision of multiple scenarios that allow senior management in a multi-campus university system to generate multiple income scenarios, make well-informed decisions concerning the operation of their institution and timely calculation and allocation of resources to academic departments. In Kenya, Kioko (2012) indicated that the macro model performs better the variations in funds allocated to counties than the representative tax system, Kibe (2011) disclosed that planning for revenue collection can best be carried out by a system that combined spatial and attribute data management capabilities like geographical information systems, Harrison & Nahashon (2015) with focus on small tax payers revealed that online tax system does affect tax compliance level, while Otieno, Oginda, Obura, Aila, Ojera &Siringi (2013) stated that relationship existed between information systems and revenue collection efficiency and effectiveness and more so, there is a strong positive relationship between Internal Control Systems and revenue collection.

In Nigeria, Oseni (2015) concluded that there is no hiding place for tax evaders with the use of this modern technology since all potential taxpayers are captured by the system, but the use of ICT can be catastrophic if carelessly employed by both the tax payers and the tax administrators as scammers and hackers of the internet facilities can utilize the ignorance or the lax security of the system. Efunboade (2014) indicated that these emerging global infrastructures (Taxpayer Identification Number- TIN, Factual Accurate Complete Timely- Project FACT and Integrated System of Tax Administration-ITAS) could make it increasingly possible for eligible taxpayers to pay tax online anywhere and anytime.

There is a general consensus that greater involvement of ICTs in the administration of states is essential in propelling countries to the realization of development (Asamoah, 2019). This has led to the coining of terms like "e-government" and "egovernance," which are essentially explained as the involvement of ICTs in the administration of states (Rossel & Finger, 2007). In the long run, it is accepted that e-government ensures that efficiency is maintained in public institutions (UN, 2016). An area, which ICTs has touched, is public revenue mobilization (Cho & Choi, 2004). Revenue generation is at the heart of state administration: The modern state is mandated to raise revenue to facilitate the developmental agenda and to provide public services for its citizens Ayee (cited in Adu, Buabeng, Asamoah & Damoah, 2020). States depend on taxes, rates, fines, and other financial obligations to raise revenue. On the national front, since the 1980s, Ghana has adopted several reforms to improve its revenue generation capacity to fund its developmental activities. Chronologically, tax reforms have been categorized into three phases, namely, restoring the tax base, strengthening production incentives, and the final stage, which has focused on enhancing tax efficiency and equity (Bekoe, Danquah, & Senahey, 2016). From these classifications, it is clear that the recurring goal of recent tax reforms has been to improve revenue generation through the maximization of efficiency as well as equity in tax collection.

Findings on e-governance success factors indicated that ICT has proven to be an effective tool for the digital divide. Also, e-governance strategies and policies cover a wide area such as human challenges, infrastructure, process reengineering, technology, change management, security challenges, legal privacy, information, and capacity building (Nirmaljeet and Kiran, 2013). A study on the effect of e-payment system on revenue collection by the Nairobi City County Government revealed that the revenue collection performance in Nairobi City County increased considerably after the introduction of e-payment system in revenue collection (Okoro, 2015). Factors that motivate institutions to adopt the Information System in their business and public organizations are the organizational commitment, group culture and superior coercive pressure (Daging, 2010). However, Sherer et al. (2016) remarked that mimetic forces were more critical predictors when there was greater uncertainty, while coercive forces were significant predictors after the U.S. government established incentives, and normative forces have continually influenced adoption. (Sherer et al, 2016). According to Al-Mamari et al. (2013), the Government of Oman implemented e-government projects due to international coercive, mimetic, and normative dynamics of conformance to international standards. This indicated that Oman was motivated by driving forces like those motivating other developing countries. To explore the effects of technological, institutional and fiscal readiness on the extent of online government services available across countries Kottemann (2009) resolved that there exist significant effects on a path model with direct effects of t-readiness and i-readiness on e-government, and indirect effects of t-readiness on e-government mediated through t-readiness.

In this study, digitization is measured by the use of internet technology, the World Wide Web and Software for registration, returns processing, enforcement, audits, risk analysis and management.

Revenue Mobilisation

Revenue is income that a company receives from its normal business activities, usually from the sale of goods and services to customers. In many countries, such as the United Kingdom, revenue is referred to as turnover. Revenue may refer to business income in general, or it may refer to the amount, in a monetary unit, received during a period of time. Profits or net income generally imply total revenue minus total expenses in a given period. In accounting, revenue is often referred to as the "top line" due to its position on the income statement at the very top (Fosu, 2012).

Revenue mobilization is the act of marshaling, assembling, and organizing financial contributions from all incomes accruing from identifiable sources in an economic setting (Fosu, 2012).

Revenue mobilization is hampered by tax leakage in developing countries which is often worsened by poor functioning tax authorities due to variety of reasons; under–resourced or under–trained administrators, poor tax collection systems, failure of legal enforcement mechanism for tax collection and small penalties for non-payment. These factors create opportunities for domestic and foreign entities to abuse the system since tax official frequently lack the required technical skills to unravel complex international fiscal structures that are used to escape taxation, and because penalties are insufficient to stop tax evasion (Egyin, 2011). Hence, the introduction of GRA.

According to Asamoah-Mensah (2015), the introduction of GRA has seen an improvement in staffs' knowledge of all major tax reforms such as VAT, income tax act, export taxes, import duties and administrative structure. The analysis further indicated that the amalgamation of the revenue agencies has helped in ensuring that administrative procedures are properly followed in the tax management thereby resulting in an increment in the tax revenue usually generated. Asamoah-Mensah (2015) findings further revealed that the amalgamation of the revenue agencies has helped in ensuring that all tax payers are provided with sufficient tax education thereby creating public awareness about the need to pay taxes and this has resulted in an increase in the amount of tax revenue every year. It was further evidenced from the analysis that the amalgamation of the revenue agencies has helped in ensuring that revenue mobilization procedures are effective.

Asamoah-Mensah (2015) moreover found that the amalgamation of the revenue agencies has helped in ensuring that budgeted tax revenue is always achieved. The analysis also revealed that the amalgamation of the revenue agencies has helped in ensuring that tax administrative procedures determine the level of revenue mobilization every year. In addition, the results from the analysis indicated that the amalgamation of the revenue agencies has resulted in an improvement in information flow between departments within the GRA thereby contributing to effective decision making. It was also noted from the analysis that tax profiling has improved after the amalgamation of the revenue agencies. Asamoah-Mensah (2015) findings further indicated that there has being regular assessment of tax payers as a result of the amalgamation of the revenue agencies.

Operationally, revenue mobilization in this study is the act of marshaling, assembling, and organizing financial contributions from all incomes accruing from identifiable sources in an economic setting.

Impact of Digitization of Tax Administration on Revenue Mobilisation

Gidisu (2012) examined the automation system procedures of the Ghana Revenue Authority on the effectiveness of revenue collection. After interviewing forty (40) officials from the Customs Division (CD) with specific duties and responsibilities in automation system management at the Ghana Revenue Authority (GRA) it can be said that the automation is a powerful monitoring tool for GRA. The research reports findings based on cross sectional approach to investigating GRA’s experiences with automation, efficiency and effective tax administration. The evidence suggests a positive impact of automation system usage and the cost of tax administration, automation and effectiveness of revenue collection. Additionally, automation was significantly related with tax clearance time. The research makes significant empirical contribution to analyzing tax automation and administration cost, time efficiency and effectiveness of revenue collection. Some of the results are consistent with the notion that automation leads to efficiency in tax administration. As such, the primary aim of computerized revenue collection (automation system) must be to dramatically increase cash receipts in order to effectively sustain the utility and generate an acceptable return on investment related to the system.

Tahiru and Agbesi (2019) examined the drivers and barriers to ICT adoption in the operations of AMA from macro level using institutional theory and organizational factors. The study adopted inductive qualitative thematic analysis using semi-structured interviews, and document analysis. The themes that emerged from the qualitative data analysis that influence AMA ICT adoption includes top management interest and attitude, infrastructure and resources, policy directive, and organizational success. The findings also identify themes such as government directives, and contractors commission as the main barriers to ICT adoption in AMA. The study concluded by making several recommendations that includes a centralized database that will serve as a repository for property information as well as owners' details.

Odoyo, Moses, John, Aila, Ojera and Siringi (2013) examined the effect of Information Systems on revenue collection of Local Authorities in Homa Bay, Kenya. Study objectives included establishing the relationship between internal control systems, Information Systems and revenue collection in Kenyan Local Authorities; determining the levels of quality service offered to the clients by Local Authorities and investigating whether Information Systems relate to effectiveness and efficiency of Revenue Collection. A structured cross-section survey was used to collect data from 2,007 individuals, of which 165 were Local Authorities staff and 1,842 were traders in Homa Bay Municipality. The study found that: there is a relationship between Information Systems and both efficiency and effectiveness in revenue collection, there is a strong positive relationship between Internal Control Systems and revenue collection as reported by 97% of the respondents, and that resistance to change by the council staff was derailing the full implementation of Information Systems. The study is useful in reviewing the institutions' Act and statutes to cater fully for the integration of IS in the management activities of Homa Bay Municipal Council, to managers at all levels, public sector, policy makers and scholars.

Domi (2019) assessed the impact of information technology in ensuring efficiency in operations of the Customs Division. It is descriptive in nature and employs the quantitative research approach through the use of questionnaires. A sample size of fifty (50) and participants were chosen by random sampling methods. The study found that most of the activities rely on the use of IT and that these activities have been automated to make operations very effective and efficient. The study further found that ICT adoption has made the overall clearing process more efficient and increased revenue collection for the state. Further, the findings show that ICT is employed for almost all clearing activities at the ports. It was also revealed that it has led to the improvement in customs operations and has made document processing easier. The study revealed that IT adoption has positively affected clearing activities.

The study thus found that with the introduction of IT to clearing activities, document processing has improved significantly in terms of time taken to clear goods. In spite of the positive effects of IT on the clearing processes of the Customs Service, there are challenges that every technology presents to users. The challenges include; difficulties in removing all forms of human interferences, intentionally delaying the processes, lack of proper infrastructure, lack of staff training, reluctance of regulatory agencies to adopt IT, and the unwillingness of some officials and agencies to adopt new ways of doing things. It is recommended that regular training and capacity building should be enforced for personnel; collaborations with other regulatory agencies and the properly resourcing the organization in terms of ICT infrastructure (Domi, 2019).

Al-Hassan (2013) focused on enhancing local government revenue mobilization through the use of information communication technology: a case-study of Accra metropolitan Assembly. The method used for the study is the case study approach and the data required was on revenue performance and structure of the Accra metropolis, revenue mobilization challenges and the use of ICT in the administration of revenue in the Accra metropolis. Data was therefore collected from both the primary and secondary sources. With regard to the sampling, institution/sub metros that employ the ICT system in their operations particularly in the area of revenue mobilization were considered. Institutional questionnaire was employed in the collection of data. The outcome of the study revealed the nature and extent of tax coverage in the Accra metropolis. Among the sources of taxation or revenue identified include rates, land, fees and fines, investments, miscellaneous among others.

The study showed the attempts made by the Accra Metropolitan Assembly and some of the sub metros in the usage of the ICT system in their operations, the effects of ICT on revenue generation, and the impact of increased revenue generation on the metropolis and the role of ICT in improving revenue generation. Other key findings included the role of Accra Metropolitan Assembly in enhancing local revenue generation through the use of ICT. The research therefore recommends ways of enhancing the nature and extent of tax coverage and improving the utilization of the ICT system in the Accra Metropolitan Assembly with the Accra Metropolitan Assembly taken the lead role with support from the Government of Ghana and the various sub metros within the metropolis (Al-Hassan (2013).

Again, there should be effective coordination among. ICT stakeholders in the Accra Metropolitan Area with the Accra Metropolitan Assembly being on the forefront and creating the environment where all actors will make input and appreciate the principles underpinning the use of the ICT system especially in local revenue generation. Another answer was the introduction and development of the ICT system at all the sub metros. The central government, through the Accra Metropolitan Assembly, should provide the avenue for the sub metro to be the focal points of local government revenue generation (Al-Hassan (2013).

Olaoye and Kehinde (2017) examined the impact of information technology on tax administration in south west, Nigeria. It specifically investigated the effect of information technology on tax productivity and the relationship between information technology on tax implementation and tax planning. Descriptive research design was employed, of which questionnaire was used to gather data and analysed with multiple regression and Pearson product moment correlation.

Asamoah-Mensah (2015) examined the impact of the amalgamation of the tax agencies on revenue mobilisation in Ghana using GRA within the Kumasi Metropolis as a case study. Convenience sampling was used in selecting the respondents for the study. Data has been gathered through the use of questionnaires and an interview guide. The Statistical Package for Social Sciences (SPSS) was used in analysing the data. The findings revealed that the amalgamation of the revenue agencies has helped in ensuring that revenue mobilization procedures are effective. The findings from the study indicated that the amalgamation of the revenue agencies has helped in ensuring that budgeted tax revenue is always achieved. The findings from the study further indicated that tax payers are able to pay their taxes easily after the amalgamation.

The results from the study also revealed that there has been an increment in the number of tax payers after the amalgamation of the revenue agencies compared to previous years before the amalgamation. The analysis indicated that one of the impacts of the amalgamation of the revenue agencies on tax compliance is that it has helped ensure proper bookkeeping by tax payers. The analysis shows some of the challenges facing GRA includes lacks regional office heads to coordinates the activities of the STOs and MTOs in the various regions, lack of certainty on the part of tax payers regarding the specific offices where their files have been transferred, and lack of the necessary logistics and personnel in order to operate effectively among others (Asamoah-Mensah, 2015).

The analysis also revealed that in order to ensure effective and efficient operation of GRA, certain measures should be put in place including continuous organization of workshops by GRA for its staffs in order to equip them with the necessary skills and expertise needed to carry out their activities. There is also the need for rigorous and intensive tax education for tax payers in order to let them know the benefits they will enjoy by paying their taxes regularly. In addition, proper training should be organised for GRA staffs in order to improve upon their knowledge (Asamoah-Mensah, 2015).

From the above discussions, the evidence suggests a positive impact of automation system usage and the cost of tax administration, automation and effectiveness of revenue collection. Additionally, automation was significantly related with tax clearance time. Again, there was a strong positive relationship between Internal Control Systems and revenue collection. Hence, the relationship that emerged from the discussion between digitization of tax administration on revenue mobilisation was a positive one.

Challenges of the Improved Tax Administration System

Corruption in revenue authorities not only reduces short-term revenues but also creates a long-lasting erosion of compliance. Methods to address corruption in Revenue assessments (including simplified, transparent, and ideally automated procedures, and the potentially beneficial signalling effect of high-profile prosecutions), are some experiences. But escaping from the bad equilibrium of high corruption and low revenue is hard. As in most Revenue assessment matters, strong political will to drive anti-corruption policies is crucial, ideally as part of a whole-of-government approach (Keen et al 2015).

Compliance with the legal obligations affects the revenue yield, efficiency and fairness of any tax system. Noncompliance undermines revenue, distorts competition (putting the noncompliant at an advantage), and compromises equity (both horizontally between taxpayers otherwise alike, but differing in their degrees of compliance and, potentially, vertically to the extent that the better off escape their obligations more extensively). Governments anxious for revenue may concentrate their efforts on more compliant taxpayers, widening the distortions and a perception of unequal treatment can jeopardize wider willingness to comply (Noronaa, 2015).

The costs of automation to both government and the taxpayer are hard to measure, but can be significant. Meeting their obligations imposes some cost on taxpayers: the opportunity cost of an owner manager's time, for instance, or those of taking professional advice. Measuring these costs is not easy much harder than measuring aggregate spending on Revenue assessment. Filing a VAT return will cost much the same, whatever the net amount remitted. These are commonly found largely on small businesses, potentially leading to a failure to register (becoming a 'ghost') or a reduction in activities to a level at which tax is not payable (Keen et al., 2015).

Agyemang (2013) observed that tax administrator lacks adequate logistics in their supervisory and monitory role. A number of findings were made, of which are; staff having little or no knowledge in accounting and taxation, no motivation and training of staff, tax payers unable to keep proper records, educational level of the majority of the tax payers being very low.

Boakye (2011) observed that tax leakage in developing countries is often worsened by poor functioning tax authorities due to variety of reasons; under–

resourced or under–trained administrators, poor tax collection systems, failure of legal enforcement mechanism for tax collection and small penalties for non-payment. These factors create opportunities for domestic and foreign entities to abuse the system since tax official frequently lack the required technical skills to unravel complex international fiscal structures that are used to escape taxation, and because penalties are insufficient to stop tax evasion. It was found out that tax collectors were fairly motivated to perform their duties and logistics were fairly adequate for their purposes. Again, it came to light that with the amalgamation of the three (3) institutions there was the need for training and workshops to sharpen the skills and knowledge of the staff to hasten the speed of the interconnectivity of both the municipal and nationwide network for effective monitoring of tax payers.

Besley and Persson (2014) attribute low tax collection in developing countries to their inadequate administrative capacity, the presence of a large informal sector, weak checks and balances, and the lack of social norms for tax compliance. They discuss how collecting income taxes are harder than collecting other taxes, such as trade taxes, because income tax collection requires a much more elaborate system of monitoring, enforcement, and compliance. Ahmed and Rider (2013) demonstrate that the evasion of income tax is estimated to be around 60% of potential revenues in Pakistan, which is much higher than the estimated evasion of indirect taxes.

Empirical Review

Owusu (2019) sought to ascertain the role of Tax Audit in Mobilizing Tax Revenue domestically. The research examined tax compliance and revenue mobilisation and possible challenges confronting Tax Auditors. Data was gathered from the Large Taxpayers Office on Tax Audit Assessment and Tax Revenue. Also, questionnaire was designed where 30 Tax Auditors were sampled to ascertain the challenges that confront tax audit. Probit regression, Descriptive statistics and Correlation coefficient was employed in this study. The study found a positive significant relationship between compliance level and external auditor type. This can be explained that, there is a high probability of firms to comply with tax regulations if their external auditors are among the biggest four audit firms in Ghana. Big firms are capable of compelling tax payers to comply probably because of goodwill. Also, the study found that Tax Audit in itself enhances compliance as well as revenues mobilization. Various challenges the tax auditors encounter includes; the unwillingness of tax payers to corporate with auditor, taxpayer being economical with respect to information and tax payers deliberating delaying the process.

Okpeyo et al. (2019) examined the factors that influence tax compliance by small and medium tax payers, the difference in the level of compliance between small and medium tax payers and strategies to improve tax compliance in Ghana. The study through stratified sampling technique sampled 100 small and medium tax payers in Accra and other GRA officials for the study. Data was analyzed qualitatively and quantitatively. The results of the study showed that compliance cost, tax rates, tax audits and morals of taxpayers significantly influenced tax compliance. The GRA also indicated that unions and associations of businesses could help increase voluntary tax compliance of small and medium tax payers in Ghana.

The study findings provide evidence that there is a significance difference in the tax compliance level between small and medium scale enterprises. The difference can be largely attributed to the inability of small enterprises to file their tax returns on due dates and also to keep proper books of records of their business transactions. The study recommends organizing workshops for businesses to train them on the need to pay their taxes and keep proper records of their transactions, increasing the rate of audits of businesses, imposing fines and penalties for defaulting businesses (Okpeyo et al., 2019).

Atuahene et al. (2018) evaluated the efficiency and effectiveness of the tax administration system of the Ghana Revenue Authority (GRA). The study employed descriptive method of research. The set of hypothesis indicates that the relationship between the variables should be tested using different statistical techniques. The sample size chosen for the study was one hundred (105) respondents which constitute eighty-three (83) taxpayers and twenty-two (22) tax officials. However out of the 105 questionnaires administered 5 of the 3 from the taxpayers and 2 from the tax officials had error so they could not be analyzed. 100 questionnaires were however perfect for the analysis. The collection agencies known as the Ghana Revenue Authority (GRA) were considered.

This was because the researchers wanted the sample to suit the purpose of the study. Hence in the Municipality, GRA was selected. Our belief is that, the above sample used in this category was enough to provide the data needed for the study. The types of data used for the purpose of this research are the primary and secondary data. The analysis of data entails a lot but the researchers used frequency tables with score applied to the variables involved (Atuahene et al., 2018).

This was done by using quantitative data to come out with qualitative meanings and explanations as well as possible implications. Percentage analysis was also used to draw the relationship of the views of the respondents and the total respondents; these are displayed in table form for easy assimilation. Simple statistical techniques were used in analyzing and summarizing the gathered data. Descriptive analysis was used with the aim of making the data more comprehensive. The data was also analyzed quantitatively in consonants with the overall objectives of the study. The research brought to light that there is lack of the characteristics of a good tax system that is equity, certainty, convenience and economy. The legal structure is complex and includes axes - related laws, decrees, and rulings (Atuahene et al., 2018).

Essilfie-Afful (2018) examined tax evasion and its effects on the Ghanaian economy with evidence from Cape Coast Metropolis. The research was a case study which blended both qualitative and quantitative methods in data collection and analysis in getting to the bottom of issues discussed. The population of the study were all the tax officials of the GRA and businesses in the Metropolis. Convenience sampling method were used to select 120 businesses and five GRA staff. With the help of SPSS version 16, all the results were analyzed using charts and frequency distribution tables. The study revealed that most tax payers lack the fundamental knowledge on the tax payment process. It was again found that even though the level of evasion was high, there were no evidence of sanctions applied to anyone found culpable.

It was revealed also that both categories respondents were very much aware that tax evasion reduces government revenue thereby affecting governments' ability to provide the citizenry with the needed infrastructural development. The researcher then recommended that the GRA in the Metropolis should embark on tax education on payment processes, and the importance of tax to the national economy. It again recommended that appropriate reviews of tax processes should be integrated into the entire tax system to encourage taxpayers' compliance. The GRA should in their attempt to profile businesses and individual tax payers, collaborate with Electricity Company of Ghana since ECG has a complete data of all commercial structures, to help them in their search for people liable to pay taxes (Essilfie-Afful, 2018).

Olaoye and Kehinde (2017) study revealed that information technology (Online Tax Filing-OTF, Online Tax Registration-OTR and Online Tax Remittance-OTRE) affect tax productivity with -1.9%, 7.3% and 31.5% (p=0.85, 0.526 and 0.00), there is relationship of -5.9% (p=0.520),9.7% (p=0.290) and 0.344 (p=0.000) between OTF, OTR and OTRE on Tax Implementation-TAXIMP and -3.8% (p=0.684), 14% (p=0.140) and -0.190 (p=0.038<0.05) relationship between OTF, OTR and OTRE on Tax Planning-TAXPLNN.

Kuug (2016) studied factors influencing tax compliance of small and medium enterprises in Ghana. A questionnaire was administered to gather data from respondents made up of 500 small taxpaying units and medium taxpaying units selected from 3 regions in the country. In addition to this, an interview guide was used to gather information from the management and staff of GRA. The results indicated that capital structure, compliance cost, tax rates, tax audits and morals of taxpayers significantly influenced tax compliance. The GRA also indicated that unions and associations of businesses could help increase voluntary tax compliance of SMEs. The study recommends among others that an in-depth interview is used in future studies to enable the researcher to interview owners and managers of SMEs on the factors that influence the tax compliance behaviour of these entities. Also, policy developers should endeavor to make tax systems less complex and less costly to encourage SMEs to comply with tax requirements.

Danquah (2015) identify the problems that the Ghana Revenue Authority (GRA) faced in the administration of tax. Specifically, the study aimed at ascertaining whether the set targets for tax collection are attained, finding out why the people in Suame Magazine evade taxes and finally identifying the challenges faced in the administration of tax in Suame Magazine, Kumasi. The researcher solicited for the views of taxpayers and management staff concerning tax administration. A case study was chosen for this study. The researcher administered the questionnaires and conducted interviews personally. The sample for the study were 53 employees comprising of 50 taxpayers and 3 management staff drawn from GRA, Suame branch.

It was also revealed by the study that no trust in government, high rate charged, unfair treatment of organizations by tax administrators, low level of knowledge on tax by tax payer, weakness in the laws against tax evaders, poor attitudes of tax collector towards tax payer, unskilled manpower / personnel to collect the tax, and poor monitoring were reasons why some taxpayers evade tax. The study also identified that low registration rate of taxpayers, lack of efficient tax administration, inadequate resources to sustain and facilitate the operations of tax authorities, inadequate modern technology, and poor remuneration of tax administrators by management of GRA were identified as challenges to effective tax administration. The study made recommendations to help improve tax administration (Danquah, 2015).

Kyereda (2015) examined taxation of the informal sector in Komenda-Edina-Eguafo-Abrem Municipality using a sample of 397 informal sector businesses and 3 tax officials. Findings of the study indicate that, high income tax, business non-profitability, distance difficulty in paying tax, unnecessary or misuse of tax income by government, tax non-compliance by other colleagues, low income tax education, advice from experts, non-registration of businesses and low educational level account for high income tax non-compliance. Personnel capacity constraints, large size of the tax district, large size of the informal sector, lack of incentive for the tax collectors and the inappropriate financial records on the part of the taxpayers are the factors that militate against effective revenue mobilization by Domestic Tax Revenue Division (DTRD) from the informal sector. Well informed frequent tax education, sanctioning tax evaders, motivating taxpayers with incentives, involvement of taxpayers in tax decisions, drawing the tax collectors closer to the taxpayers and having master list of all informal sector businesses would help to improve tax compliance in the municipality.

Mantey (2015) examined tax compliance of small-scale business in the Suame Magazine Industrial Area (SMID) in the Kumasi Metropolis of Ghana. The study specifically sought to determine the attitudes and knowledge of Small Business Income Earners (SBIE) towards tax compliance determine the level of compliance and identify the challenges of complying with tax regulations SBIE in the area. The study employed a qualitative research design because of its appropriateness in understanding and explaining attitudes of people. Small

Scale Business Income Earners in the form of hairdressers, provision shop keepers, food vendors, petty traders and many others within the SMIA formed the study population. A sample size of 137 was chosen out of a sample frame of 208 registered SBIE in the SMIA. The study has revealed that, SBIE usually register with authorities but do not declare their incomes. SBIE barely understand the tax system in the country.

They do not know much about the income tax laws and regulations and computing of tax liabilities is always difficult for them. The study has also revealed that, SBIE in the area have negative attitude towards the Ghanaian tax system. In order to improve tax compliance among SBIE, it is recommended that, the Ghana Revenue authority should reduce the inconveniences and obstacles in the tax registration process, and that, the general public should also be educated on tax regulations in the country, and that organizational tax educational programmes should also be organized for SME mangers and that there is also the need for adequate training of tax collectors to improve their efficiency and effectiveness in tax collection (Mantey, 2015).

Agyemang et al. (2013) sought to find the Challenges of Tax Administration in the Kumasi Metropolis domestic tax revenue division (DTRD) Asokwa Branch was used as a case study. The objective of the research was to find out the problems of tax administration, tax evasion and tools for easy tax administration in Kumasi metropolis. The researcher used questioner and interviews to gather data for the study. Findings were that a tax administrator lacks adequate logistics in their supervisory and monitory role. A number of findings were made, of which are; staff having little or no knowledge in accounting and taxation, no motivation and training of staff, tax payers unable to keep proper records, educational level of the majority of the tax payers being very low. The research work was constrained with the following limitations; tax officers were reluctant to disclose much detailed information to the researcher. It is recommended among others that the challenges revealed are real, and that if the recommendations made are adhered to, challenges of tax administration will be minimized.

Yayra (2011) studied the effectiveness and efficiency of income tax collection in Berekum district tax office. The study examined the reasons for the low level of tax collection as well as the challenges facing the Berekum District Domestic Tax Division in its quest to meet its revenue collection targets. The study also investigated the level of voluntary tax compliance in the Berekum Districts tax office. Questionnaires were administered to two hundred (200) taxpaying public and seven (7) tax experts. The study found that tax compliance is low in the Berekum tax District. Low tax education, inadequate resources and low staff motivation were identified as key reasons for the low compliance. Also, tax efficiency and effectiveness has not been attained.

Conceptual Framework

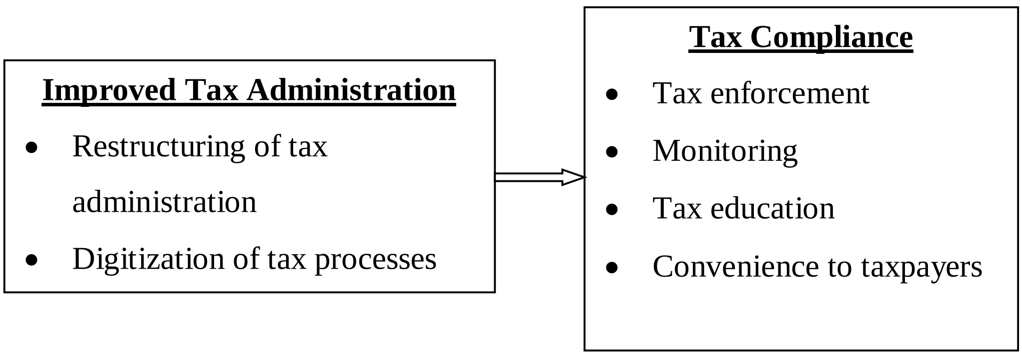

Figure 1: Improved tax administration and tax compliance

Source: Adopted from Ziema (2020)

From Figure 1, improved tax administration comprised restructuring of tax administration and digitization of tax processes. It is assumed that with the restructuring of tax administration, tax enforcement, monitoring and tax education will be effective. Hence, tax payers will see the need to pay taxes. This will make paying of taxes convenient to taxpayers. Again, digitization of tax processes will also mean that manual processes are a thing of the past. Thus, speedy processes are ensured. These would ensure tax compliance.

Chapter Summary

This chapter per the objectives of the study considered factors that contribute significantly to tax non-compliance. In this area, the study concentrated on high income tax, business non-profitability, distance difficulty in paying tax, unnecessary or misuse of tax income by government, tax non-compliance by other colleagues, low income tax education, advice from experts, non-registration of businesses and low educational level account for high income tax non-compliance, no trust in government, high rate charged, unfair treatment of organisations by tax administrators, low level of knowledge on tax by tax payer, weakness in the laws against tax evaders, poor attitudes of tax collector towards tax payer, unskilled manpower/ personnel to collect the tax, and poor monitoring. The literature on effect of tax administration on tax compliance showed tax audit, tax knowledge and investigation have a significant positive effect on tax compliance. Again, the literature review on the impact of digitization of tax administration on revenue mobilisation showed that a positive impact of automation system usage and the cost of tax administration, automation and effectiveness of revenue collection. Once more, there is a relationship between Information Systems and both efficiency and effectiveness in revenue collection. There is a strong positive relationship between Internal Control Systems and revenue collection. IT adoption has positively affected clearing activities.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter describes the methods, techniques and/or procedures employed to achieve the objectives of the study. According to Bryman and Bell (2004), the methodology provides the framework or process for the conduct of the research or the study. The methodology is very important in any research as it provides the structured procedures that must be followed to attain reasoning and communication. Hence, it entails: research design, study area, population, sampling procedure, data collection instruments, data collection procedures, data processing and analysis, data analysis methods and procedure and chapter summary.

Research Design

The research design is the conceived plan and structure of an investigation that enables the researcher find or obtain answers to research questions (Kerlinger, 1986). The research design provides the overall operational framework for the study. It specifies the type of data or information to be used and the sources of the data or information. Jones et al. (2004) notes that, the research design helps the research obtain answers to the initial research questions as unambiguously as possible. In order to describe and do an in-depth analysis and explanation of the contribution of improved tax administration on tax compliance in Sunyani Municipality, the study adopted a mixed research design. This research design uses both quantitative and qualitative approaches (Bryman, 2004).

Study Area

Bono Region is one of the 16 administrative regions of Ghana. It was created from Brong-Ahafo Region when Bono East Region and Ahafo Region were also created. Its capital is Sunyani. The administrative areas of the Bono Region comprise the Sunyani municipality, the Sunyani West District, the Berekum municipality and the Dormaa municipality. The rest are the Dormaa East District, the Dormaa West District, the Jaman South municipality, the Jaman West District and the Jaman North District (Ntreh, 2019). On January 13, 2019, President Nana Akufo-Addo presented the Constitutional Instruments (CIs) for the creation of the Bono East and the Ahafo regions to their representatives at separate ceremonies at the Jubilee House. That meant that the Brong Ahafo Region, which was the second biggest region in the country, covering an area of 39,557 square kilometers, no longer exists.

The Sunyani municipality was established on 10th March, 1989 by a legislative instrument (LI) 1473. This was the period Ghana adopted the District Assembly concept. The overall goal is to accelerate growth and development in the Municipality. The Sunyani Municipal Assembly is responsible for the administration and development of the Municipality. The Assembly has three councils namely; Sunyani urban council, Abesim town council and Atronie area council. The Assembly's mandate is enshrined in the 1992 Constitution of Ghana and other key legislations such as the Local Government Act 1993 (Act 462) (GSS, 2014). The main revenue collection agency in the municipality is the GRA.

In 1986, the Internal Revenue Service Law of 1986 (PNDCL, 143) was passed. This brought about structural change for this reason the Department which was under the civil service department was transformed into the public service organisation. The Internal Revenue Service was then mandated to take charge and they had their own Board of Directors. The Internal Revenue Act, 2000 (Act 592) was amended in 2002 (Ali-Nakyea, 2008). The establishment of Ghana Revenue Authority (GRA) Act 2009 (Act 791) followed. Under this law, Domestic Tax Revenue Division (DTRD) was established to take care of the duties of Internal Revenue Service (IRS) and Value Added Tax (VAT) service. Customs, Excise and Preventive Service (CEPS) maintained its status and Management Support Unit was added to GRA. The Commissioner-General is the head of GRA and oversees the activities of the commissioners of the DTRD, CEPS and the Management Support Unit (Ohemeng & Owusu, 2013).

GRA Domestic Tax Revenue Division of Sunyani comprise the Medium Taxpayer's Office (MTO) and the Small Taxpayer's Office. The two offices have separate office managers who oversee the running of the offices by coordinating with the various units or departments under them. The MTO's operational area covers the entire Bono, Ahafo, and Bono East regions whilst that of the STO is limited to Sunyani municipality, Tano North, Tano South, and Sunyani West Districts. The various taxes collected within these operational areas include Value Added Tax (VAT), Pay As You Earn (PAYE), Withholding taxes, Vehicle income tax, Company Income tax, Personal Income tax etc.

Population

Research population refers to or represents all the cases of people, organisations or institutions of interest to the researcher (Neumann, 2007). That is, the population possess certain characteristics or information relevant to the research or researcher. The study targeted twenty (20) tax officials of GRA.

However, 16 staff members are directly involved in revenue collection, management (2) and evaluation of development (2) at the GRA. Hence, revenue collection staff members would be in position to respond to the study items adequately. Once more, information from taxpayers Files showed that there are 245 VAT registered taxpayers in the Sunyani Tax District (Odame, 2020).

Sampling Procedure

Sampling is the process of selecting a sample or subsets of the target pollution for purposes of making observations or making statistical inferences about the population (Neuman, 2007). Sampling is an important activity, especially, where it is relatively difficult or not feasible to reach all the units or subjects within the population of interest. It involves selecting units (for example, individuals, organisations) from the population of interest so that by studying the sample the researcher can fairly generalise the results back to the population from which the units were selected or chosen from.

According to Sekaran and Bougie (2009) sampling technique is the identification of the specific process by which the entities of the sample have been selected. There are two main types of sampling techniques – probability and non-probability sampling. With the probability sampling technique, all units within the population of interest have equal chance of selection. However, units within the population of interest do not have equal chance of selection where non-probability sampling technique(s) is employed.

Specifically, purposive and quota sampling methods was used to ensure that the desired sample is selected. Purposive sampling method was appropriate because, since the population comprised of individuals from different sections of the GRA, it is ideal to ask individuals before giving questionnaires out for completion. In this case, the following criteria was used to select participants: (i) the potential participant must be willing to respond to the items (ii) must be involved in revenue collection at the Assembly. This is to ensure that, the individual gives an accurate and fair assessment of the items on the questionnaire. Lastly, to ensure equitable distribution of the categories of taxpayers (traders, 65), service institutions (180) identified for the study, the quota sampling technique was used to select 232 respondents from the GRA tax officials and VAT registered mentioned.

The sample size is the number of units or units of analysis constituting a sample (Kumekpor, 2002). The general principle is that the sample size should be neither too large nor too small (Festival, 2011).

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

Where n = sample size, N = population universe and $\propto$ is the confidence level. The formula adopted a confidence level of 95% and the margin of error is therefore 5% which is acceptable in social science research.

Sample size determination for GRA tax office (Revenue Collectors)

$$n = \frac{16}{1+20(0.05^2)};\ n = \frac{16}{1.05};\ n = 15.23 \approx 15$$

Sample size determination for Traders (65)

$$n = \frac{65}{1+245(0.05^2)};\ n = \frac{65}{1.6125};\ n = 40.31 \approx 40$$

Sample size determination for Service Institutions

$$n = \frac{180}{1+245(0.05^2)};\ n = \frac{180}{1.6125};\ n = 111.62 \approx 112$$

Data Collection Instruments

The main instrument of data collection used is the questionnaire. The questionnaire was divided into four sections. Section A, requested data on the demographics of participants such as sex, age, and level of education. Section B, contain items on factors that contribute to tax non-compliance. The scales for responding to the items are clearly stated to guide participants in answering the questions. Section C, contain items on the effect of tax administration on measures of tax compliance and Section D, gather information on the impact of digitization of tax administration on measures of revenue mobilisation.

Reliability refers to replication and consistency. If a researcher is able to replicate an earlier research design and achieve the same findings, then that research would be seen as being reliable. In essence, validity refers to the appropriateness of the measures used, accuracy of the analysis of the results and generalisability of the findings (Saunders, Lewis & Thornhill, 2016). In order to understand whether the questions in this questionnaire are all reliably measure the same latent variables (contribution of improved tax administration on tax compliance), a Cronbach's alpha was run. Cronbach's alpha was 0.802**,** which indicates a high level of internal consistency for the scale with this specific sample.

To achieve validity of the study, pre-testing and piloting will be done at Berekum Small Taxpayers' office (STO). According to Neumann (2007), pre-testing data collection instrument enables the researcher to fine-tune or make necessary corrections on the data collection instrument. This will be done on the 16th July, 2020. Jones et al (2004) also adds that, pre-testing of data collection instrument increases response rate and enhances the quality of responses.

The strength of the questionnaire per this study is that it is less expensive and it offers greater anonymity. The weakness of this instrument is that it is possible to consult others before responding.

Data Collection Procedures

The researcher sought the consent of participants before giving questionnaires to them for completion. This was done to ensure ethical acceptability of the research findings. Participants will be assured of confidentiality of information that they provide, and that they would not be exposed to any form of discomfort or risk by participating in the study. The respondents will be informed that, participation in the study is voluntary. Data administration was done by the researcher on 16th July, 2020 at the GRA office. Data collection will be carried out by the researcher on 17th July, 2020 at 8:00 am to 2:30 pm for the VAT registered tax payers. All social distancing protocols were observed by both the researcher and the respondents in this COVID-19 season.

Data Processing and Analysis

This section takes account of the data processing which includes data editing, coding, inputting, data analysis methods and procedure.

The purpose of data editing, simply put, is to prepare the questionnaire for coding and tabulating. The researcher first of all collected the raw data in order to be sure that it is accurate. This was done on the field. The completed questionnaire was checked for overall accuracy, completeness and general usability.

During data entry the numeric data collected using questionnaires were entered into a computer, principally as numeric data “codes.” The unit of analysis was ordinal scale. Statistical Package for Social Sciences (SPSS) was used for the data analysis. Data collected was checked and cleaned before the data entry.

Data analysis is making sense out of data gathered from sources. According to Patton (2002), data analysis clarifies what would have been most important to study if we had known. According to LeCompte (2010), data analysis is the transformation of data into research results. Researchers have proposed a number of qualitative data analysis approaches or techniques. For instance, LeCompte (2010) identified five major processes in qualitative data analyses. The five processes include tidying up; finding items; creating stable sets of items; creating patterns and assembling structures. Miles and Huberman (1984) consider data analysis to consist of three concurrent flow of activities.

The data gathered for the study is quantitative and qualitatively analysed in accordance with the concurrent approaches to qualitative data analysis prescribed by Miles and Huberman. The Miles and Huberman approach to qualitative data analysis has been adopted and applied in wide range of qualitative studies.

The data gathered from the questionnaire are, first organised into themes according to the objectives of the study. The data will then be analysed according to the dominant themes that emerged from the empirical materials or evidence. The dominant themes that will emerge from the data process are the nature and background of the respondents, factors that contribute significantly to tax non-compliance; the effect of tax administration on tax compliance; and the impact of digitization of tax administration on revenue mobilisation. The analyses and discussion of the results was done along these identified themes.

The model for tax non-compliance was estimated by a linear model as follows: $TNi = B' Xi + ei$ ------------------------- 1 where TN_i is the tax noncompliance and the outcome dummy variable denoted by "1" if an item *i* is a factor of noncompliance and "0" if otherwise. The researcher estimates the probability of a factor as noncompliance resorting to the Linear Probability Model (LPM): Pr (Y = 1|X = *x*) = *x'*β -----------------2

$$E[Y|X] = Pr(Y = 1|X = x) = x'\beta \text{ -----------3}$$

In equation 1, the matrix *X* contains a set of variables picking up the respondent's choice of factors constituting noncompliance. These are the explanatory variables making up of unfair and unaffordable tax system, high tax rates, low integrity, low educational level, tax non-compliance by other colleagues, business non-profitability, distance difficulty in paying tax.

Below is a model that was used to show the relationship between tax administration and tax compliance.

General model: $TCi = (TE, M, TEDU, CON)$ -----------------------------4

Specific model = $TC_i = \beta_0 + \beta_1 TE + \beta_2 M_i + \beta_3 TEDU_i + \beta_4 CON_i + \varepsilon_i$ -------5

(Agyapong, 2018)

TC = tax compliance; β_0 = constant term; TE = tax enforcement; M = monitoring; TEDU = tax education; CON = convenience to tax payers; ε_t = error term.

Below is an Ordinary Least Squares Model (OLS) that was used to find the impact of digitization on tax administration on revenue mobilisation for the past five years (2014 - 2019). Taking digitization of tax administration as independent variable (X) and the revenue mobilisation as dependent variable (Y) the following equations can be derived:

Y = a + bX+μ-----------------------------6

Ethical Consideration

Ethics in business research refers to a code of conduct or expected societal norm of behaviour while conducting research (Sekaran et al., 2010). Before the conduct of the study, approval was sought from Catholic University College of Ghana, Fiapre. Permission was also sought from the management of the various banks to use their employees and customers as subjects for the study. Hence, the managers involved in the study contacted with official letter of introduction from the Catholic University, Fiapre for their permission. Participants consent were sought before administering the questionnaires, observations and analysis of documents. The researcher stated clearly the purpose of the study and indicate that the study is purely academic. The researcher also assured participants of anonymity and that the data collected was treated with confidentiality. Participants were assured that their participation in the study is voluntary and that they could withdraw from the study without any consequence.

Chapter Summary

This chapter considers the research methods and it includes research design, study area, population, sampling procedure, data collection instruments, data collection procedures, data processing and analysis and chapter summary. The limitation envisaged were: financial constraints, inadequate time, challenges in the data gathering process, some respondents' attitude and combining work with academics.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents the results of the data analysed with description. It also discusses the results of the study. The data collected was analyzed using Statistical Package for Social Sciences (SPSS) per the research objectives. Results were presented in tabular forms. Again, the chapter discussed results of the study by comparing and contrasting it with reviewed literature.

Factors that Contribute to Tax Non-Compliance

The Table below reports the factors that contribute to tax non-compliance. These factors include: high tax rates, low integrity, educational level, colleagues, non-profitability, and distance.

Probit regression, reporting marginal effects

Number of obs = 152

LR chi2(10) = 146.81

Prob > chi2 = 0.0000

Pseudo R2 = 0.3563

Log likelihood = -132.61079

Table 1: Probit Regression, Reporting Marginal Effects

Factors	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I]	
High tax Rate	.1469881	.0594699	2.47	0.013	.61745	.030429	.263547
Colleagues	-.0653868	.0819155	-0.80	0.426	.489933	-.225938	.095165
Non-profitability	-.1674726	.0818036	-2.01	0.045	.241611	-.327805	-.00714
Low Integrity	.230061	.0652425	3.53	0.000	.798658	.102188	.357934
Low Edu. level	.4292673	.0533483	8.04	0.000	2.14765	.324707	.533828
Distance	.2743211	.1187764	2.10	0.036	.848993	.041524.	.507119

Source: Field survey (2020)

Table 1 above reports the estimated results of the probit regression with marginal effects. The results show that high tax rate is a factor contributing to tax non-compliance (P>|z| = 0.013). It was observed that non-profitability is likely to contribute to tax non-compliance (P>|z| = 0.045). It was also observed that tax officials who have low integrity are more likely to influence people from paying tax from the results of the estimation (P>|z| = 0.000). It is observed from the Table that people who have low level of education are more likely to resist the tax payment system (P>|z| = 0.000). Distance is very crucial to the accessibility of any tax payment method. It is therefore not surprising that distance is a tax non-compliance factor (P>|z| = 0.000). However, it was noticed that discouragement to pay tax as a result of tax non-compliance by other colleagues was not a factor in this study (P>|z| = 0.426).

Challenges of the Improved Tax Administration System

This section focuses on hinderance to the improved tax administration. These hinderances are outlined as: high taxes, affordability, wasteful use of tax money by government, and stealing of tax money by government officials.

Table 2: Hindrances to the Improved Tax Administration

Item	**Frequency**	**Percentage**
Taxes are too high	70	46.05
People cannot afford to pay	20	13.16
Wasteful use of tax money by government	30	19.74
Stealing of tax money by government officials	32	21.05

Source: Field survey (2020)

From Table 2 above, 70 respondents representing 46.05% of the respondents admitted that taxes are too high for them to pay. Once more, 20 respondents representing 13.16% believe that people cannot afford to pay the taxes. In the view of 30 respondents representing 19.74%, wasteful use of tax money by government is a hindrance to the improved tax administration. Another 32 respondents representing 21.05% posited that stealing of tax money by government officials is a hindrance to the improved tax administration.

Table 3: Attribution to the Improved Tax Administration Challenge

Item	Frequency	Percentage
Inadequate administrative capacity	10	6.58
The presence of a large informal sector	50	32.90
Weak checks and balances	90	59.21
Lack of social norms for tax compliance	2	1.31

Source: Field survey (2020)

From Table 3 above, 10 respondents representing 6.58% admitted that inadequate administrative capacity is a contributory factor to improved tax administration challenge. According to 50 respondents representing 32.90%, the presence of a large informal sector is a contributory factor to the improved tax administration challenge. In view of 90 respondents which represents 59.21%, weak checks and balances is a contributory factor to the improved tax administration challenge. Furthermore, 2 respondents representing 1.31% believe that lack of social norms for tax compliance is a contributory factor to the improved tax administration challenge.

Results for GRA Staff Members

Effect of the Improved Tax Administration on Tax Compliance

To examine the tax compliance factors a regression analysis was adopted. The results from the regression analysis are presented below.

Table 4: Regression of Tax Compliance

	Unstandardized Coefficient		**Standardized Coefficient**		
	B	Std. Error	Beta	t-test	Probability
Constant	1.086	0.257	1.344	4.292	0.000
TE	0.066	0.07	0.058	3.461	0.001
M	-0.141	-0.08	-0.158	-2.08	0.037
TEDU	0.161	0.061	0.195	2.72	0.007
CON	-1.28	0.035	-2	-3.767	0.000

$\alpha = 0.05$; $R^2 = 0.685$; Adjusted $R^2 = 0.608$; F-Stat. = 163.5; Prob. of F-Stat. = 0.002

Source: Field survey (2020)

From Table 4 above, the dependent variable is represented by a score for tax compliance. The independent variables comprise of tax enforcement (TE), monitoring (M), tax education (TEDU), and convenience to tax payers (CON). It is observed from the Table 4 that tax enforcement (TE) is significantly predicts tax compliance (P = 0.001). Once more, monitoring (M) is observed to significantly influence compliance (P = 0.037). Furthermore, tax education (TEDU) is also found to be a predictor of tax compliance (P = 0.007). Once again, convenience to tax payers (CON) is found to influence tax compliance (P = 0.000).

Table 5: Effects of Improved Tax Administration on Tax Compliance

	Unstandardized Coefficient		Standardized Coefficient		
	B	Std. Error	Beta	t-test	Probability
Constant	64.37	3.751	-	23.52	0.008
TA	0.251	0.0068	0.235	6.78	0.039

α = 0.05; R^2 = 0.685; Adjusted R^2 = 0.608; F-Stat. = 163.5; Prob. of F-Stat. = 0.002; TA = Improved Tax Administration.

Source: Field survey (2020)

Table 5 above presents the regression result on the effects of improved tax administration on tax compliance. Table 5 shows that the coefficient of TA is 0.251. This means that TA has 25.1% effect on TC, holding the other variables constant. Additionally, the level of effect is significant since the probability (P = 0.008) is less than 5%. It can further be ascertained from Table 5 that the R^2 and Adjusted R^2 of the model are 0.685 and 0.608 respectively. The R^2 of 0.685 means that about 68.5% of the variations in the dependent variable is explained by the independent variables. Further, the probability of the F-statistic is 0.002, which is less than the α of *0.05*, suggesting that the model is a good fit.

Impact of Digitization of Tax Administration on Revenue Mobilisation

This section presents the GRA planned and actual performances of total revenue for the study period. The actual revenue of GRA has dramatically improved from just below half a million in the year 2014 to close to three million in the year 2019.

Table 6: GRA Revenue Plan and Performance

Year	Revenue Plan	Revenue Performance (%)	Actual Revenue
2014	469187	101	475002
2015	666184	118	783582
2016	1016179	93	947916
2017	1407529	76	1064099
2018	1411854	74	1044270
2019	1346890	78	1050976

Source: Field survey (2020)

Taking digitization of tax administration as independent variable (X) and the revenue mobilisation as dependent variable (Y), from Table 6 the relationship can be statistically be explained as follows: Y=521031+1.61X. The X axis represents digitization of tax administration for the study period (2014-2019) and Y axis represent revenue mobilisation for the same period in Ghana Cedis ¢. Furthermore, calculating the correlation coefficient (r) from the data above, r is found to be 0.87 positive, indicating the strong direct relationship between digitization of tax administration and revenue mobilisation of GRA. Similarly, coefficient of determination, which is the square of correlation coefficient, found to be approximately 0.79 or 79% indicating that 79% of change in digitization of tax administration is explained by change in revenue mobilisation and the remaining 21% by some other factors.

Challenges of the Improved Tax Administration System

Table 7: What Tax Auditors Encounter

Item	Frequency	Percentage
Unwillingness of tax payers to corporate with auditor	3	20.0
Taxpayer being economical with respect to information	4	26.6
Tax payers deliberating delaying the process	2	13.4
All the above	6	40.0

Source: Field survey (2020)

From Table 7 above, 3 respondents representing 20.0% admitted that tax auditors face that challenge of unwillingness of tax payers to corporate with auditor. Again, it was observed that 4 respondents representing 26.6% admitted that taxpayer are being economical with respect to information. It was further revealed by 2 respondents which represents 13.4% that tax payers deliberately delay the process. Once more 6 respondents representing 40.0% believe that all the above information serve as challenge.

Table 8: Challenged to the Improved Tax Administration System

Item	Frequency	Percentage
Challenge of regional office heads to coordinates the activities of the STOs and MTOs in the various regions	10	66.7
The presence of a large informal sector	5	33.3

Source: Field survey (2020)

From the Table above, 10 respondents representing 66.7 admitted that challenge of regional office heads to coordinates the activities of the STOs and MTOs in the various regions is a challenged to the improved tax administration system. Again, the presence of a large informal sector according to 5 respondents representing 33.3% is also an impedance to the improved Tax Administration System.

Discussion of Results

Factors that Contribute to Tax Non-Compliance

The study observed that high tax rate is a factor contributing to tax non-compliance. This finding of the study support what Armah-Attoh and Awal (2013) discovered. They observed that among the reasons some Ghanaians avoid paying taxes and fees that they owe the state is that taxes are too high. This finding of the study support what Okpeyo, Musah and Gakpetor (2019) observed. They found that compliance cost, tax rates, tax audits and morals of taxpayers significantly influenced tax compliance. Business non-profitability was observed to contribute significantly to tax non-compliance. Distance was observed to be a tax non-compliance factor. These findings are in line with Kyereda (2015) who discovered that that high-income tax, business non-profitability, distance difficulty in paying tax account for high income tax non-compliance. However, the study goes contrary to Kyereda (2015) observation of tax non-compliance by other colleagues.

It was also observed that tax officials who have low integrity are more likely to influence people from paying tax from the results of the estimation. The study further found that people who have low level of education are more likely to resist the tax payment system. This finding is consistent with what

Mantey (2015) found. He observed that Small Business Income Earners (SBIE) usually register with authorities but do not declare their incomes. This Mantey (2015) accounted as being a result of the SBIE barely understanding the tax system in the country, not knowing much about the income tax laws and regulations and computing of tax liabilities. In view of Noronaa (2015) noncompliance undermines revenue.

Challenges of the Improved Tax Administration System

The study found that high taxes is a challenge to the improved tax administration system. It was further discovered that affordability hampers the new system. This finding is in line with Rebecca (2010) who found that taxes are considered unfair and unaffordable and therefore their introduction or revision of rates upwards has always been met with resistance from either the general public or interest groups. Once again, wasteful use of tax money by government was observed to be a hindrance to the improved tax administration. Stealing of tax money by government officials was another challenge to the improved tax administration system. These findings support what the result of the Ghana Afrobarometer Survey (2012). In support of this finding, Keen et al (2015) observed that corruption in revenue authorities not only reduces short-term revenues but also creates a long-lasting erosion of compliance.

The Ghana Afrobarometer Survey (2012) observed that the integrity of Ghana Revenue Authority (GRA) officials are very low in the eyes of Ghanaians. Armah-Attoh and Awal (2013) support these findings as well by stating that why some Ghanaians avoid paying taxes and fees that they owe the state: taxes are too high, and people cannot afford to pay. It was observed from the study that what accounted for the above-mentioned challenges were:

inadequate administrative capacity; the presence of a large informal sector; weak checks and balances; and lack of social norms for tax compliance. These findings are in line with Besley and Persson (2014) who attributed low tax collection in developing countries to their inadequate administrative capacity, the presence of a large informal sector, weak checks and balances, and the lack of social norms for tax compliance.

Effect of the Improved Tax Administration on Tax Compliance

It was observed from the study that tax enforcement (TE), monitoring (M), tax education (TEDU), and convenience to tax payers (CON) significantly predicts tax compliance. Hence, the study found a significant effect of improved tax administration on tax compliance. The finding that tax education (TEDU) significantly affects tax compliance is in line with the finding of Trawule (2017). He observed that tax education affects tax compliance among the self-employed, however, the nature of the relationship depends on the type of the content of tax education and the type of compliance to be achieved.

Impact of Digitization of Tax Administration on Revenue Mobilisation

The study observed that since the introduction of digitization, the revenue performance of GRA has increased consistently. This therefore accounted for the strong direct relationship between digitization of tax administration and revenue mobilisation of GRA over the past five (5) years. This finding of the study is in line with what Olaoye and Kehinde (2017) study revealed. Their study revealed that information technology (Online Tax Filing-OTF, Online Tax Registration-OTR and Online Tax Remittance-OTRE) affect tax productivity.

Challenges of the Improved Tax Administration System

The study observed the unwillingness of tax payers to corporate with auditor. The other challenged observed was that taxpayer were economical with information. It was further observed that taxpayers deliberately delay the process. These findings support what Owusu (2019) observed. He found that tax auditors encounter the unwillingness of tax payers to corporate with auditor, taxpayer being economical with respect to information and tax payers deliberating delaying the process. These challenges culminated due to inability of regional office heads to coordinates the activities of the STOs and MTOs in the various regions. Again, the presence of a large informal sector was found to contribute to the challenge. In line with these findings, Agyemang (2013) observed that tax administrators lack adequate logistics in their supervisory and monitory role. Boakye (2011) supports Agyemang (2013) by stating that tax leakage in developing countries is often worsened by poor functioning tax authorities due to variety of reasons; under–resourced or under–trained administrators, poor tax collection systems, failure of legal enforcement mechanism for tax collection and small penalties for non-payment.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of the study was to assess the contribution of the improved tax administration to tax compliance in Sunyani Municipality. The research methods employed in the study included: purposive and quota sampling methods, questionnaire, data editing, data coding, data collected was checked and cleaned before data entry started. Data analysis was done using SPSS.

Summary of Findings

In examining factors that contribute significantly to tax non-compliance from the view point of the taxpayer, the study came out with high tax rate, business non-profitability, low integrity of tax officials, low educational level on the tax system, and distance to pay taxes.

In analysing the effect of the improved tax administration on tax compliance, the study found that tax enforcement (TE) significantly predicts tax compliance. Once more, monitoring (M) significantly influence compliance. Furthermore, tax education (TEDU) was found to be a predictor of tax compliance. Once again, convenience to tax payers (CON) was observed to influence tax compliance. So overall, the regression result on the effects of improved tax administration on tax compliance was significantly positive.

In finding the impact of digitization of tax administration on revenue mobilisation, the study discovered that the introduction of digitization has improved the revenue performance of GRA. This therefore accounted for the strong direct relationship between digitization of tax administration and revenue mobilisation of GRA over the past five (5) years.

In identifying the challenges of the improved tax administration system, the study observed that these challenges are in two-folds: those from taxpayers and those from tax authorities. The challenges from the taxpayers were high taxes, affordability issues, wasteful use of tax money by government, and stealing of tax money by government officials. These challenges were as a result of inadequate administrative capacity, the presence of a large informal sector, weak checks and balances, and lack of social norms for tax compliance. The challenges on the part of the tax officials were from taxpayers' unwillingness to corporate with auditor, taxpayer being economical with respect to information, and taxpayers deliberating delaying the process. These challenges came about because of lack of regional office heads to coordinates the activities of the STOs and MTOs in the various regions, and the presence of a large informal sector.

Conclusions

In conclusion, high tax rate, business non-profitability, low integrity of tax officials, low educational level on the tax system, and distance to pay taxes contributed significantly to tax non-compliance. This shows that non-compliance of tax payments is an urgent issue in Ghana, as the government has been suffering from a widening fiscal deficit and a rising debt burden.

However, improved tax administration had significant impact on tax compliance. The effects of improved tax administration on tax compliance was also significant.

There was a strong positive relationship between digitization of tax administration and revenue mobilisation of GRA over the past five (5) years.

The challenges of the improved tax administration system were in two-folds: those from taxpayers and those from tax authorities. Each of these challenges had its underlying cause which were also in two-folds. The challenges from the taxpayers were high taxes, affordability issues, wasteful use of tax money by government, and stealing of tax money by government officials. These challenges were as a result of inadequate administrative capacity, the presence of a large informal sector, weak checks and balances, and lack of social norms for tax compliance. The challenges on the part of the tax officials were from taxpayers' unwillingness to corporate with auditor, taxpayer being economical with respect to information, and taxpayers deliberating delaying the process. These challenges came about because of lack of regional office heads to coordinates the activities of the STOs and MTOs in the various regions, and the presence of a large informal sector.

Recommendations

Based on the findings and conclusion of the study, the following recommendations are made:

It is recommended that appropriate reviews of tax processes should be integrated into the entire tax system to encourage taxpayers' compliance.

The GRA should in their attempt to profile businesses and individual tax payers should collaborate with Electricity Company of Ghana since ECG has a complete data of all commercial structures, to help them in their search for people liable to pay taxes.

Policy developers should endeavour to make tax systems less complex, less costly and accessible to encourage taxpayers to comply with tax requirements.

It is recommended among others that the challenges revealed are real, and that if the recommendations made are adhered to, challenges of tax administration will be minimized.

Government should provide GRA with enough logistics to help them in the operations.

Suggestion for Further Research

For future research, the study should consider contribution of the improved tax administration to tax compliance in Ghana. This would give a broader perspective on the subject.

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APPENDIX A

Questionnaire for VAT registered

I am a final year student of Catholic University College of Ghana, undertaking a study on the topic; *Improved Tax Administration and Tax Compliance: The Case of Value Added Tax (VAT)*. You have been selected to assist in this study. I hope you will be objective in answering the questions and by so doing you will be helping in achieving the objective of this study. This information is collected solely for academic research purposes. The information you provide will be treated as strictly confidential.

Thank you for your participation.

SECTION A: Demographic Characteristics

1. Age: **a.** 18-30 [ ] **b.** 31-40 [ ] **c.** 41-50 [ ] **d.** 51+ [ ]

2. Sex: **a.** Male [ ] **b.** Female [ ]

3. What is your highest level of education?

a. Certificate [ ] **b.** Diploma [ ] **c.** Bachelor's degree [ ] **d.** Post graduate [ ]

SECTION B: Factors that Contribute to Tax Non-Compliance

1. Do you think high tax rates is a factor of tax non-compliance?

a. Yes [ ] **b.** No [ ]

2. Does low integrity on the part of tax officials encourage tax non-compliance?

a. Yes [ ] **b.** No [ ]

3. Would you attribute tax non-compliance to low educational level?

a. Yes [ ] **b.** No [ ]

4. Do you feel discouraged to pay tax as a result of tax non-compliance by other colleagues?

a. Yes [ ] **b.** No [ ]

5. Do you pay your tax when your business is non-profitable?

a. Yes [ ] **b.** No [ ]

6. Does distance contribute to tax non-compliance?

a. Yes [ ] **b.** No [ ]

SECTION C: Challenges of the Improved Tax Administration System

1. Which of the following do you think plays a part in hindering the improved tax administration?

a. Taxes are too high [ ]

b. People cannot afford to pay [ ]

c. Poor government service delivery [ ]

d. Wasteful use of tax money by government [ ]

e. Unfair tax system [ ]

f. Stealing of tax money by government officials [ ]

g. Offenders being sure they will not be caught [ ]

h. All the above [ ]

2. Which of the following would you attribute as a challenge to the improved tax administration challenge?

a. Inadequate administrative capacity [ ]

b. The presence of a large informal sector [ ]

c. Weak checks and balances [ ]

d. Lack of social norms for tax compliance [ ]

e. All the above [ ]

Appendix 2

Questionnaire for GRA Staff Members

I am a final year student of Catholic University College of Ghana, undertaking a study on the topic; *Improved Tax Administration and Tax Compliance: The Case of Value Added Tax (VAT)*. You have been selected to assist in this study. I hope you will be objective in answering the questions and by so doing you will be helping in achieving the objective of this study. This information is collected solely for academic research purposes. The information you provide will be treated as strictly confidential.

Thank you for your participation.

SECTION A: Demographic Characteristics

1. Age:

  a. 18-30 [ ]

  b. 31-40 [ ]

  c. 41-50 [ ]

  d. 51+ [ ]

2. Sex:

a. Male [ ]

b. Female [ ]

3. What is your highest level of education?

a. Certificate [ ] **b.** Diploma [ ] **c.** Bachelor's degree [ ] **d.** Post graduate [ ]

SECTION B: Effect of the Improved Tax Administration on Tax Compliance

Improved Tax Administration

1. Has the restructuring of tax administration improved the administration.

a. Yes [ ] **b.** No [ ]

2. Has the introduction of digitization of tax processes improved tax administration?

a. Yes [ ] **b.** No [ ]

Tax Compliance

1. Has tax enforcement helped in tax compliance?

a. Yes [ ] **b.** No [ ]

2. Has monitoring by the restructured tax administration aided compliance?

a. Yes [ ] **b.** No [ ]

3. Do you think tax education has been effective in ensuring tax compliance?

a. Yes [ ] **b.** No [ ]

4. Is tax convenient to tax payers?

a. Yes [ ] **b.** No [ ]

SECTION C: Impact of Digitization of Tax Administration on Revenue Mobilisation

Digitization of Tax Administration

1. Can business registration be done online?

a. Yes [ ]   **b.** No [ ]

2. Do you process returns with software?

a. Yes [ ]   **b.** No [ ]

3. How often do you enforce tax laws with software?

a. Very often [ ]   **b.** Not often [ ]

4. Do you use a software for auditing?

a. Yes [ ]   **b.** No [ ]

5. Do you perform risk analysis and management with a software?

a. Yes [ ]   **b.** No [ ]

Revenue Mobilisation

GRA Revenue plan and performance

Year	Revenue Plan	Revenue Performance	Total Revenue Plan	Actual Revenue
2014				
2015				
2016				
2017				
2018				
2019				

SECTION D: Challenges of the Improved Tax Administration System

1. Which of these challenges do tax auditors encounter?

a. The unwillingness of tax payers to corporate with auditor [ ]

b. Taxpayer being economical with respect to information [ ]

c. Tax payers deliberating delaying the process [ ]

h. All the above [ ]

2. Under–trained administrators is a challenge for the new system?

a. Yes [ ] **b.** No [ ]

3. Which of the following is a challenge to the improved tax administration system?

a. Challenge of regional office heads to coordinates the activities of the STOs and MTOs in the various regions [ ]

b. lack of certainty on the part of tax payers regarding the specific offices where their files have been transferred [ ]

h. All the above [ ]