



**THE EFFECT OF FINANCIAL STATEMENT AUDIT ON TAX REVENUE COLLECTION GROWTH IN RWANDA. A CASE STUDY OF RWANDA REVENUE AUTHORITY, HEAD QUARTER (2016-2020)**

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**ABSTRACT**

*The aim of this study was to assess the effect of financial statement audit on revenue collection growth in Rwanda. Under five specific objectives; \*to analyse whether desk audit influences tax revenue collection growth in RRA; \*to investigate whether field audit influences tax revenue collection growth in RRA; \*to evaluate whether compliance tests audit affect tax revenue collection growth in RRA; \*to establish the moderating effect of government policies on financial statement audit and tax revenue collection growth; and \*to identify the effect of tax revenue collected on economic growth in RRA. This study adopted a descriptive research design, quantitative approaches were used. The population under this research was 100 RRA's tax audit officers. In this study a sample size of 50 tax audit officers in RRA was determined using Yamane's formula. Both primary and secondary sources of data were obtained for the study. Primary data was collected using questionnaire and secondary data was collected using documentation technique from RRA reports (2016-2020). After the data collected were organized, edited and coded, quantitative data were entered into SPSS 20 and MS-Excel. The significance of the findings was tested using the T-test. The p-value was used to determine whether the null hypothesis should be accepted or rejected. If the p-value >0.05 then alternative hypothesis is accepted while null hypothesis is rejected. The results of the findings indicated that the correlation coefficient showed that there was a strong positive relationship between desk audit, field audit, and compliance test audit and government policies respectively and tax revenue collected performance. The results showed that the Pearson correlation coefficient indicated that there is strong positive relationship between tax revenue collected before audit and the tax revenue collection after audit ( $r=0.984$ ,  $p=0.014267878$ ). The study concluded that all the tax audits are important because they add something to tax revenue collected. The study recommended that the companies or individual's tax payers should comply with tax law pertaining the payment of the corporate or personal income tax in particular area.*

**Key Words:** Tax Compliance, Tax Evasion, Financial Statement Audit, Revenue Collection Growth

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## INTRODUCTION

Taxation remains to be the main source of government revenue in both developed and developing economies. For most developing countries, taxation goes hand-in-hand with economic growth and taxes are lifeblood for governments to deliver essential services and to make long-term investments in public goods (Paepe & Dickinson, 2014).

A financial statement is a formal record of the financial activities of a business, person, or other entity. Government entities (tax authorities) need financial statements to determine the correctness of tax declared in the tax returns (Freeman & Reed, 1983). In this, accounting records are examined by the auditors who use a variety of generally accepted techniques. Financial audits are thorough review of a company's financial records conducted by external auditors to verify that their financial statements are accurate and reliable. Audits are also customarily conducted to assess the effectiveness of compliance with law and regulations (Bradford, 2013). In the word of Okonkwo (2014), tax audit is independent examination of accounts, tax returns, tax payments and other records of a taxpayer to confirm compliance with tax laws, rules and regulations and accuracy and correctness of tax paid and adhering to generally relevant accounting principles and standards.

Financial statements elements are analyzed during a financial audit, key financial elements, such as assets, liabilities, revenue, and expenses, are analyzed and checked. These elements are reflected mostly in two main statements: the balance sheet and income statement of an entity. Let's look at the essence of these statements' elements. A balance sheet is a statement of the values of the stock positions of assets owned and of the liabilities owed by an institutional unit or group of units, drawn up in respect to a particular point in time. The income statement details of transactions in revenue and expense. Revenue minus expense equals the net operating balance, reflecting the total change in net

worth due to transactions with financial assets and liabilities (IMF, 2014).

As mentioned to (Brown *et al.*, 2003), today's tax agencies typically lose some percentage of total revenues due to tax evasion and other types of noncompliance known as the "tax gap". The primary goal of a revenue body's compliance activity is to improve the overall compliance with their tax laws, and in the process instill confidence in the community that the tax system and its administration are fair. Instances of failure to comply with the law are inevitable whether due to taxpayers' ignorance, carelessness, recklessness and deliberate evasion, or weaknesses in administration. To the extent those failures occur, governments, and in turn the communities they represent, are denied the tax revenues they need to provide services to citizens (FTAC, 2006).

Kircher (2008) stated that tax audit is the examination of an individual or organization's tax report by the relevant tax authorities in order to ascertain compliance with applicable tax laws and regulations of state. He further reported that tax audit is a process where the internal revenue service tries to confirm the numbers that you have put on your tax return. Ola (2001) stated that the process of tax audit involves tax returns that are selected for audit using some selection criteria. Thereafter, the underlying books and records of the taxpayers are examined critically to relate them to the tax return filed. Tax audit is important because it assist the government in collecting appropriate tax revenue necessary for budget, maintaining economic and financial order and stability, to ensure that satisfactory returns are submitted by the tax payers, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers and to ensure that the amount due is collected and remitted to government.

At a time when tax evasion techniques have grown more sophisticated, tax agencies have simultaneously been hit with a cascade of

budgetary and staffing restrictions, continually changing tax statutes and more rigorous requirements for privacy. As a result of these pressures, many tax agencies continue to rely on audits of taxpayers' business records and financial affairs to ensure taxpayers have computed their tax payable in accordance with current tax laws and regulations and this implied the tax revenues growth otherwise, tax agencies can lose significant revenues opportunities. Finally, when tax audit is well conducted, taxpayers understand that their returns will be quickly and scientifically analyzed, voluntary compliance rates may rise which could help tax agencies avoid costs and further improve revenue collections (Brown *et al.*, 2003).

Tax audit affects revenue collection in that it promotes voluntary compliance of taxpayers which increases revenue. It also determines the accuracy of returns so as to ensure the right taxes are submitted. With tax audit tax liability can be easily declared and matters that need adjustment are identified. It also helps in collecting tax interests and penalties which thereby increase revenue collection. Tax audit also helps to implement changes to eradicate evasion. Thus, tax audit is positively related to tax collection (Gelete, 2019).

According to Mutarindwa and Rutikanga (2014), tax audit will enable the government of Rwanda to control and ensure the taxpayers' compliance with tax laws thus this will increase tax revenue collected from taxpayers. One of the functions of auditing is to detect errors and frauds, RRA's tax audit and investigation aim at stopping the loss which comes from tax evasion, fraud and corruption. If there is a fraudulent event by taxpayers, auditing practices will enable the RRA to find out the taxpayers who had avoided paying tax and paying the tax due with penalties and fines.

According to RRA (2019), the amount of annual tax revenue collection transferred to the national treasury as percentage of the total national budget. Although there has been good progress in contribution of tax revenue to national budget, the pace of tax revenue growth as well as the country's

increased appetite for infrastructure investment calls for increased tax revenue mobilization to reduce the public debt. Tax revenue collection is key to the financial independence, stability and sustainability of a nation. This is in line with RRA's vision statement.

### **Objectives of Study**

The general objective of this study was to assess the effect of financial statement audit on revenue collection growth in Rwanda.

Specifically, this study achieved the following objectives;

- To analyze whether desk audit influences tax revenue collection growth in RRA.
- To investigate whether field audit influences tax revenue collection growth in RRA.
- To evaluate whether compliance tests audit affect tax revenue collection growth in RRA.
- To establish the moderating effect of government policies on financial statement audit and tax revenue collection growth in RRA.
- To identify the effect of tax revenue collected on economic growth in RRA.

### **Statement of the Problem**

Globally, Governments need funds to undertake their responsibilities and run their operations. Each government gains its revenue from internal and external resources. Taxes are one of the principal points of the supply of public revenue. The tax collection that moves the economic wheels of a community is the income generated by the activities of the economic companies of that society. Some of the countries in Latin America region that are on a fiscally sustainable path, revenues appear inadequate to fund a socially sustainable level of provision of public services (Ter-Minassian, 2012). The United Nations considers that achieving the Millennium Development Goals (MDGs) requires developing countries to raise at least 20% of their gross domestic product (GDP) in taxes. Several Asian and Latin American countries and some of sub-Saharan African countries still mobilize less than 17% of their GDP in tax revenues hence making it. In Africa, most developing

countries, taxation goes hand in-hand with economic growth and taxes are lifeblood for governments to deliver essential services and to make long-term investments in public goods (OECD, 2010; Paepe & Dickinson, 2014).

In the same region, Tax revenue to GDP ratio in Rwanda was 15.2%, 15.6%, 15.2%, 15.6% and 16.3% in 2014/15, 2015/2016, 2016/17, 2017/18 and 2018/19 respectively due to improve on the tax revenue collection. However, despite the recorded growth in revenue collections, Rwanda's tax to GDP ratio is still below their target, 18% Sub-Saharan average (RRA, 2019). The low tax to GDP ratio implied that tax dodgers made a lot of tax remains uncollected and so tax revenues collected are inadequate to finance government budget. RRA (2019) RRA continues to face the challenges of low compliance culture within some taxpayers and insufficient tax revenue declared. Tax compliance is the process whereby taxpayers comply with the stipulated laws and regulation by paying the expected tax return accurately and truthfully. However, tax payment level in RRA is relatively low, which is always reflected in the total internally generated revenue every year. In Rwanda where taxes are considered as a main source Revenue for growth and development purposes because the higher the revenue, the more likely government will put in place developmental plans for the enhancement of the living standard of the people, tax compliance and revenue have been relatively low (RRA, 2019). Corroborating this fact, observed that low tax revenue in RRA underpinned excessive evaders and avoiders that engulfed the RRA. Hence, financial statement audit is therefore considered as critical issue to the government of Rwanda to increase generated tax revenue. Financial statements audits are conducted in many different forms of organizations today. Tax audit ensure that satisfactory return are submitted by the tax payers, organize the degree of tax avoidance and tax evasion, ensure strict compliance with tax laws by tax payers, improve the degree of voluntary compliance by tax payers and to ensure that the

amount due is collected and submitted to government (Harelimana, 2018).

Harelimana (2018) agrees that the more the tax audit conducted the more revenue is collected and improve the degree of voluntary compliance with tax law by tax payers. There is gap between the taxpayer's compliance and tax revenue submitted, therefore the financial statement audit is a watchdog of the individuals who may cheat on the taxes they pay to government, it's on this regards that the author carried out research on "The effect of financial statement audit on the tax revenue collection growth in Rwanda".

## LITERATURE REVIEW

### Theoretical Literature Review

#### Agency Theory

This theory is associated with conflicting interests of shareholders and management of organizations, suggesting that the less informed party will have to demand for information that monitors the behaviour of better informed manager (Akinbuli, 2010). According to Hayes *et al.* (2009), assumptions are made that agency theory can be used to explain the supply side of the audit market. The contribution of an audit to third parties is basically determined by the probability that the auditor will detect errors in the financial statements and the auditor's willingness to report these errors. Then independence is emphasized in auditing.

#### The policeman theory

This theory of auditing was formulated by Awe (2008) on assumptions that once monitoring is done on the systems at unspecified times then that is like policeman guarding a place and thus, called it policeman theory. It was further asserted that auditing is purely on the arithmetical accuracy and on the prevention and detection of fraud. This theory makes the auditor to detect and prevent errors and fraud in organizations. It then adds a factor of monitoring to the auditing theory. According to Hayes *et al.* (2009), the policeman theory claims that the auditor is responsible for

searching, discovering and preventing fraud in the early 20th century this was certainly the case. However, more recently the focus of auditors has been to provide reasonable assurance and verify the truth and fairness of the financial statement and which is the focus of external auditors. The dictation of fraud, is however, still a hot topic in the debate on the auditor's responsibilities, and typically after events where financial statement fraud have been revealed, the pressure increases on the increasing the responsibilities of the auditors in dictating fraud.

### **Classical theory of tax compliance**

This theory of tax compliance initially formulated by Torgler (2003) is also called the A-S models based on the deterrence theory. In the theory the taxpayer is assumed to maximize the expected utilities of the tax evasion gamble, balancing the benefits of successful tax cheating against the risky prospect of being caught and punished by tax authorities (Sandmo, 2005). Alabede *et al.* (2011) asserted that the deterrence theory depends largely on tax audit and penalty. They further stressed that this theory of tax compliance makes taxpayers to pay tax as a result of fear and sanctions. Trivedi and Shehata (2005) says that the deterrent theories suggest that taxpayers "play the audit lottery", that is they make calculations of the economic consequences of different compliant alternative. Verboon and Dijke (2007) stated that the essence of the deterrence model of tax compliance is to chiefly examine the interaction between probability of detection and sanction severity that should affect non-compliance. Brook (2001) says that classical theory is only based on economic analysis but social and psychological variables are equally important in understanding the issue of noncompliance to tax. Some of the important studies about the effects of deterrence on compliance include Torgler (2003) and Kirchler (2007). Braithwaith (2003) argued that if deterrence (that is the probability of detection and sanction severity) would be the most significant variable in explaining compliance, rational individuals in most societies of the world would be

non-compliant because the levels of deterrence are low. The theory has contributed to theory the fact that revenue authorities should seek audited statements or perform audits to ascertain compliance.

### **Concepts of financial statement audit**

According to INTOSAI (2018), financial statement audit is determining whether an entity's financial information is presented in accordance with the applicable financial reporting and regulatory framework. This is accomplished by obtaining sufficient appropriate audit evidence to enable the auditor to express an opinion on whether the financial information is free from material misstatement whether due to fraud or error. Adediran *et al.* (2013) opined that, financial statement audit involves the gathering of information and processing it for determining the level of compliance of an organization with tax laws of the territory. For a successful audit, it is necessary that the auditor organizes his work in such a way that the assignment is accomplished completely and efficiently. More importantly however, a professional tax auditor or investigator must possess sound accounting and taxation knowledge, he must be sharp in interpreting the tax laws, tactical and must display high intelligence in applying tax laws, he must have sound knowledge of investigation techniques. Apart from technical skills, he must be alert and open minded with good communication Skills. These are necessary personal prerequisite for any tax auditor or investigator to be successful for tax audit assignments. A tax as we already know is a charge imposed by governmental authority upon property, individual or organization to raise money for public purpose. An audit on the other hand can be seen as the examination of the records underlying a financial statement as will enable the auditors to report authoritatively, whether in his opinion, the statement gives a true and fair view (Okoye, 2006).

According to Hornby (2000), tax means "money that you have to pay to the government so that it can pay for public services". He also defined Audit as

“an official examination of business and financial records to see that they are true and correct”. ACCA (2009) defined a financial statement audit as an exercise which provides assurance to the shareholders and other stakeholders of a company on the financial statements because it is independent and impartial. A tax audit is an examination of whether a taxpayer has correctly assessed and reported their tax liability and fulfilled other obligations. Tax audits are often more detailed and extensive than other types of examination, such as general desk checks, compliance visits/ reviews or document matching programmes (FTAC, 2006).

Ojo (2016) defined financial statements audit as an inspection of taxpayers’ business records so as to ensure that law and regulation were maintained in the amount of tax reported. This reflects that the aim of tax audit is to ensure that laws and regulations regarding tax revenue are maintained by taxpayers with the aim of increasing the revenue pool of the government. Tax audit is necessary because it help the government to collect taxes paramount in financing budget and maintaining economic and financial order and stability. Kircher (2008) pinned that the submitted that ax audit ensure that satisfactory returns are submitted by the tax payers, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers and to ensure that the amount due is collected and remitted to government.

A tax audit is also an examination of whether a taxpayer has correctly reported its tax liability and fulfilled other obligations. It is often more detailed and extensive than other types of examination such as general desk checks, compliance visits or document matching programs (FTAC, 2006). Most tax payers report their tax liabilities more accurately if they believe that the tax administration has the capacity to detect any unreported liabilities and that heavy penalty may be applied when they are detected (Biber, 2010).

The system of tax auditing is imperative because it assists the government in collecting appropriate tax revenue necessary for budget, maintaining economic and financial order and stability, ensuring that satisfactory returns are submitted by the taxpayers, organizing the degree of tax avoidance and tax evasion, ensuring strict compliance with tax laws by taxpayers, improving the degree of voluntary compliance by taxpayers and ensuring that the amount due is collected and submitted to government (Nyakamba, 2014).

Bassey (2013), however classified tax audit into two: “desk audit”; “field audit”; and “compliance audit”.

### **Desk Audit**

Desk audit is said to be the tax audit or examination which takes place in the tax office where books and financial records of the taxpayers are examined (Bassey, 2013). This is one which the whole activity of the audit takes place within the confines of the office of the tax officials. In this situation the tax official may simply request the taxpayers to provide some additional documents to his office to enable him clear some issues in the returns submitted. In this type of audit, no official notice is given to the taxpayer of the impending desk audit exercise. He only gets to know when letters are written to him requesting for certain documents or explanations. The essence is to ensure some level of compliance with tax laws, rules and regulations as well as performing the administrative checks on returns submitted (Adediran *et al.*, 2013; Nyakamba, 2014).

Desk audit which is the routine examination that is carried out in the tax office by the Inspector as soon as a tax return is received. It focus is to ensure completeness of the items submitted for tax purposes. The Inspector carrying out a desk audit will also look for apparent errors or mistakes in the tax computations and/or in the accompanying documents and records. The outcome of a desk audit may lead to the conduct of a field audit whenever additional information or documentary evidence is required to satisfy the Inspector of Taxes carrying out the desk audit

### **Field Audit**

Field audit is that tax audit conducted in the taxpayers' office. In field tax office, tax auditors have opportunity to examine the relevant documents, accounts, and other necessary schedules in taxpayers' business premises and this affords the auditors opportunity to obtain information and explanations directly from the staff of the company (Bassey, 2013). By the nature and scope of their work, regular assessing officers can only carry out limited desk audit through examination of accounts and returns. It is in a bid to check this handicap as well as to improve on tax compliance that tax authorities carry out field audit exercise on taxpayers by physically conducting the exercise in the office of the taxpayer. The taxpayers are however formally notified of the arrival of the auditor prior to the commencement of the audit and the requirements of the auditors in terms of documents to be audited will also be requested for in advance. Field audit involves physical verification of documentary evidence and materials at the premises of a taxpayer so as to confirm the facts and figures of the tax returns filed by corporate taxpayers. The scope or depth of verification depends on the outcome of the desk audit work carried out by the tax auditor as well as the risk factors of the audit exercise. Special attention will normally be paid to those items likely to have high tax yield potentials (Adediran *et al.*, 2013; Nyakamba, 2014).

Field audit is more elaborate and comprehensive audit than a desk audit carried out outside the tax office, in the taxpayer's business premises. The need to carry it out in the taxpayer's premises is to enable the tax auditors carry out the examination of applicable documents and also obtain appropriate information directly from the officials of the business.

Olaoye and Ogundipe (2018) opined that desk audit often times lead to field audit when additional documents are needed to complete the inspection of a tax payer. This implied that field audit is more elaborate and broader than office audit because it

transcends the office of the auditor. Explaining further, Ladi and Henry (2015) noted that field audit requires the taxpayers are well-informed before the commencement of the audit. This type of audit allows physical verification of tax payers claims so as to confirm the facts and figure of the returns. Literature affirmed that field audit would improve the level of compliance by the tax payers.

### **Compliance Tests Audit**

According to INTOSAI (2018), tax compliance auditing is performed by assessing whether activities, financial transactions and information are in all material respect, in compliance with the authorities which govern the audited entity. These authorities may include rules, laws and regulations, budgetary resolutions, policy, established codes, agreed terms or the general principles governing sound public-sector financial management and the conduct of public officials. Compliance audit focuses on whether a particular subject matter is in compliance with authorities identified as criteria. Compliance with tax law typically means true reporting of the tax base, correct computation of the liability, timely filing of the return, and timely payment of the amount due (Allingham & Sandmo, 1972).

### **Objectives of Tax Audit**

The purpose of tax audit is to determine a true and fair view of the business records for tax purposes. The tax audit officer is responsible to ensure that the reported amount is correct and that the amount of tax paid is correct accordance with tax laws and regulations. The other purpose of tax audit is to achieve the voluntary compliance with the tax laws and regulations and to ensure that a higher tax compliance rate is achieved under the self-assessment system (Eevonn, 2009).

The objectives of tax audit according to Bitrus (2014) are to enable the tax auditors to determine whether or not: adequate accounting books and records exist for the purpose of determining the taxable profits or loss of the taxpayer and consequently the tax payable; the tax computations submitted to the authority by the taxpayer agree



with the underlying records; all applicable tax legislation have been complied with; provision of an avenue to educate taxpayers on various provisions of the tax laws; discourage tax evasion; detect and correct accounting and/or arithmetic errors in tax returns; provide feedback to the (tax administrators) on various provisions of the law and recommend possible changes; identify cases involving tax fraud and recommend them for investigation; forestall a taxable person's failure to render tax returns; and forestall a taxable person rendering incomplete or inaccurate returns in support of the self-assessment scheme.

### **The phases of an audit**

According to PWC (2017), the audit process can be summarized in five phases:

**Planning:** Initial planning activities include formal acceptance of the client by the audit firm, verifying compliance with independence requirements, building the audit team and performing other procedures to determine the nature, timing and extent of procedures to be performed in order to conduct the audit in an effective manner.

**Risk assessment:** Auditors use their knowledge of the business, the industry and the environment in which the company operates to identify and assess the risks that could lead to a material misstatement in the financial statements. Those risks often involve a high degree of judgment and require a significant level of knowledge and experience by the auditor, particularly on large and complex engagements. This requires a good understanding of the business and its risks, which is typically built up over a number of years as part of the audit firm's and auditor's knowledge. It also meant that the auditors need to be well informed about the industry and wider environment in which the company operates, and about what its competitors, customers, suppliers and where relevant regulators are doing.

**Audit strategy and plan:** Once the risks have been assessed, auditors develop an overall audit strategy and a detailed audit plan to address the risks of material misstatement in the financial statements.

Among other things, this includes designing a testing approach to various financial statement items, deciding whether and how much to rely on the company's internal controls, developing a detailed timetable, and allocating tasks to the audit team members. The audit strategy and plan is continually reassessed throughout the audit and adjusted to respond to new information obtained about the business and its environment.

**Gathering evidence:** Auditors apply professional scepticism and judgement when gathering and evaluating evidence through a combination of testing the company's internal controls, tracing the amounts and disclosures included in the financial statements to the company's supporting books and records, and obtaining external third party documentation. This includes testing management's material representations and the assumptions they used in preparing their financial statements. Independent confirmation may be sought for certain material balances such as cash.

**Finalization:** Finally, the auditors exercise professional judgement and form their overall conclusion, based on the tests they have carried out, the evidence they have obtained and the other work they have done. This conclusion forms the basis of the audit opinion.

Auditors interact with the company during all the phases of the audit process listed above. There will be continuing discussions and meetings with management, both at operational and senior executive levels, and with those charged with governance. Using their professional skepticism and judgment, auditors challenge management's assertions regarding the numbers and disclosures in the financial statements.

### **Review of policies**

According to RRA (2019), during the 2018/19 fiscal year, RRA continued to provide advice on tax issues as mandated. In this regards, RRA actively participated in: Reviewing the draft Ministerial Orders implementing Law n° 016/2018 of 13/04/2018 establishing taxes on income;

Reviewing the draft Law on Excise Duty; Drafting Ministerial Orders and Commissioner General Rules implementing Draft Law on Tax Procedures; Drafting Ministerial Orders governing Law n° 75/2018 of 07/09/2018 determining the sources of revenue and property of decentralized entities; and Reviewing and publishing the Statute governing the members of staff of RRA. Moreover, the following public rulings were prepared and published during the 2018/19 fiscal year: Public ruling issued by the Commissioner General on Article 26 of the Law n° 016/2018 of 13/04/2018 establishing taxes on income; Public ruling issued by the Commissioner General on Article 60 (30) of the Law n° 016/2018 of 13/04/2018 establishing taxes on income; Public ruling issued by the Commissioner General on article 15 (7°) of the Law n°016/2018 of 13/04/2018 establishing taxes on income. And draft ruling issued by the Commissioner General on article 46 of the Law no 016/2018 of 13/4/2018 establishing taxes on income.

RRA (2019) opined that taxpayers are expected to pay taxes on time. Tax laws and administrative procedures specify payment requirements, including deadlines (due dates) for payment, who is required to pay, and payment methods. Depending on the system in place, payments due will be either self-assessed or administratively assessed. Failure by a taxpayer to pay on time results in imposition of interest and penalties and, for some taxpayers, legal debt recovery action. The aim of the tax administration should be to achieve high rates of voluntary on-time payment.

#### **Review of taxpayer audit programme and its role**

According to Opoku (2016), the audit programme of a revenue body performs a number of important roles that, effectively carried out, can make a significant contribution to improved administration of the tax system. These roles are described briefly hereunder;

**Promote voluntary compliance:** The primary role of the audit program is to promote voluntary compliance by taxpayers with the tax laws. It seeks to achieve this by reminding taxpayers of the risks

of noncompliance and by engendering confidence in the broader community that serious abuses of the tax law will be detected and appropriately penalized.

**Detect non-compliance at the individual taxpayer level:** By concentrating on major areas of risk (e.g. unreported cash income) and those individual taxpayers most likely to be evading their responsibilities, audits may bring to light significant understatements of tax liabilities, and additional tax revenue collections.

**Gather information on the “health” of the tax system (including patterns of taxpayers’ compliance behaviour):** The results of normal audit activity may provide information on the general well-being of the tax system. Audits conducted on a random basis can assist overall revenue administration by gathering critical information required to form judgments on overall levels of tax compliance that over time can be used to identify trends in overall organizational effectiveness and to gather more precise information that can be used to inform decision-making on future compliance improvement strategies, to refine automated risk-based case selection processes, and even support changes to tax legislation.

**Gather intelligence:** Audits may bring to light information on evasion and avoidance schemes involving large numbers of taxpayers that can be used to mount major counter-abuse projects.

**Educate taxpayers:** Audits can assist clarify the application of the law for individual taxpayers and to identify improvements required to recordkeeping and thus may contribute to improved compliance by taxpayers in the future.

**Identify areas of the law that require clarification:** Audits may bring to light areas of the tax law that are causing confusion and problems to large numbers of taxpayers and thus require further efforts by the revenue body to clarify the laws’ requirements and/or to better educate taxpayers on what they must do to comply into the future. Given the broad range of roles to be performed a

revenue body's audit program typically entails the largest allocation of a revenue body's total staff resources. From this perspective alone, the audit program represents a sizeable strategic investment that dictates the need for sound management policies and practices.

### **Concepts of tax revenue collection growth**

The Rwanda Revenue Authority (RRA) was established under Law No 15/97 of 8 November 1997 as a quasi-autonomous body charged with the task of assessing, collecting, and accounting for tax, customs and other specified revenues. This is achieved through effective administration and enforcement of the laws relating to those revenues. In addition, it is mandated to collect non-tax revenues. The Authority is also responsible for providing advice to the Government on tax policy matters relating to revenue collections. It performs other duties in relation to tax administration, as may be directed from time to time by the Cabinet. The Authority was established as part of the reform programme by the Government of Rwanda designed to restore and strengthen the main economic institutions of the country. Additionally, the Government wanted to improve its resource mobilization capacity while providing the public with better quality and courteous services. In a bid to mobilize more resources the Authority is therefore required to assist taxpayers in understanding and meeting their tax obligations thus raising their compliance (RRA, 2019).

The Rwandan Revenue Authority (RRA) was formed in 1998 to spearhead all reforms in taxation in the country with a mandate to administer, collect and account for all tax and some non-tax revenues and to provide services aimed at promoting business growth. Therefore, Rwanda's state-building approach through taxation, among other major reforms, was anchored around the establishment of this system (tax policy and its administration), which would strengthen the legitimacy of the state through five core principles political inclusion; accountability and transparency; perceived fairness; effectiveness; and political commitment to shared

property (RRA, 2019). It is important to note that the last two decades, critical achievements have been registered which contribute to its success today. Tax revenue collections have increased from Frw 62.8 billion in 1998 to Frw 1,399.5 billion in 2018/19 fiscal year. In most of these years, RRA has achieved and surpassed its revenue targets. Total revenue collection (tax and non-tax, excluding local government collections) amounted to Frw 1,422.9 billion against a target of Frw 1,392.1 billion. This is an achievement of 102.2%, or Frw 30.8 billion in excess of the target. Local Government Taxes and Fees collections totalled Frw 60.6 billion, an achievement of 100.8% of the Frw 60.1 billion target, or a surplus of Frw 0.5 billion. This represents year-on-year growth of 12.7% and a nominal increase of Frw 6.8 billion. Not only has the tax revenue base increased, but its share to the national GDP has also improved, moving from 10% in 1998 to 16.3% in 2018/19. The continued improvement to the current tax-to-GDP ratio of 16.3% is evidence of RRA's commitment to its mandate and responsibilities. RRA strongly believe that the ambition demonstrated over these years continues to build a foundation for future gains. RRA (2019) RRA continues to face the challenges of low compliance culture within some taxpayers and insufficient allocated budget to clear VAT refund backlog. Harelimana (2018) agrees that the more the tax audit conducted the more revenue is collected and improve the degree of voluntary compliance with tax law by tax payers.

During the 2018/19 fiscal year, total tax audits concluded by Small and Medium Taxpayer Office (SMTO) in Kigali were 116 (49 comprehensive and 67 issue audits) against 200 planned. In addition, 7,696 desk audit cases were conducted by SMTO. The initial tax declared by all these cases totaled Frw 2.86 billion. However, the re-assessed tax (principals only, before appeals) totaled Frw 15.5 billion, an additional assessment of Frw 12.6 billion. The average tax declared by all audited SMTO taxpayers including desk audit cases amounted to 15.6% of the total re-assessed tax (principal only,

before appeals). RRA domestic tax offices in Provinces completed 112 tax audit cases (32 comprehensive and 80 issue audits) against 300 that were planned. In addition, 1,004 desk audit cases were conducted and completed by tax offices in Provinces. The initial tax declared by all these cases concluded by domestic tax offices in Provinces totaled Frw 1.3 billion. However, the re-assessed tax (principals only, before appeals) totaled Frw 3.7 billion, an additional assessment of Frw 2.4 billion. The average tax declared by all audited taxpayers in Provinces including desk audit cases amounted to 35.7% of the total re-assessed tax (principals only, before appeals). Out of 110 tax audit cases that were planned by large taxpayers' office in 2018/19 fiscal year, 79 were completed (75 comprehensive and 4 issue audits). In addition, 233 desk audit cases were conducted by LTO. The initial tax declared by all audited large taxpayers totaled Frw 139.2 billion. However, the re-assessed tax (principals only, before appeals) totaled Frw 148.5 billion, an additional assessment of Frw 9.3 billion. The average tax declared by audited LTO taxpayers amounted to 93.7% of the total re-assessed tax (principals only, before appeals). Customs Services Department (CSD) completed 128 post-clearance audit cases against 134 planned. Also, 242 desk audit cases were conducted by CSD. The initial tax declared by all audited importers totaled Frw 80.7 billion. However, the re-assessed tax (principals only, after appeals) totaled Frw 82.1 billion, an additional assessment of Frw 1.4 billion. The average tax declared by audited importers amounted to 98.3% of the total re-assessed tax (principals only, after appeals).

RRA (2019) argued that the percentage contribution of tax revenue to national budget has increased progressively during the past four fiscal years. It increased to 58.3% in 2017/18 fiscal year from 48.7% in 2014/15 fiscal year. However, it decreased to 54.1% in 2018/19. RRA (2019) noted that tax revenue collection is key to the financial independence, stability and sustainability of a nation as it is in line with RRA's vision statement.

### **Empirical Studies**

A lot of good number of empirical studies have been conducted on the financial statement audit and revenue collection growth in developed and developing countries with various conclusions. Nyakamba (2011) examined the relationship between tax reassessment, and revenue collection in Kenya revenue authority in 2014. The research was limited to the Nairobi west region of the Kenya revenue authority. He used secondary data from Kenya revenue authority's reports. T-test analytical model used to analyze the data. He found in his research that statistically there is a significant relationship between tax paid 29 before and after tax reassessment. He declared that the more tax revenue will be collected if a tax agency conduct tax reassessment frequently. Ladi and Henry (2015) explored the effects of the tax audit on revenue generation in Federal Inland Revenue Service. The population of the study consists of the staff of the Federal Inland Revenue Service, Abuja, and Taro Yamane sampling technique was used to determine the sample size. The questionnaire was used to generate the data and was tested using Analysis of Variance (ANOVA). Findings revealed that: tax audit has significant effects on revenue generation in Federal Inland Revenue Service and tax audit has a positive relationship with the revenue generation in Federal Inland Revenue Service

Harelimana (2018) conducted a research on the effect of tax audit on revenue collection in Rwanda, by using questionnaire as source of data pronounced that tax audit actually has an effect to revenue collection as according to the T-tests there is significance in the correlation between tax collected before the audit and after the audit. This clearly indicates that tax audit increases revenue collection. That in essence meant that the more the tax audit conducted the more revenue is collected. Thus, it is right to say that tax audit is directly related to revenue collection. All the tax audits are important because they add something to revenue and thus should be encouraged as it assists the government in collecting appropriate tax revenue

necessary for budget, maintaining economic and financial order and stability, to ensure that satisfactory returns are submitted by the tax payers, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers and to ensure that the amount due is collected and remitted to government. Adediran *et al.* (2013), with focus on the impact of tax audit and investigation on revenue generation in Nigeria using Pearson correlation coefficient indicated that tax audit and investigations can increase the revenue base of the government and can also stamp out the incidents of tax evasion in the country.

Mutarindwa and Rutikanga (2014) pined in their study on the impact of taxpayers' financial statements audit on tax revenue growth, findings indicate that the tax audit increases the compliance rate which will impact positively the tax revenues to be collected by RRA. Because the taxpayers' compliance is still less and generally it negatively affects the tax revenues growth, the financial statements of taxpayers should be analyzed until they show a true and fair view of a Company's Affairs. Enofe *et al.* (2019) study entitled tax audit, investigation, and tax evasion, findings from the study revealed that tax audit in the form of desk audit, field audit and back-duty audit exert a significant negative influence on tax evasion.

#### **Relationship between financial statement audit and tax revenue collection growth**

According to Nyakamba (2011), tax audit affects revenue collection in that it promotes voluntary compliance of taxpayers which increases revenue. It also determines the accuracy of returns so as to ensure the right taxes are submitted. With tax audit tax liability can be easily declared and matters that need adjustment are identified. It also helps in collecting tax interests and penalties which thereby increase revenue collection. Tax audit also helps to implement changes to eradicate evasion. Thus, tax audit is positively related to tax collection.

Revenue collection is the process of collecting state fees, charges, excise duties, customs, taxes, and other revenue sources, and depositing them to the state account. On the other side, tax reassessment is the process of examining the tax revenues to ensure tax compliance. Tax reassessment has an impact on revenue collection by encouraging taxpayers to comply with the tax acts and regulations. Tax audit is one of the measures that influences taxpayers' behavior, thus determines the level of tax compliance (Mebratu, 2016). In other words, tax reassessment improves voluntary tax compliance. If taxpayers know the law well and are prepared to pay the tax they are required to pay, then tax revenue will rise. The reason behind this is that the taxpayers must report all their sources of revenue to the tax agency under the compliance principle. Therefore, tax audit can improve a state revenue collection by increasing the taxpayer's compliance rate.

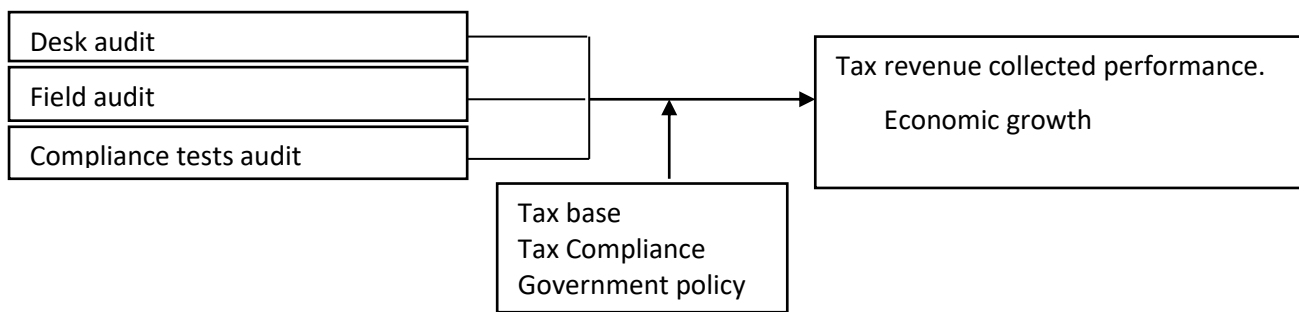
Tax audit or tax reassessment is ensuring the accuracy of tax returns submitted by taxpayers. It means tax audit increases revenue collection by collecting tax interests and penalties where taxpayers could not pay the expected tax amounts on time. Tax audit is minimizing tax dodging, and tax avoidance. Tax reassessment is a process of establishing, and maintaining a strong mechanism based on which a tax agency can deal well with tax avoidance techniques of taxpayers (Badara, 2012). Nowadays, the role of tax reassessment in tax agencies is minimizing the tax avoidance and under reporting of taxes (Biber, 2010). According to Barreca and Ramachandran (2013), the main aim of tax reassessment is determining the level of tax compliance, and decreasing tax evasion. Harelimana (2018) his study shows a tax audit increases revenue collection. It means if a tax agency conducts more tax reassessment, the agency will collect more tax revenues. Therefore, tax audit can positively affect revenue collection. It affects revenue collection directly through reassessment of tax returns, and improving the tax compliance with

the tax laws, and indirectly through minimizing tax avoidance and tax evasion.

### Conceptual framework

Conceptual framework is a set of broad ideas used to explain the relationship between the independent variables (factors) and the dependent variables (outcome) (Kothari, 2004). It is a

schematic presentation which identifies the variables that when put together explain the issue of concern (Mugenda & Mugenda, 2013). The conceptual framework assesses how the financial statement audit as independent variable influences tax revenue collection growth as dependent variable.



**Independent variable**

**Dependent variable**

**Figure 1 Conceptual Framework**

Figure 1 indicates that the independent variable is “financial statement audit” which contains “desk audit, field audit and compliance tests audit”. The dependent variable is “Tax revenue collection growth” measured by tax revenue collected performance and economic growth. However, these variables are moderated by other intervening variables such as tax base, tax law compliance and government policy.

### METHODOLOGY

This study adopted a descriptive survey research design.

The population under this research comprised of RRA’s tax audit officers and was 100 tax audit officers from RRA, head quarter reported by the Human Resource department. This population consisted of RRA’s tax audit officers involved in day-to-day Tax auditing.

For the purpose of this study the purposive sampling technique was used.

Under this study the sample size of this research was selected using Yamane’s formula.

Both primary and secondary sources of data was obtained for the study.

The Primary data were collected using questionnaire techniques while secondary data were obtained using documentary technique. SPSS and MS-Excel was used for data analysis.

### FINDINGS

#### Descriptive Statistics and discussion

This section demonstrated the respondents rate and study findings alongside discussions of the data output. The findings are in form of descriptive statistics (Mean and Standard deviation). The data collected was on a five point Likert scale of 1-5 where Strongly agree=1; Agree= 2; Undecided=3; Disagree=4; and Strongly disagree.

#### Desk audit

The first objective of the study was to analyze whether desk audit influences tax revenue collection growth in RRA. To achieve this objective, the respondents were asked to indicate their level of agreement on the statement related to desk audit and tax revenue collection growth in RRA. Responses was summarized using mean ( $\bar{x}$ ) and standard deviations ( $\delta$ ).

**Table 1: Desk audit**

Desk audit	N	Mean	Std. Deviation
Desk audit takes within the premises of tax officials	50	1.5800	.49857
Desk audit is cost effective	50	1.2200	.41845
It affords auditors to independently determine the accurate tax liability of the tax payers	50	1.7000	.46291
Desk audit ensures the level of tax compliance by examining the existing documents in the taxpayer's file	50	1.9400	.65184
A desk audit is used as a preliminary examination of declarations analyzing accuracy, completeness, ratios and crosschecking information to determine if further audit or investigation is warranted.	50	1.1400	.35051
Tax payers respect the tax law, regulation and directive.	50	2.3400	1.43726
Desk audit is important	50	1.0600	.23990
Do desk audit practice auditing regularly	50	1.2600	.44309
Valid N (listwise)	50		

The findings from table 1 indicated that the respondents strongly agreed with statement that desk audit is cost effective as indicated by ( $\bar{x}$  =1.2200,  $\delta$ =0.41845), a desk audit is used as a preliminary examination of declarations analyzing accuracy, completeness, ratios and crosschecking information to determine if further audit or investigation is warranted as indicated by ( $\bar{x}$  =1.1400,  $\delta$ =0.35051), desk audit is important as indicated by ( $\bar{x}$  =1.0600,  $\delta$ =0.23990), do desk audit practice auditing regularly as indicated by ( $\bar{x}$  =1.2600,  $\delta$ =0.44309). while other respondents agreed with statement that desk audit takes within the premises of tax officials as indicated by ( $\bar{x}$  =1.5800,  $\delta$ =0.49857), it affords auditors to independently determine the accurate tax liability of the tax payers as indicated by ( $\bar{x}$  =1.7000,  $\delta$ =0.46291), desk audit ensures the level of tax compliance by examining the existing documents in the taxpayer's file as indicated by ( $\bar{x}$  =1.9400,  $\delta$ =0.65184), tax payers respect the tax law,

regulation and directive as indicated by ( $\bar{x}$  =2.3400,  $\delta$ =1.43726). This implied that desk audit takes place within the office of the tax audit officer to enable them clear some issues in the tax returns submitted, to ensure completeness of the items submitted for tax purposes, look for apparent errors or mistakes in the tax computations and/or in the accompanying documents and records. This was supported by Bassey (2013) confirmed that desk audit is said to be the tax audit or examination which takes place in the tax office where books and financial records of the taxpayers are examined.

#### Field audit

The second objective of the study was to investigate whether field audit influences tax revenue collection growth in RRA. To achieve this objective, the respondents were asked to indicate their level of agreement on the statement related to field audit and tax revenue collection growth in RRA. Responses was summarized using mean ( $\bar{x}$ ) and standard deviations ( $\delta$ ).

**Table 2: Field audit**

Field audit	N	Mean	Std. Deviation
Desk audit often times lead to field audit when additional documents are needed	50	1.4800	.50467
Tax payers cooperate to give their source documents (essential information necessary for performing tax audit)	50	1.8200	.52255
Field audit requires the taxpayers are well-informed before the commencement of the audit	50	1.3400	.47852
Field audit allows physical verification of tax payers claims so as to confirm the facts and figure of the returns	50	1.7000	.61445
The auditors check the source documents and the data of the third party with the information presented in the taxpayers' income tax returns to ensure that tax laws and regulations are followed properly	50	1.4400	.50143
Field audit improve reduction of tax evasion and other fraudulent intensions in order to increase tax revenue	50	1.3400	.47852
Field audit allows auditors to independently determine the accurate tax liability of the taxpayers	50	1.4200	.60911
Field audit show accuracy and reliability	50	1.1400	.35051
Valid N (listwise)	50		

The findings from table 2 indicated that the respondents strongly agreed with statement that desk audit often times lead to field audit when additional documents are needed as indicated by ( $\bar{x}$  =1.4800,  $\delta$ =0.50467), field audit requires the taxpayers are well-informed before the commencement of the audit as indicated by ( $\bar{x}$  =1.3400,  $\delta$ =0.47852), the auditors check the source documents and the data of the third party with the information presented in the taxpayers' income tax returns to ensure that tax laws and regulations are followed properly as indicated by ( $\bar{x}$  =1.4400,  $\delta$ =0.50143), field audit improve reduction of tax evasion and other fraudulent intensions in order to increase tax revenue as indicated by ( $\bar{x}$  =1.3400,  $\delta$ =0.47852), field audit allows auditors to independently determine the accurate tax liability of the taxpayers as indicated by ( $\bar{x}$  =1.4200,  $\delta$ =0.60911), and field audit show accuracy and reliability as indicated by ( $\bar{x}$  =1.1400,  $\delta$ =0.35051). While other respondents agreed with statement that tax payers cooperate to give their source documents (essential information necessary for

performing tax audit) as indicated by ( $\bar{x}$  =1.8200,  $\delta$ =0.52255), field audit allows physical verification of tax payers claims so as to confirm the facts and figure of the returns as indicated by ( $\bar{x}$  =1.7000,  $\delta$ =0.61445). This implied that field audit takes place within the office of the taxpayer's office when desk audit not satisfies with the tax return submitted and when additional information or documentary evidence is required to satisfy the inspector of taxes carrying out the desk audit. This was supported by Harelimana (2018) pined that all the tax audits are important because they add something to revenue and thus should be encouraged as it assists the government in collecting appropriate tax revenue necessary for budget, maintaining economic and financial order and stability, to ensure that satisfactory returns are submitted by the tax payers, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers and to ensure that the amount due is collected and remitted to government. This also was supported by Ladi and



Henry (2015) noted that field audit allows physical verification of tax payers claims so as to confirm the facts and figure of the returns.

**Compliance test audit**

The third objective of the study was to evaluate whether compliance tests audit affect tax revenue

collection growth in RRA. To achieve this objective, the respondents were asked to indicate their level of agreement on the statement related to compliance test audit and tax revenue collection growth in RRA. Responses was summarized using mean ( $\bar{x}$ ) and standard deviations ( $\delta$ ).

**Table 3: Compliance test audit**

Compliance test	N	Mean	Std. Deviation
Desk audit induces taxpayers to fully comply with tax laws and regulations	50	1.9800	.74203
Field audit promotes reporting compliance of taxpayers	50	1.4600	.50346
The function of tax audit will increase tax payer’s compliance with tax law	50	1.0200	.14142
Compliance test audit ensures full compliance of tax laws and revenue of tax	50	1.8000	.57143
The degree of tax payers compliance is low to which a taxpayer obliges to tax rules and regulations willingly without any use of force	50	1.5400	.70595
Compliance test audit improve the ability and willingness of taxpayers to comply with tax laws, declare the correct income in each year and pays the right amount of taxes on time	50	2.1800	1.06311
Compliance test audit is crucial in the management of returns	50	1.4600	.54248
The additional test necessary if not compliance with tax audit	50	1.2800	.57286
Valid N (listwise)	50		

The findings from table 3 indicated that the respondents strongly agreed with statement that field audit promotes reporting compliance of taxpayers as indicated by ( $\bar{x}$  =1.4600,  $\delta$ =0.50346), the function of tax audit will increase tax payer’s compliance with tax law as indicated by ( $\bar{x}$  =1.0200,  $\delta$ =0.14142), compliance test audit is crucial in the management of returns as indicated by ( $\bar{x}$  =1.4600,  $\delta$ =0.54248), the additional test necessary if not compliance with tax audit as indicated by ( $\bar{x}$  =1.2800,  $\delta$ =0.57286). While other respondents agreed with statement that desk audit induces taxpayers to fully comply with tax laws and regulations as indicated by ( $\bar{x}$  =1.9800,  $\delta$ =0.74203), compliance test audit ensures full compliance of tax laws and revenue of tax as indicated by ( $\bar{x}$  =1.8000,  $\delta$ =0.57143), the degree of tax payers compliance is low to which a taxpayer obliges to tax rules and regulations willingly without any use of force as indicated by ( $\bar{x}$  =1.5400,  $\delta$ =0.70595), compliance test audit improve the ability and willingness of taxpayers to comply with tax laws,

declare the correct income in each year and pays the right amount of taxes on time as indicated by ( $\bar{x}$  =2.1800,  $\delta$ =1.06311). This implied that compliance tax audit performed through assessing whether activities, financial transactions and information are presented; true reporting of the tax base, correct computation of the liability, timely filing of the return, and timely payment of the amount due. This was supported by Harelimana (2018) pined that all the tax audits are important because they add something to revenue and thus should be encouraged as it assists the government in collecting appropriate tax revenue necessary for budget, maintaining economic and financial order and stability, to ensure that satisfactory returns are submitted by the tax payers, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers and to ensure that the amount due is collected and remitted to government. Reflected by Allignham and Sandmo (1972), who pined that compliance

with tax law typically means true reporting of the tax base, correct computation of the liability, timely filing of the return, and timely payment of the amount due.

### Government policies

The fourth objective of this study was to establish the moderating effect of government policies on financial statement audit and tax revenue collection growth. The findings were in form of descriptive statistics (Mean and Standard deviation). The data

collected was on a five point Likert scale of 1-5 where Strongly agree=1; Agree= 2; Undecided=3; Disagree=4; and Strongly disagree=5. To achieve this objective, the respondents were asked to indicate their level of agreement on the statement related to government policies and tax revenue collection growth in RRA. Responses are summarized using mean ( $\bar{x}$ ) and standard deviations ( $\delta$ ).

**Table 4: Government policies**

Government policies	N	Mean	Std. Deviation
Field audit ensures full compliance of tax laws and remittance of tax	50	1.1200	.32826
Registration audit influences taxpayers' compliance level and remittance of tax	50	1.7800	.41845
Government policies improve the tax revenue and compliance as taxpayers' willingness to comply with tax laws, declare the correct income, claim the correct deductions, relief and rebates and pay all taxes on time.	50	1.1800	.38809
Government policies influences taxpayers' compliance level and revenue of tax	50	1.9400	.61974
Fiscal policies affect in the achievements of economic growth.	50	1.0600	.23990
The government regulations are proportionally with the collection of taxes	50	1.8200	.62890
Tax administration influence the taxpayers returns	50	1.7200	.78350
Tax payers pay the returns on time as required by the government policies	50	2.6000	1.35526
Valid N (listwise)	50		

The findings from table 4 indicated that the respondents strongly agreed with statement that government policies ensures full compliance of tax laws and remittance of tax as indicated by ( $\bar{x}$  =1.1200,  $\delta$ =0.32826), government policies improve the tax revenue and compliance as taxpayers' willingness to comply with tax laws, declare the correct income, claim the correct deductions, relief and rebates and pay all taxes on time as indicated by ( $\bar{x}$  =1.1800,  $\delta$ =0.38809), fiscal policies affect in the achievements of economic growth as indicated by ( $\bar{x}$  =1.0600,  $\delta$ =0.23990). While other respondents agreed with statement that registration audit influences taxpayers' compliance level and remittance of tax as indicated by ( $\bar{x}$  =1.7800,  $\delta$ =0.41845), government policies influences taxpayers' compliance level and revenue of tax as indicated by ( $\bar{x}$  =1.9400,  $\delta$ =0.61974), the government regulations are proportionally with the

collection of taxes as indicated by ( $\bar{x}$  =1.8200,  $\delta$ =0.62890), tax administration influence the taxpayers returns as indicated by ( $\bar{x}$  =1.7200,  $\delta$ =0.78350), tax payers pay the returns on time as required by the government policies as indicated by ( $\bar{x}$  =2.6000,  $\delta$ =1.35526). This implied that the government through RRA governed and opined that taxpayers are expected to pay taxes on time. Tax laws and administrative procedures specify payment requirements, including deadlines (due dates) for payment, who is required to pay, and payment methods. Depending on the system in place, payments due will be either self-assessed or administratively assessed. Failure by a taxpayer to pay on time results in imposition of interest and penalties and, for some taxpayers, legal debt recovery action. This was supported by Mebratu (2016) tax reassessment has an impact on revenue collection by encouraging taxpayers to comply with

the tax acts and regulations. Tax audit is one of the measures that influences taxpayers' behavior, thus determines the level of tax compliance. In other words, tax reassessment improves voluntary tax compliance. If taxpayers know the law well and are prepared to pay the tax they are required to pay, then tax revenue will rise. The reason behind this is that the taxpayers must report all their sources of revenue to the tax agency under the compliance principle. This was also supported by RRA (2019)

continued to provide advice on tax issues as mandated as well as improve the level of tax revenue collection.

### Tax revenue collection growth

The respondents were asked to indicate their level of agreement on the statement related to tax revenue collection growth in RRA as dependent variable. Responses was summarized using mean ( $\bar{x}$ ) and standard deviations ( $\delta$ ).

**Table 5: Tax revenue collection growth**

Tax revenue collection growth	N	Mean	Std. Deviation
The government expenditure affect the tax revenue collected performance	50	1.4400	.50143
Good governance influence the tax revenue collected performance	50	1.4200	.49857
Inflation hamper the tax revenue collected performance	50	1.2600	.44309
Tax rate affect the tax revenue collected performance	50	1.6200	.63535
Tax education impact the tax revenue collected performance	50	1.7800	.41845
Moral obligation enhance the tax revenue collected performance	50	1.0000	.00000
Tax equity contribute to tax revenue collection growth	50	1.2400	.59109
Attitudes towards tax payment enhance the tax revenue collected performance	50	1.9800	1.26958
Valid N (listwise)	50		

The findings from table 5 indicated that the respondents strongly agreed with statement that the government expenditure affect the tax revenue collected performance as indicated by ( $\bar{x}$  =1.4400,  $\delta$ =0.50143), good governance influence the tax revenue collected performance as indicated by ( $\bar{x}$  =1.4200,  $\delta$ =0.49857), inflation hamper the tax revenue collected performance as indicated by ( $\bar{x}$  =1.2600,  $\delta$ =0.44309), tax rate affect the tax revenue collected performance is crucial for tax revenue collection growth as indicated by ( $\bar{x}$  =1.0000,  $\delta$ =0.00000), tax education impact the tax revenue collected performance as indicated by ( $\bar{x}$  =1.2400,  $\delta$ =0.59109). While other respondents agreed with statement that moral obligation enhance the tax revenue collected performance as indicated by ( $\bar{x}$  =1.6200,  $\delta$ =0.63535), tax equity contribute to tax revenue collection growth as indicated by ( $\bar{x}$

=1.7800,  $\delta$ =0.41845), and attitudes towards tax payment enhance the tax revenue collected performance as indicated by ( $\bar{x}$  =1.9800,  $\delta$ =1.26958). This implied that the more the tax collected the more tax revenue can be realised and hence improve the degree of the tax revenue collected performance. This was supported by (OECD, 2010) where the United Nations considers that achieving the Millennium Development Goals (MDGs) requires developing countries to raise at least 20% of their gross domestic product (GDP) in taxes. In Africa, most developing countries, taxation goes hand in-hand with economic growth and taxes are lifeblood for governments to deliver essential services and to make long-term investments in public goods (Paepe & Dickinson, 2014). In Rwanda, this was supported by (RRA, 2019) tax revenue to GDP ratio in Rwanda was 15.2%, 15.6%, 15.2%,

15.6% and 16.3% in 2014/15, 2015/2016, 2016/17, 2017/18 and 2018/19 respectively due to improve on the tax revenue collection. However, despite the recorded growth in revenue collections, Rwanda's tax to GDP ratio is still below their target, 18% Sub-Saharan average.

### Inferential statistics and discussion

Under this study inferential statistics were used to indicate the relationship and effect of independent variable on dependent variable like regression analysis and correlation analysis.

### Effect of financial statement audit on tax revenue collection growth

This part answers objective of the study. The relationship between financial statement audit and tax revenue collection growth was investigated using desk audit, field audit, and compliance test audit and government policies for financial statement audit while tax revenue collected performance was for tax revenue collection growth.

**Table 6: Correlation analysis between financial statement audit and tax revenue collection growth**

Control Variables			Desk audit	Field audit	Compliance test audit	Government policies
Tax revenue collected performance	Desk audit	Correlation	1.000	.832	.791	.835
		Significance (2-tailed)	.	.000	.000	.000
		df	0	4	4	4
	Field audit	Correlation	.832	1.000	.848	.829
		Significance (2-tailed)	.000	.	.000	.000
		df	4	0	4	4
	Compliance test audit	Correlation	.791	.848	1.000	.848
		Significance (2-tailed)	.000	.000	.	.000
		df	4	4	0	4
	Government policies	Correlation	.835	.829	.848	1.000
		Significance (2-tailed)	.000	.000	.000	.
		df	4	4	4	0

From the Partial correlation coefficient (two-tailed) table 6 presented the relationship between dimensions of financial statement audit indicated by desk audit, field audit, and compliance test audit and government policies against tax revenue collection growth measured by tax revenue collected performance. The results showed that all the dimensions have positive and significant influence between financial statement audit and tax revenue collection growth. Specifically, desk audit, field audit, and compliance test audit and government policies relates positively with tax revenue collected performance ( $r = 1.000, p < 0.05$ ;  $r = 0.832, p < 0.05$ ;  $r = 0.791, p < 0.05$ ; and  $r = 0.835, p < 0.05$ ) respectively. These implied that there a

strong positive relationship between financial statement audit and tax revenue collection growth. This was supported by Nyakamba (2011) examined the relationship between tax reassessment, and revenue collection in Kenya revenue authority in 2014. The research was limited to the Nairobi west region of the Kenya revenue authority. He used secondary data from Kenya revenue authority's reports. T-test analytical model used to analyse the data. He found in his research that statistically there is a significant relationship between tax paid before and after tax reassessment. He declared that the more tax revenue will be collected if a tax agency conduct tax reassessment frequently.

**Effect of desk audit on tax revenue collected performance**

The first objective of the study was to analyze whether desk audit influences tax revenue collection growth in RRA.

**Table 7:** Model summary between desk audit and tax revenue collected performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.972 <sup>a</sup>	.945	.840	.20129

- a. Predictors: (Constant), Desk audit
- b. Dependent variable: Tax revenue collected performance

The result showed that the correlation coefficient (R) = 0.972 showed a strong relationship between desk audit and tax revenue collected performance. Considering R<sup>2</sup> in statistic indicate the variation in the dependent variable due to independent variable. From the findings, the value of R<sup>2</sup>= 0.945 indicated that desk audit explained 94.50% of the change in tax revenue collected performance. The results indicated that the coefficient of determination, adjusted R<sup>2</sup>= 0.840 obtained from the model summary, coefficient of determination was used to explain whether the model is good predictor. From the results of the analysis, the findings showed that desk audit contributed to 84.00% of the variation in tax revenue collected

performance which shows that the model is a good prediction. Harelimana (2018) pinned that all the tax audits are important because they add something to revenue and thus should be encouraged as it assists the government in collecting appropriate tax revenue necessary for budget, maintaining economic and financial order and stability, to ensure that satisfactory returns are submitted by the tax payers, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers and to ensure that the amount due is collected and remitted to government.

**Table 8:** ANOVA between desk audit and tax revenue collected performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.731	1	.367	9.048	.000 <sup>b</sup>
	Residual	.689	17	.041		
	Total	12.420	18			

- a. Dependent variable: Tax revenue collected performance
- b. Predictors: (Constant), Desk audit

The results of the findings from the table 8 indicated that the ANOVA statistics show that the significance (p = .000<sup>b</sup>, F=9.048) was less than the recommended critical significance at 0.05. Therefore, the regression model was statistically significant in predicting how desk audit influence tax revenue collected performance in RRA. Since the p-value was less than 0.05 (P-value= .000<sup>b</sup>) obtained, then alternative hypothesis was accepted

while null hypothesis was rejected. Meant there was significant effect between desk audit and tax revenue collected performance. This was supported by Adediran *et al.* (2013); Nyakamba (2014), the desk audit essence is to ensure some level of compliance with tax laws, rules and regulations as well as performing the administrative checks on returns submitted.

**Table 9:** Estimated coefficient model between desk audit and tax revenue collected performance

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.069	.324		2.895	.006
Desk audit	.786	.313	.137	2.511	.031

- a. Dependent variable: Tax revenue collected performance.
- b. Predictors: (Constant), Desk audit

The results from the table 9 indicated that there was a significant positive relationship between desk audit and tax revenue collected performance. Where the regression coefficient of desk audit was 0.786 (p-value =0.006). This implied that desk audit had strong positive relationship on tax revenue collected performance in RRA under this study. The following regression equation was obtained:  $Y=1.009+0.786X_1+e$ , where  $Y$  = tax revenue collected performance,  $X_1$  = Desk audit,  $e$ = Error term. Implied that holding other factors (desk audit) remain constant to zero, the tax revenue collected performance in RRA would be achieved at a unit of 1.009. It was also indicated that a unit increase in desk audit would cause an increase in tax revenue collected performance in RRA by a factor of 0.786.

This was supported Ladi and Henry (2015) explored the effects of the tax audit on revenue generation in Federal Inland Revenue Service. The questionnaire was used to generate the data and was tested using Analysis of Variance (ANOVA). Findings revealed that: tax audit has significant effects on revenue generation in Federal Inland Revenue Service and tax audit has a positive relationship with the revenue generation in Federal Inland Revenue Service.

**Effect of field audit on tax revenue collected performance**

The second objective of the study was to investigate whether field audit influences tax revenue collection growth in RRA.

**Table 10:** Model summary between field audit and tax revenue collected performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.828 <sup>a</sup>	.685	.623	.30770

- a. Predictors: (Constant), Field audit
- b. Dependent variable: Tax revenue collected performance

The result in the table 10 showed that the correlation coefficient (R) = 0.828 showed a strong relationship between field audit and tax revenue collected performance. Considering  $R^2$  in statistic indicated the variation in the dependent variable due to independent variable. From the findings, the value of  $R^2= 0.685$  indicated that field audit explained 68.50% of the change in tax revenue collected performance. The results indicated that the coefficient of determination, adjusted  $R^2= 0.623$  obtained from the model summary, coefficient of determination was used to explain whether the

model is good predictor. From the results of the analysis, the findings showed that field audit contributed to 62.30% of the variation in tax revenue collected performance which shows that the model is a good prediction. This was supported by Olaoye and Ogundipe (2018) opined that desk audit often times lead to field audit when additional documents are needed to complete the inspection of a tax payer. This implied that field audit is more elaborate and broader than office audit because it transcends the office of the auditor. Explaining further, Ladi and Henry (2015) noted that field audit

requires the taxpayers are well-informed before the commencement of the audit. This type of audit allows physical verification of tax payers claims so

as to confirm the facts and figure of the returns. Literature affirmed that field audit would improve the level of compliance by the tax payers.

**Table 11:** ANOVA between field audit and tax revenue collected performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.438	1	1.055	11.140	.000 <sup>b</sup>
	Residual	3.882	41	.095		
	Total	12.320	42			

Dependent variable: Tax revenue collected performance

Predictors: (Constant), Field audit

The results of the findings from the table 11 indicated that the ANOVA statistics show that the significance ( $p = .000^b$ ,  $F=11.140$ ) was less than the recommended critical significance at 0.05. Therefore, the regression model was statistically significant in predicting how field audit influence tax revenue collected performance in RRA. Since the p-value was less than 0.05 ( $P\text{-value} = .000^b$ ) obtained, then alternative hypothesis was accepted while null hypothesis was rejected. Meant there was

significant effect between field audit and tax revenue collected performance. Explaining further, Ladi and Henry (2015) noted that field audit requires the taxpayers are well-informed before the commencement of the audit. This type of audit allows physical verification of tax payers claims so as to confirm the facts and figure of the returns. Literature affirmed that field audit would improve the level of compliance by the tax payers.

**Table 12:** Estimated coefficient model between field audit and tax revenue collected performance

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.904	.324		2.895	.062
	Field audit	.968	.300	.208	3.216	.001

a. Dependent variable: Tax revenue collected performance.

b. Predictors: (Constant), Field audit

The results from the table 13 indicated that there was a significant positive relationship between field audit and tax revenue collected performance. Where the regression coefficient of field audit was 0.968 ( $p\text{-value} = 0.001$ ). This implied that field audit had strong positive relationship on tax revenue collected performance in RRA under this study. The following regression equation was obtained:  $Y = 1.904 + 0.968X_1 + e$ , where  $Y$  = tax revenue collected performance,  $X_1$  = Field audit,  $e$  = Error term. Implied that holding other factors (field audit) remain constant to zero, the tax revenue collected performance in RRA would be achieved at a unit of

1.904. It was also indicated that a unit increase in field audit would cause an increase in tax revenue collected performance in RRA by a factor of 0.968. This was supported by Adediran *et al.* (2013); Nyakamba (2014) said that by the nature and scope of field auditor's work, regular assessing officers can only carry out limited desk audit through examination of accounts and returns. It is in a bid to check this handicap as well as to improve on tax compliance that tax authorities carry out field audit exercise on taxpayers by physically conducting the exercise in the office of the taxpayer. Field audit involves physical verification of documentary

evidence and materials at the premises of a taxpayer so as to confirm the facts and figures of the tax returns filed by corporate taxpayers. The scope or depth of verification depends on the outcome of the desk audit work carried out by the tax auditor as well as the risk factors of the audit exercise.

### Effect of compliance test audit on tax revenue collected performance

The first objective of the study was to evaluate whether compliance tests audit affect tax revenue collection growth in RRA.

**Table 14:** Model Summary between compliance test audit and tax revenue collected performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826 <sup>a</sup>	.683	.621	.30871

- a. Predictors: (Constant), Compliance test audit
- b. Dependent variable: Tax revenue collected performance

The result in the table 14 showed that the correlation coefficient (R) = 0.826 indicated a strong relationship between compliance test audit and tax revenue collected performance. Considering R<sup>2</sup> in statistic indicated the variation in the dependent variable due to independent variable. From the findings, the value of R<sup>2</sup>= 0.683 indicated that compliance test audit explained 68.30% of the change in tax revenue collected performance. The results indicated that the coefficient of determination, adjusted R<sup>2</sup>= 0.621 obtained from the model summary, coefficient of determination

was used to explain whether the model is good predictor. From the results of the analysis, the findings show that compliance test audit contributed to 62.10% of the variation in tax revenue collected performance which shows that the model is a good prediction. According to INTOSAI (2018), tax compliance auditing is performed by assessing whether activities, financial transactions and information are in all material respect, in compliance with the authorities. The level of compliance reflect the with the correctness of tax revenue submitted.

**Table 15:** ANOVA between compliance test audit and tax revenue collected performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.413	1	1.052	11.034	.000 <sup>b</sup>
	Residual	3.907	41	.095		
	Total	12.320	42			

Dependent variable: Tax revenue collected performance  
 Predictors: (Constant), compliance test audit

The results of the findings from the table 15 indicated that the ANOVA statistics show that the significance (p = .000<sup>b</sup>, F=11.034) was less than the recommended critical significance at 0.05. Therefore, the regression model is statistically significant in predicting how compliance test audit influence tax revenue collected performance in RRA. Since the p-value was less than 0.05 (P-value=.000<sup>b</sup>) obtained, then alternative hypothesis is

accepted while null hypothesis is rejected. Meant there was significant effect between compliance test audit and tax revenue collected performance. Supported by Allignham and Sandmo (1972), who pinned that compliance with tax law typically means true reporting of the tax base, correct computation of the liability, timely filing of the return, and timely payment of the amount due.



**Table 16:** Estimated coefficient model between compliance test audit and tax revenue collected performance

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	0.905	.324		2.895	.062
Compliance tests audit	.671	.241	.250	2.784	.003

- a. Dependent variable: Tax revenue collected performance.
- b. Predictors: (Constant), Compliance test audit

The results from the table 16 indicated that there was a significant positive relationship between compliance test audit and tax revenue collected performance. Where the regression coefficient of compliance test audit was 0.671 (p-value =0.003). This implied that compliance audit had strong positive relationship on tax revenue collected performance in RRA under this study. The following regression equation was obtained:  $Y=0.905+0.671X_1+e$ , where Y = tax revenue collected performance,  $X_1$  = Compliance test audit, e= Error term. Implied that holding other factors (compliance test audit) remain constant to zero, the tax revenue collected performance in RRA would be achieved at a unit of 0.905. It was also indicated

that a unit increase in desk audit would cause an increase in tax revenue collected performance in RRA by a factor of 0.671. Reflected by Allingham and Sandmo (1972), who pined that compliance with tax law typically means true reporting of the tax base, correct computation of the liability, timely filing of the return, and timely payment of the amount due.

**Effect of government policies on tax revenue collected performance**

The first objective of the study was to establish the government policies considered in the achievements of economic growth.

**Table 17: Model Summary between government policies and tax revenue collected performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.867 <sup>a</sup>	.752	.730	.26218

- a. Predictors: (Constant), Government policies
- b. Dependent variable: Tax revenue collected performance

The result in the table 17 showed that the correlation coefficient (R) = 0.867 showed a strong relationship between government policies and tax revenue collected performance. Considering R<sup>2</sup> in statistic indicated the variation in the dependent variable due to independent variable. From the findings, the value of R<sup>2</sup>= 0.752 indicated that government policies explained 75.20% of the change in tax revenue collected performance. The results indicated that the coefficient of determination, adjusted R<sup>2</sup>= 0.730 obtained from

the model summary, coefficient of determination was used to explain whether the model is good predictor. From the results of the analysis, the findings showed that government policies contributed to 73.00% of the variation in tax revenue collected performance which shows that the model was a good prediction. This was supported by RRA (2019) continued to provide advice on tax issues as mandated as well as improve the level of tax revenue collection.

**Table 18:** ANOVA between government policies and tax revenue collected performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.387	1	2.347	34.138	.000 <sup>b</sup>
	Residual	3.093	45	.069		
	Total	12.480	46			

- a. Dependent variable: Tax revenue collected performance  
b. Predictors: (Constant), Government policies

The results of the findings from the table 18 indicated that the ANOVA statistics show that the significance ( $p = .000^b$ ,  $F=34.138$ ) was less than the recommended critical significance at 0.05. Therefore, the regression model was statistically significant in predicting how government policies influence tax revenue collected performance in RRA. Since the p-value was less than 0.05 ( $P\text{-value} = .000^b$ ) obtained, then alternative hypothesis is accepted while null hypothesis is rejected. Meant there was significant effect between government policies and tax revenue collected performance. This was

supported by RRA (2019) opined that taxpayers are expected to pay taxes on time. Tax laws and administrative procedures specify payment requirements, including deadlines (due dates) for payment, who is required to pay, and payment methods. Depending on the system in place, payments due will be either self-assessed or administratively assessed. Failure by a taxpayer to pay on time results in imposition of interest and penalties and, for some taxpayers, legal debt recovery action. The aim of the tax administration should be to achieve high rates of voluntary on-time payment.

**Table 19:** Estimated coefficient model between government policies and tax revenue collected performance

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.303	.324		2.895	.062
	Government policies	.769	.279	.811	2.756	.002

- a. Dependent variable: Tax revenue collected performance.  
b. Predictors: (Constant), Government policies

The results from the table 19 indicated that there was a significant positive relationship between government policies and tax revenue collected performance. Where the regression coefficient of government policies was 0.769 ( $p\text{-value} = 0.002$ ). This implied that government policies had strong positive relationship on tax revenue collected performance in RRA under this study. The following regression equation was obtained:  $Y=1.303+0.769X_1+e$ , where  $Y$  = tax revenue collected performance,  $X_1$  = government policies,  $e$ = Error term. Implied that holding other factors

(government policies) remain constant to zero, the tax revenue collected performance in RRA would be achieved at a unit of 1.303. It was also indicated that a unit increase in government policies would cause an increase in tax revenue collected performance in RRA by a factor of 0.786. This was supported by RRA (2019) continued to provide advice on tax issues as mandated as well as improve the level of tax revenue collection.

**Effect of financial statement audit on tax revenue collection growth in Rwanda**

The general objective of the study was to assess the effect of financial statement audit on revenue collection growth in Rwanda.

**Table 20:** Model summary between financial statement audit and tax revenue collection growth

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.958 <sup>a</sup>	.919	.593	.29698

- a. Predictors: (constant), desk audit, field audit, compliance tests audit, government policies
- b. Dependent variable: Tax revenue collection growth (Tax revenue collected performance)

The predictors in the regression model were desk audit, field audit and compliance tests audit, and government policies while the dependent variable was tax revenue collection growth (Tax revenue collected performance). The result in the table 20 showed that the correlation coefficient (R) = 0.958 showed that there was a strong relationship between financial statement audit (desk audit, field audit and compliance tests audit, and government policies) and tax revenue collection growth in RRA (tax revenue collected performance). Considering R<sup>2</sup> in statistic indicated the variation in the dependent variable due to independent variable. From the findings, the value of R<sup>2</sup>= 0.919 indicated that financial statement audit (desk audit, field audit and compliance tests audit, and government policies) explained 91.90% of the change in tax revenue collection growth (tax revenue collected performance). The results indicated that the coefficient of determination, adjusted R<sup>2</sup>= 0.593 obtained from the model summary, coefficient of

determination was used to explain whether the model is good predictor. From the results of the analysis, the findings show that financial statement audit (desk audit, field audit and compliance tests audit, and government policies) contributed to 59.30% of the variation in tax revenue collection growth (tax revenue collected performance) which shows that the model is a good prediction. This supported by Harelimana (2018) pinned that all the tax audits are important because they add something to revenue and thus should be encouraged as it assists the government in collecting appropriate tax revenue necessary for budget, maintaining economic and financial order and stability, to ensure that satisfactory returns are submitted by the tax payers, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers and to ensure that the amount due is collected and remitted to government.

**Table 21:** Estimated coefficient model between financial statement audit and tax revenue collection growth

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.904	.324		2.895	.062
Desk audit	.786	.313	.137	2.511	.031
Field audit	.968	.300	.208	3.216	.003
Compliance tests audit	.671	.241	.250	2.784	.001
Government policies	.769	.279	.811	2.756	.002

- a. Dependent Variable: Tax revenue collection growth (Tax revenue collected performance).

The results from the table 21 indicates the estimated coefficients of the model which showed that there is a positive relationship between financial statement audit (desk audit, field audit, compliance tests audit, government policies) and Tax revenue collection growth (Tax revenue collected performance) in RRA. Basing on the results the multiple regression model equation became  $Y = 1.904 + 0.786X_1 + 0.968X_2 + 0.671X_3 + 0.769X_4 + e$ . From this multiple regression model, holding other factors (desk audit, field audit, compliance tests audit, and government policies) remain constant to zero, the tax revenue collection growth (Tax revenue collected performance) in RRA would be achieved at a unit of 1.904. It was also indicated that a unit increase in desk audit would cause an increase in tax revenue collection growth (Tax revenue collected performance) in RRA by a factor of 0.786, a unit increase in field audit would cause an increase in tax revenue collection growth (Tax revenue collected performance) in RRA by a factor of 0.968 and a unit increase in compliance tests audit would lead to an increase in tax revenue collection growth (Tax revenue collected performance) in RRA by a factor of 0.671 and a unit increase in government policies would lead to an increase in tax revenue collection growth (Tax revenue collected performance) in RRA by a factor of 0.769. This was supported by FTAC (2006)

defined that a tax audit is an examination of whether a taxpayer has correctly reported its tax liability and fulfilled other obligations. Further supported by Biber (2010) argued that the most tax payers report their tax liabilities more accurately if they believe that the tax administration has the capacity to detect any unreported liabilities and that heavy penalty may be applied when they are detected.

#### Analysis of secondary data

This section analyze and discussion on the data published by RRA in five from 2015-2019, mainly it implied on relationship between initial tax revenue declared by the taxpayer's before financial statement audited and the tax revenue collected after financial statement audited from SMTO and LTO and also focus on the effect of tax revenues collected with GDP growth rate in Rwanda.

#### Relationship between initial taxes declared before audit and tax revenue collected after audit

Initial tax revenue declared is a system under which each taxpayer determines the tax liabilities and submits the income tax returns to the RRA. The tables below showed the comparison and relationship between initial tax revenue declared (tax revenue collected before audit) and tax revenue collected after audit.

**Table 22:** Tax revenue before audit and after audit

Fiscal years	Tax revenue Before audit FRW(Billion)	Tax revenue after audit FRW(Billion)	Variation between tax revenue before audit and after audit FRW(Billion)	Average of the tax revenue declared %
2019/2020	259.70	292.10	32.40	88.91
2018/2019	142.06	164.00	21.94	86.62
2017/2018	229.00	296.80	67.80	77.16
2016/2017	154.50	190.00	35.50	81.32
2015/2016	96.20	110.10	13.90	87.38

The results from the table 22 indicated that in the fiscal year 2019/2020 the initial tax revenue declared totaled Frw 259.70 billion. However, the

re-assessed tax totaled Frw 292.10 billion, an additional assessment of Frw 32.40 billion. The average tax declared by all audited SMTO and LTO

taxpayers amounted to 88.91% of the total re-assessed tax, in the fiscal year 2018/2019 the initial tax revenue declared totaled Frw 142.06 billion. However, the re-assessed tax totaled Frw 164.00 billion, an additional assessment of Frw 21.94 billion. The average tax declared by all audited SMTO and LTO taxpayers amounted to 86.62% of the total re-assessed tax, in the fiscal year 2017/2018 the initial tax revenue declared totaled Frw 229.00 billion. However, the re-assessed tax totaled Frw 296.80 billion, an additional assessment of Frw 67.80 billion. The average tax declared by all audited SMTO and LTO taxpayers amounted to 77.16% of the total re-assessed tax, in the fiscal year 2016/2017 the initial tax revenue declared totaled Frw 154.50 billion. However, the re-assessed tax totaled Frw 190.00 billion, an additional assessment of Frw 35.50 billion. The average tax declared by all audited SMTO and LTO taxpayers amounted to 91.32% of the total re-assessed tax, and in the fiscal year 2015/2016 the

initial tax revenue declared totaled Frw 96.20 billion. However, the re-assessed tax totaled Frw 110.10 billion, an additional assessment of Frw 13.90 billion. The average tax declared by all audited SMTO and LTO taxpayers amounted to 87.38% of the total re-assessed tax. This was supported by Badara (2012) concluded that tax audit or tax reassessment is ensuring the accuracy of tax returns submitted by taxpayers. It means tax audit increases revenue collection by collecting tax interests and penalties where taxpayers could not pay the expected tax amounts on time. Tax audit is minimizing tax dodging, and tax avoidance. Tax reassessment is a process of establishing, and maintaining a strong mechanism based on which a tax agency can deal well with tax avoidance techniques of taxpayers. Nowadays, Biber (2010) stated that the role of tax reassessment in tax agencies is minimizing the tax avoidance and under reporting of taxes.

**Table 23:** T-test: Paired Two Sample for Means between initial tax revenues declared and submitted and the tax revenue collected after audit.

	<i>Tax revenue Before audit FRW(Billion)</i>	<i>Tax revenue after audit FRW(Billion)</i>
Mean	216.272	253.806
Variance	10314.79092	11924.40458
Observations	5	5
Pearson Correlation	0.98418442	
Hypothesized Mean Difference	0	
df	4	
t Stat	-4.149343718	
P(T<=t) one-tail	0.007133939	
t Critical one-tail	2.131846786	
P(T<=t) two-tail	0.014267878	
t Critical two-tail	2.776445105	

By using T-test: Paired Two Sample for Means, the results showed that the Pearson correlation coefficient indicate that tax revenue collected before audit was significantly correlated to the tax revenue collection after audit ( $r=0.98418442$ ,  $p=0.014267878$ ). There was a strong positive

relationship between the tax revenue collection before audit and the tax revenue collection after audit in RRA as indicated by correlation of 0.98418442. From the analysis, a p-value less than 0.05 ( $p\text{-value}=0.014267878$ ) was obtained. This was supported by Kircher (2008) pined that the

submitted that tax audit ensure that satisfactory returns are submitted by the tax payers, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers and to ensure that the amount due is collected and remitted to government. A tax audit is also an examination of whether a taxpayer has correctly reported its tax liability and fulfilled other obligations. According to Barreca and Ramachandran (2013), the main aim of tax reassessment is determining the level of tax compliance, and decreasing tax evasion. Further, Harelimana (2018) his study shows a tax audit increases revenue collection. It means if a tax agency conducts more tax reassessment, the agency will collect more tax revenues. Therefore, tax audit can positively affect revenue collection. It affects revenue collection directly through reassessment of tax returns, and improving the tax

compliance with the tax laws, and indirectly through minimizing tax avoidance and tax evasion.

#### **Effect of tax revenues collection on gross domestic product in Rwanda.**

In this section the fifth hypothesis was “there is no effect of tax audit on economic growth in RRA” was tested. And economic growth is measured by GDP. Tax to GDP ratio is calculated by dividing the tax revenue collected by a country, by the Gross Domestic Product (GDP) of that country, expressed as a percentage. Changes in the tax-to-GDP ratio are driven by the relative changes in nominal tax revenues and in nominal GDP. From one year to another, if tax revenues rise more than GDP (or fall less than GDP) the tax-to-GDP ratio will increase. Conversely, if tax revenues rise less than GDP, or fall further, the tax-to-GDP ratio will go down. The table shows the comparison and relationship between tax revenues collected and GDP in Rwanda.

**Table 24:** Trend of tax to GDP ratio in Rwanda in fiscal year (2015/16 – 2019/20)

<b>Fiscal year</b>	<b>Tax revenue (FRW'billion) (X)</b>	<b>Nominal GDP (FRW'billion) (Y)</b>	<b>Tax to GDP Ratio (%)</b>
2015/2016	986.7	6321	15.6
2016/2017	1086.5	7125	15.2
2017/2018	1234.1	8014	15.4
2018/2019	1399.5	8713	16.1
2019/2020	1494.8	9399	15.9

**Source:** RRA, 2020

The results from table indicated that tax to GDP ratio decreased from 15.6% in 2015/16 to 15.2% in 2016/17, and it increased to 15.4% and 16.1% in 2017/18 and 2018/19 respectively, it decreased once again to 15.9% in 2019/20 from 16.1% in 2018/19. However, despite the recorded growth in revenue collections, Rwanda’s tax to GDP ratio is still below the 18% Sub-Saharan average. Therefore financial statement audit is right way because it examine whether a taxpayer has correctly assessed and reported their tax liability and fulfilled other

obligations. This implied that tax audit is necessary because it help the government to collect taxes paramount in financing budget and maintaining economic and financial order and stability. This was supported by RRA (2020) reported that despite the recorded growth in revenue collections, Rwanda’s tax to GDP ratio is still below the 18% Sub-Saharan average. Since it is often not advisable to increase tax rates, additional revenue can mainly originate from two sources: broadening the tax base or further improvements in collection efficiency.

**Table 25: Regression statistics between tax revenues collection and GDP in Rwanda.**

<b>Regression Statistics</b>	
Multiple R	0.995040708
R Square	0.99010601

Adjusted R Square  
 Standard Error  
 Observations

0.986808013  
 140.8313762  
 5

a. Predictor: (constant), tax revenue collected

The results from the table indicated that there was strong relationship between tax revenues collected growth and GDP in Rwanda as indicated by  $R^2=0.99010601$ . The results also indicated that the coefficient of determination, adjusted  $R^2=0.986808013$  indicated that tax revenue collected explained 98.6808013% of the variation in the GDP at 95% confidence interval. This supported by RRA (2020) reported that there big relationship between tax revenues collected and GDP Growth as observed from the budgetary allocations above, our country's increased appetite for infrastructure investment calls for increased tax revenue mobilization to reduce the public debt. Tax revenue

collection is a key to the financial independence, stability and sustainability of our nation. This speaks directly to RRA's vision statement. Further, Mutarindwa and Rutikanga (2014) pined in their study on the impact of taxpayers' financial statements audit on tax revenue growth, findings indicate that the tax audit increases the compliance rate which will impact positively the tax revenues to be collected by RRA. Because the taxpayers' compliance is still less and generally it negatively affects the tax revenues growth, the financial statements of taxpayers should be analyzed until they show a true and fair view of a Company's Affairs.

**Table 26: Estimated coefficient model between tax revenues collection and GDP in Rwanda.**

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	743.2025	418.6461	1.775253	0.173945	-589.116	2075.521	-589.116	2075.521
Tax revenue (FRW'billion)								
(X)	5.781732	0.333689	17.3267	0.000419	4.719784	6.84368	4.719784	6.84368

a. Dependent Variable: GDP

Basing on the results from the table, the linear regression equation became  $Y=743.2025+5.781732X_1+e$ , where  $Y=GDP$  and  $X_1$  = tax revenue collected, this implied holding other factors (tax revenue collected) remain constant to zero, the GDP would be achieved at a unit of 743.2025. It was also indicated that a unit increase in tax revenue collected would cause an increase in GDP by a factor of 5.781732. If the p-value was less than 0.05 (P-value= 0.000419) obtained, then alternative hypothesis is accepted while null hypothesis is rejected. Means there was significant effect between tax revenue and economic growth. Therefore, the alternative hypothesis is accepted while null hypothesis is rejected. This was supported by Nyakamba (2014) who said that the system of tax auditing is imperative because it

assists the government in collecting appropriate tax revenue necessary for budget, maintaining economic and financial order and stability, ensuring that satisfactory returns are submitted by the taxpayers, organizing the degree of tax avoidance and tax evasion, ensuring strict compliance with tax laws by taxpayers, improving the degree of voluntary compliance by taxpayers and ensuring that the amount due is collected and submitted to government.

**CONCLUSION AND RECOMMENDATIONS**

The study concluded on the effect of financial statement audit on the tax revenue collection growth in Rwanda. The study concluded that all dimensions of financial statement audit such as desk audit, field audit, and compliance test audit and government policies have positive and

significant influence against tax revenue collection growth measured by tax revenue collected performance. This justified by testing all specific objectives of this study; Based on the results of the findings on the first objective, the study concluded that there was a strong positive relationship between desk audit and tax revenue collected performance. Based on the results of the findings on the second objective, the study concluded that there was a strong relationship between field audit and tax revenue collected performance. Based on the third objective of this study, it concluded that there was a strong relationship between compliance test audit and tax revenue collected performance. Based on the fourth objective, the study concluded that there was a strong relationship between government policies and tax revenue collected performance. Based on fifth objectives of this study, it concluded that there was a strong relationship between tax revenues collected growth and GDP in Rwanda.

The study was attained all its objectives, all its research questions were answered and all hypothesis of the study was tested and confirmed where all alternative hypothesis of all financial statement audit was accepted while null hypothesis was rejected. Based on the findings of the study, it was concluded that financial statement audit has a great effect on tax revenue collection growth in Rwanda because the results show that all the dimensions have positive and significant influence of financial statement audit on tax revenue collection growth. Specifically, desk audit, field audit, and compliance test audit and government policies relate positively with tax revenue collected performance. That in essence meant that the more the financial statement audit conducted the more tax revenue is collected. Thus, it is right to say that tax audit is directly related to revenue collection, tax audit minimize tax dodging, and tax avoidance. All the tax audits are important because they add something to revenue and thus should be encouraged as it assists the government in collecting appropriate tax revenue necessary for

budget, maintaining economic and financial order and stability, to ensure that satisfactory returns are submitted by the tax payers, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers and to ensure that the amount due is collected and submitted to government.

Based on the findings and on the study variables the researcher came up with the following recommendations;

The study recommended RRA to train its tax audit officers frequently on updated software align to the tax system which can strengthened the tax revenue collection and hence to enhance tax auditors' capacity and improve desk audit.

Internal mechanism to check and monitor the RRA audit officers should be put in place to minimize the level of poor corporate governance and enhance effectiveness of the tax audit.

Tax payers should hire skilled accountants who prepare and present the financial statements in accordance with an applicable financial reporting framework, and maintain strong internal controls relevant to the preparation and presentation of financial statements that are free from material misstatements, whether from errors or frauds this will stop them facing punishment due to dodging taxes.

Tax payers should keep all the consistent records, documentations and other matters relevant to the preparation and presentation of financial statements to ensure that all the records are corresponding or matching the records of the company.

Tax payers should implement the recommendations found in the field audit reports including keep filling the financial documents in the appropriate way to ensure its accountability.

The study suggests that the individual's tax payers should comply with tax law pertaining the payment of the personal income tax in particular area.



The study suggested that the government should come up with the training curriculum to boost the limited capacity of tax administrators in the way that they can perform their assigned duties with perfection.

#### **Suggestion for further research**

This study assessed the effect of financial statement audit on revenue collection growth in Rwanda for

five last successive years. This study also recommended similar studies to be carried out for a longer period of time in order to compare the findings with the previous findings of the study. This study also recommended further studies to be carried out in RRA branches situated in the districts of the Republic of Rwanda in similar research topic.

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