ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDENTS

EFFECTS OF TAX AUDIT ON REVENUE COLLECTION IN ADDIS ABABA REVENUE BUREAU: EVIDENCE FROM MERKATO NO.2 BRANCH OFFICE

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MBA IN ACCOUNTING AND FINANCE

BY: ANBESADIRIBASENBETA

ID: SGS/0505/2011A

ADVISOR

SIMON TAREKE ABAY (ASSISTANT PROFESSOR)

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Statement of Declaration

I, the undersigned, declare that this study is my original work and has not been presented in any other university, and that all sources of materials used for the study have been accordingly acknowledged.

 Declared by:

Name: Anbesa Diriba Senbeta

Signature _____

 Date Aug. 21/2020

 Confirmed by Advisor:

Name; Simon Tareke Abay (Assistant professor)

Signature _____

 Date: - Aug. 19/2020

Certification

This is to certify that the thesis prepared by Anbesa Diriba Senbeta, entitled: "effects of tax audit on revenue collection Addis Ababa revenue bureau (ARB): from Merkato no.2 branch office "and submitted in partial fulfillment of the requirements for the degree of master of science (accounting and finance) complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Advisor __Simon T._____signature _____ Date: - Aug. 19/2020

External Examiner Dr._Misrak Molla   signature   Date: - Aug. 19/2020

Internal Examiner Mohammed S. (Asst Prof)   signature   Date: - Aug. 11/2020

Dean of Graduate Program Coordinator   _____

Signature _____ Date_____

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Lists of Abbreviations

AA: Income after Audit

AC: Audit Case Selection

ARB: Addis Ababa revenue bureau

BA: Income before Audit

CA: Capacity of the Auditors

CLRM: Classical Linear Regression Model

DRM: Domestic Resource Mobilization

DW: Durbin Watson

ERCA Ethiopian Revenues and Customs Authority

ARB: Addis Ababa Revenue Bureau

GDP: Gross Domestic Production

IMF: International Monetary Fund

OECD: Organization for Economic Co-operation and Development

OLS: Ordinary Least Square

RC: Revenue Collection

RP: Revenue Protection System

SIGTAS: Standard Integrated Government Tax Administration System

SPSS: Statistical Package for Social Sciences

TA: Tax Automation

TOT: Turn Over Tax

TR: Tax Audit Resource

UNDP: United Nation Development Project

VAT: value added tax

WHT: Withholding Tax

Abstract

This study examines the effect of tax audit on revenue collection evidenced from ARB Merkato no.2 branch office. In doing so, tax audit is measured by seven variables (tax audit resources, audit case selection, capacity of auditors, tax protection system and, tax automation, and amount before and after audit). The study uses explanatory research design and mixed research approach with secondary data utilized over the study period 2009-2018G.C (10 years). The data were collected both from primary and secondary source of data. More specifically, the study adopted a multiple regression model. The finding of the study reveals that, revenue protection system, and audit case selection has positive and significant effect on revenue collection and statically significant at 5% and 1% significance levels respectively. Furthermore, revenue after audit, auditors' capacity and tax automation has positive and insignificant even at 10 present significance levels .Apart from this, the variable tax audit resource and before audit amount has a negative effect on revenue collection and statically significant at 5% and 1% significance levels respectively. From the finding of the study the researcher can concluded that; tax audit found the significant variable which affect revenue collection performance at ARB, Merkato no.2 branch office. This study suggests that the management of Merkato no.2 branch office shall improve tax audit resources by considering the recommendation given from these research findings to increase revenue collection.

Key words: Tax audit, revenue collection, Tax audit resource, Audit case selection, Capacity of auditors, Revenue protection system, Tax automation and revenue before and after audit

<div align="center">**CHAPTER ONE**</div>

1. Introduction

This chapter provides general information about the research topic in order to give some clues to the readers about the study area. The chapter begins with the background of the study then followed by the statement of problems, research hypothesis, overall objectives of the study, significance of the study and finally scope, limitation, and organization of the paper.

1.1. Background of the study

In Ethiopia share of tax revenue to GDP is very low, which imply that domestic resource mobilization through taxation is at an infant stage in Ethiopia. The development of any nation depends on the amount of revenue generated and applied by the government on public infrastructure for the benefits of members of that society. No economy can grow without adequate resources for infrastructural development and provision of power and public utilities and services. Taxes and tax systems are fundamental components of any attempts to build nations, and this is particularly the case in developing or transitional nations (Mckerchar and Evans, 2009).

In addition to this, since the primary objective of taxation is to raising the governments' revenue to finance its expenditure for all economic activities. There is growing international interest in improving the ability to develop countries to mobilize domestic revenue from different resources (Damme, 2008). Domestic resource mobilization (DRM) refers to the process in which countries raise domestic resources and spend these funds to provide goods and services to their people. This includes tax collection, non- tax revenues, domestic borrowing, and other domestic income sources but it doesn't necessarily have to mean introducing new taxes or increasing the tax rates.

For developing countries, DRM is the only dependable and long-term source of development financing in terms of sustainability and reliability (Azubike, 2009).However, developing countries have had difficulties in mobilizing resources for investment from domestic sources.

It has been evidenced that expenditure programs in developing countries have been hampered by low tax revenues (Tanzi, 2000). With this regard, a number of scholars were agreed on the importance of a good tax system to achieve government objectives. For example, according to Azubike (2009) and Okezie (2003), a good tax system (which includes tax audit) is an opportunity for the government to collect additional revenue needed in discharging its present obligations and plays multiple roles in the process of economic development of any nation.

Tax audit is a critical and significant component of the compliance activities of tax administration by means of proper use of enforcing tax laws; it is the conduct by audit staff for the appropriate verification of selected taxpayer's whether he/she has been correctly declaring the tax liabilities including a review of taxpayer's systems, books of account and other related information. It may include crosschecks of taxpayer's records with those of taxpayer's supplier's or with other government departments and agencies source of information and its effectiveness and efficiency must be guaranteed by means of proper procedures and application of modern audit tools and techniques (OECD 2006a).

In addition to this, tax audits are an examination of taxpayer's business records and financial affairs to ensure taxpayers have computed their tax payable in accordance with the current tax laws and regulations (Isa & Pope, 2011). Furthermore, according to al Zakari (1995), tax audit is an examination of the historical financial statements and other documentary evidences for the preparation of current tax returns, as well as the supporting working statements, followed by an audit report giving the auditors' opinion about the degree of correspondence between the information contained in the tax return and the regulatory provisions of tax laws. So, tax audit affects revenue collection in that it promotes voluntary compliance of taxpayers which increases revenue and determines the accuracy of returns so as to ensure the right taxes are submitted. Furthermore, tax audit tax liability can be easily declared and matters that need adjustment are easily identified. It also helps in collecting tax interests and penalties which thereby increase revenue collection (Bello, 2001).

Specifically, to discuss this issue in the context of Ethiopia (the effect of tax audit on revenue collection), in the past decade Ethiopia has made encouraging progress in mobilizing more revenues from domestic sources, particularly in tax revenue. Tax collection increased from birr 165.3 billion in 2015 to 198.1 billion Br in revenue in the 2018/19 FY. indicating over a thirteen-fold increase in the decade (UNDP, 2016).Similarly, the share of domestic revenue in the total public revenue increased from 77 percent to 94 percent in the same period, and the share of tax revenue stands at83 percent in 2015. However, there is a challenge increasing the tax revenue proportionate GDP; the tax to GDP ratio remained low at 7.6 percent in 2018 which is way below the sub Saharan average of about 18percent, over 20percent for emerging economies and above 30percent for developed economies (IMF report, 2018).

According to the IMF report (2018), in 2005, Ethiopians' tax to GDP ratio was 13 percent, but this ratio dramatically declines to 7.6 percent in 2017. While the economy has been growing at a remarkable rate averaging more than 10 percent, the slow growth in the tax to GDP ratio suggests the growth in tax collection is not commensurate with the economic growth perhaps indicating a huge untaxed potential (UNDP, 2016).

According Shumetie (2019), there are a number of reasons in Ethiopia which leads to revenue collection in danger position because of the improper tax audit. The reasons were highlighted by the author for improper tax audit was; case selection is not based on the availability of resource for tax audit, taxpayers were not co-operated to give their source documents, do not respect the tax law, lack of good awareness on tax, not happy while they are noticed to be audited and taxpayers are mostly unwilling to release vital records. Hence, this study focuses on the effect of tax audit on revenue collection in the context of Ethiopia by selecting a case study of Merkato no.2 branch office.

1.2. Statement of the problem

Taxes are the main revenue for the government and thus the department or agent concerned should ensure they are collected in the right way. To do so, a properly designed and administrated taxation system is important for developed and developing countries to increase domestic revenue from taxes. The system should have been simple and transparent administrative procedures (Tanzi, 2000). Under insufficient tax administration of the audit programs, the potential amount of tax revenue in developing and transitional countries has not been collected in an efficient and equitable manner (Edmiston, 2004). Moreover, the weak tax administration may make the tax system unfair so that compliance taxpayers would bear heavier tax and inappropriate tax burden. So, the compliance taxpayers are in turn to work in the illegal economy; to avoid this, conducting tax audit is mandatory.

Tax audit is an activity or a set of activities performed by tax auditors to determine at taxpayers' correct tax liabilities for a particular accounting or tax period, by examining of a taxpayers' organization procedures and financial records in order to assess compliance to tax laws and verifying the true, fair, reliable, and accuracy of tax returns, and financial statements (ERCA, 2010).Thus, tax audit becomes a bridge that is believed to connect taxpayers with the tax authority. And it could also fill the gap by exposing tax evaders and teaching those that have a knowledge gap on the tax laws. Hence, the existence of efficient and effective tax audit

structures within a tax authority could guarantee optimum tax collection and increased societal awareness towards the existing tax laws.

In order to meet this requirement, a tax audit should be performed by highly-skilled, knowledgeable and committed auditors. However, as noted by Ebrill (2001), several developing countries do not yet have effective audit programs due to: insufficient numbers of the required qualified and appropriately paid audit practitioners, absence of a sound institutional audit practices, illegal cooperation between taxpayers and auditors, lack of clear political support for the tax administration, and the deficiency of an appropriate legal and judicial environment; this in return affects revenue collection. Additionally, according to Hellenrstein (2005), those countries have a tendency to offset weak tax audits by adopting complex procedures, such as increased filing requirements and massive cross-checking. This, in turn, might result from administrative difficulties and increase the compliance cost of taxpayers.

In line with this, a number of studies are conducted in Ethiopia on tax collection as well as on tax audits from different perspectives. For example, Gebeyehu (2008) studied tax audit practice and its significance in increasing revenue in Ethiopia; the case of Addis Ababa city administration, Mihret (2011) studied Tax Audit Practice in Ethiopia: The Case of the Federal government, Abera (2016) studied factors affecting tax audit effectiveness evidence from large taxpayers office of Ethiopian revenue and customs authority (Based on Auditors perception) and Shumetie (2019) studied perception of tax audit practices pieces of evidence from Ethiopian revenue and customs authority large taxpayers office. However, all researchers were given widen consideration for a tax audit but unable to consider the issue of revenue collection and the relationship between tax audit and revenue collection. A number of studies are conducted in different countries. But there are economic and cultural deference with our country it's difficult to Measure the effect of tax audit on revenue collection based on the above research. Hence, by considering the above research gap, this study focuses on the effect of tax audit on revenue collection in Ethiopia; by taking a case study of Merkato no.2 branch office.

1.3. General objective

The main objective of this study is to examine the effects of tax audits on revenue collection in ARB by taking a case study of Merkato no.2 branch offices.

1.3.1. Specific objectives of the study

1. To examine the effect of tax audit resources on revenue collection in ARB Merkato no.2 branch offices.
2. To examine the effect of auditors capacity on revenue collection in ARB Merkato no.2 branch offices.
3. To examine the effect of audit case selection on revenue collection in ARB Merkato no.2 branch offices.
4. To examine the effect of revenue protection system on revenue collection in ARB Merkato no.2 branch offices.
5. To examine the effect of tax automation on revenue collection in ARB Merkato no.2 branch offices.
6. To examine the effect of before audit revenue of taxpayers on revenue collection in ARB Merkato no.2 branch offices.
7. To examine the effect of after audit income of taxpayers on revenue collection in ARB Merkato no.2 branch offices.

1.4. Research Hypothesis

Hypothesis of the study stood on the theories related to tax audit and revenue collection and researchers" past empirical studies related to the effect of tax audit on revenue collection. The results from the literature review will use to establish expectations for the relationship between variables. Hence, the present study seeks to test the following hypotheses based on the benchmarks of studies conducted by Sarfo (2015), Merima (2014) and Harelimana (2018).

H1: Tax audit resource has a positive and significant effect on revenue collection.

H2: Auditors capacity has a positive and significant effect on revenue collection.

H3: Audit case selection has a positive and significant effect on revenue collection.

H4: Revenue protection system has a positive and significant effect on revenue collection.

H5: Tax automation has a positive and significant effect on revenue collection.

H6: Before audit revenue of tax payers has a negative and significant effect on revenue collection.

H7: After audit revenue of tax payers has a positive and significant effect on revenue collection.

1.5. Significance of the study

The research will be expected to identify the effects of tax audit on revenue collection in Addis Ababa Revenue bureau: evidence from Merkato no.2 branch office and then recommend mechanisms for improvement. Also it has the aim of recommending mechanisms for enhancing performance in the revenue generation process. Hence, the study may play a key role in the development process of the nation by recommending mechanisms for enhancing the capacity of the branch office.

The finding of this study has expected to explain the relationship between tax audit and revenue collection and live a standing stone for the different regional states, government agencies, and business associations. Contribution to existing literature: In addition, scholars and researchers will find this study useful if they wish to use the findings as a basis for current and further research on the subject. Moreover, academic researchers dedicated to studying tax audit and revenue collection in the country will benefit from this empirical study focused on the effect of tax audit on revenue collection

1.6. Scope of the study

The issue of tax audit is broad and it encompasses a range of topics and issues that require investigation at federal, regional, local administration levels. It will be more useful investigating the issue at all levels of the country as it will provide a complete picture than what this study contributed. However, this was beyond the capacity of the researcher due to various resource-related constraints. Thus, due to resources, constraints, and shortage of time the study focused particularly on effect of tax audit and revenue collection part of Addis Ababa Revenue bureau: evidence from Merkato no.2 branch office. With regard to data based on the availability the study was used 10 years (2009-2018) G.C.

This study restricted itself to the discourse of the effect of tax audit on revenue collection; seven variables were chosen are Tax audit resource, Auditor capacity, and Audit case selection, and Revenue protection system, Tax automation, before audit revenue and, after audit revenue.

1.7. Limitations of the study

There was a limitation in conducting the study; based on the nature of the study the following points were raised as limitations; as the data was collected based on self-report of the respondents, there was intolerance from some respondents since they do not return the questionnaire on the time required and may not cooperate well to fill and gave all the necessary data. This may in turn limit the ability to make a broader generalization from the study suffered.

Additionally, the study was also based on a test of seven independent variables namely are Tax audit resource, Auditor capacity, Audit case selection, and Revenue protection system, Tax automation, before audit revenue and, after audit revenue. There are other factors that might affect tax revenues collection which was not considered in this study. Thus not all the factors were controlled for in the model rather concern only the most significant variables from different empirical evidence.

1.8. Organization of the study

The paper was organized in five chapters. The general introduction is assessed in the first chapter. And the relevant literature in the field was discussed in the second chapter. In chapter three research design and methodology were presented. Following this, chapter four was containing results and discussion. Finally, a summary, conclusions, and recommendations were presented in the fifth.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter is organized in three sections. The first section reviews theoretical studies on tax audit and revenue collection while the second section presents the empirical evidence on tax audits, revenue collection, and related issues. The final section provides concluding remarks on the review of the literature and identifies the knowledge gap that has been addressed in the study.

2.2. Definition of tax audit

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". The Association of Chartered Certified Accountants (2009) defined an 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 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 (OECD, 2006a). As Biber (2010) noted, the role of an audit program in a modern tax administration must extend beyond merely verifying a taxpayers reported obligations and detection of discrepancies between a taxpayer's declaration and supporting documentation

2.3. Review of theoretical literature

The audit is defined as the structured examination of a business's relevant commercial systems financial and non-financial records, physical stock and other assets, internally generated data and that produced independently of the business. Tax audit is a critical and significant component of the compliance activities of tax administration by means of proper use of enforcing tax laws; it is the conduct by audit staff of appropriate verification of selected taxpayer's whether he/she has been correctly declaring the tax liabilities including a review of taxpayer's systems, books of account and other related information. It may include crosschecks of taxpayer's records with those of taxpayer's suppliers or with other government departments and agencies source of information and its effectiveness and efficiency must be guaranteed by means of proper procedures and application of modern audit tools and techniques (OECD, 2006).

Adesina (2005) defined an Audit as the examination of accounting documents and of supporting evidence for the purpose of reaching an opinion concerning their propriety. It is an examination intended to serve as a basis for an expression of opinion regarding the fairness, consistency, and conformity with accepted accounting principles of a statement prepared by a corporation or other entity for submission to the public or to other interested parties. A tax audit is, therefore, a means of ensuring compliance with the tax laws. The primary purpose of a tax audit is to maintain confidence in the integrity of the self-assessment system. It helps to improve voluntary compliance by detecting and bring to book those who do not pay the correct amount of tax. The numerous roles assigned to tax auditors require the recruitment and maintenance of competent tax auditors with technical knowledge, audit skills, and tactical knowledge.

Auditing theory helps explain why society needs auditing: the role and purpose of audit services in communication between a company and its environment. The agency theory is the most prominent of the existing theories. There are several different theories that may explain the demand for audit services. Some of them are well known in research and some of them are more based on perceptions (Hayes, 2005).

2.3.1. The theory of inspired confidence.

This theory states that stakeholders demand accountability from the management in return for their contribution to the organization as taxpayers by Due (2003). It was made on the assumptions that stakeholders want to know how their resources are utilized and that the managers are responsible and geared towards the same objectives as stakeholders. The theory asserted that it is through audited financial statements that accountability can be substantiated. Then accountability is introduced in auditing.

2.3.2. The moderator of claimant theory

This theory is stated by Frey (2003) that it is important that all vital participants in an organization continue to contribute. In order to continue these contributions, it is important that each group believes it receives a fair share of the organization's income. This is based on the assumption that when one gets a fair share then a fair share will be contributed. To the auditing theory then fairness is introduced.

2.3.3. The policeman theory

This theory of auditing asserts that the auditor is responsible for searching, discovering and preventing any fraudulent activity. However, the role of an auditor is to provide reasonable assurance and an independent, true and fair view of the financial statements. Although there has

been more pressure on auditors to detect fraud after recent scandals it can be argued that in modern societies, the users of statements want auditors to be responsible for fraud detection as they use audit reports to analyze and make decisions. However, auditors are not responsible for finding all fraud but should improve their direction rate to instill public confidence. The primary responsibility of fraud prevention and detection rests in the management and the governance of the organization. It is also important that more emphasis is placed on the prevention of fraud. However, the auditor also has a duty of care to the end-users of audit reports and should consider risks of material misstatements due to fraud when calculating audit risk (Daniel, 2011).

2.3.4. The lending credibility theory

This theory of auditing regards the primary function of auditing to be the addition of credibility to the financial statements. Akinbuli (2010) who states that audited financial statements can enhance stakeholder's faith in management's stewardship assumed that for one to be sure that the financial statements are true and fair then an independent person has to go through the statement, substantiate them then produce a report. It was asserted that shareholders and stakeholders trust the report of the auditor and feel secure. The theory was modified from the initial by Hayes (1999) that stated that it was through financial statements that the revenue authorities are able to ascertain the amount to be collected. The factor of credibility was added to the theory of auditing.

2.3.5. Agency theory

Adams (1994) used agency theory to explain that it is in the interest of management to maintain a strong internal audit department. Implementation of audit recommendations is highly relevant to audit effectiveness (van gansberghe, 2005) and the management of an organization is viewed as the customer receiving internal audit services. As a result, management's commitment to using audit recommendations and its support in strengthening internal audit is vital to audit effectiveness (sawyer, 1995). Using agency theory, Xiangdong (1997) explained the role that internal audit plays in an economy and points out that internal audit has an advantage over external audit in obtaining information quickly and finding problems at an earlier stage; and Sparkman (1997), applying the theory of transaction cost economics, demonstrated how internal audit recommendations are important to the management of government organizations.

Audit findings and recommendations would not serve much purpose unless management is committed to implementing them. "Auditors are engaged as agents under contract but they are expected to be independent of the agents who manage the operations of the business. The

primary purpose of audited accounts in this context is one of accountability and audits help to reinforce trust and promote stability" (audit quality, 2005).According to Hayes et al. (1999), 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.

2.3.6. Positive accounting theory

The term "Positive Accounting Theory" has come to practice to refer to the accounting theory developed and named by Watts and Zimmerman. The authors seek to appreciate and explain the concept of economic consequences of the interests of managers and financial accounting and reporting. In other words, their major aim is to explain and predict why managers and accountants choose particular accounting methods in preference to others. Furthermore, they assert that firm's attributes, such as leverage and size, are predictive variables of the firm's accounting choice.

Watts and Zimmerman seek to develop a positive theory of the determination of accounting standards. "such a theory will help us to understand better the source of the pressures driving the accounting standard-setting process, the effects of various accounting standards on different groups of individuals and the allocation of resources, and why various groups are willing to expend resources trying to affect the standard-setting process" (watts and Zimmerman, 1978).

2.3.7. Institutional theory

The concept of institutional theory is related to organizations' actions over time. Such actions are said to be legitimated within an organization and environment (Pfeffer, 1982). Institutional theory suggests that internal operating processes loosely coupled with the observable structures accomplish the real work of an organization. As a result, organizations with the appropriate structures in place will avoid deep investigations of their function by external auditors (Meyer and rowan, 1977). Organizations are subject to rules and regulations to which they must conform in order to ensure their legitimacy and thus have access to resources and ensure their survival (Dimaggio and powell, 1983). However, these rules and regulations don't necessarily guarantee that organizations will continue to operate efficiently (Meyer and rowan, 1977; Scott, 2008). Institutional elements comprise the institutions and over time the institutional elements are given priority. The key point is to identify what institutional elements reinforce or undercut other

elements (Scott, 2008). Functional pressure, political pressure, and social sources are three possible factors that cause pressure on institutional common practices (Oliver, 1991).

2.3.8. Stewardship theory

Stewardship theory outlines a co-operative and optimistic view of relationships within the corporation by assuming that managers are good stewards and do not misappropriate corporate resources; their behavior is also conditioned by non-financial motives such as the need for recognition of their achievements and performance (Vanden, 2004). Thus, the directors' role is to counsel and advice rather than to monitor the stewardship theory holds that no inherent, general problem of executive motivation exists. The model of man is based on a steward whose behavior is pro-organizational and collectivistic. Following the basic thoughts of stewardship theory, there is no need for implementing monitoring mechanisms. There is no need for engaging audit services in order to secure the reliability of the information. However, within stewardship theory, an audit could be of value as a means of assisting the executive's stewardship.

2.3.9. Stakeholder theory

Stakeholder theory explains the relationship between organizations and their external environment (freeman, 1984). A stakeholder is defined as a human agency that can have an impact or affect organizations (gray et al., 1996). Stakeholders represent the big umbrella for all individuals and parties that may have a direct or indirect interest in an organization. Direct stakeholders are shareholders, employees, investors, customers, and suppliers whose interests are aligned with the company. An example of an indirect stakeholder is the government, which is indirectly affected by the company's function (Kiel and Nicholson, 2003). Due to this role of stockholders, organizations are not only accountable to shareholders only but also to stakeholders.

2.4. Objectives of tax audit

The overall objective is to improve the compliance of taxpayers, whether they declare the correct amount of tax and paid at the right time. The expectation by a taxpayer of an audit should have a deterrent effect and encourage the taxpayer to declare as far as possible a credible tax return. It also improves the taxpayer's understanding and awareness of the relevant taxes.(ERCA audit manual, 2014).Other objectives of tax audit include: to educate taxpayers on various provisions of the tax law; discouraging tax evasion; detecting and correcting accounting and/or arithmetical errors in tax returns; providing feedback to the management on various provisions of the law and recommend possible changes; identifying cases involving tax frauds and

recommend them for investigation; forestalling taxable persons' failure to render tax returns; forestalling taxable person's rendering of incomplete or inaccurate returns; and encouraging voluntary compliance this is the strong reasons in support of the self-assessment scheme.

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.

According to Erard (1994) mentioned some reasons for tax audit which include, to 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 taxpayers, to minimize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by taxpayers, to improve the degree of voluntary compliance by taxpayers and to ensure that the amount due is collected and remitted to government.

2.5. Types of Tax Audit

There are different types of Tax Audit which are applied in different countries based on types of tax being audited. These types of audit services are Audit of the financial statements of the company to provide assurance on the financial statement; Compliance audit to find whether the company has complied with the required laws and regulations and Operational audit to check for the operational efficiency and effectiveness of a process (Grandcolas, 2005).Form the above type

of tax audit service: operational efficiency and effectiveness are audits of performance but an audit of financial statements and compliance audits are mostly applied for a tax audit. However, audits can vary in their scope and the level of intensity in which they are conducted. So, various terminologies have evolved to describe different types of audit activity (OJONTA, 2011).

2.5.1. Comprehensive Audit

Erbil (2011) defined a comprehensive audit is an examination of all information relevant to the calculation of a taxpayer's tax liability for a given period. This audit may cover all tax obligations over a number of tax periods, or extended to several years up to the limit provided for in the law. All cases where serious underreporting or evasion has been detected under any of the other audits should be forwarded to a unit responsible for undertaking comprehensive audits of all tax liabilities

A Comprehensive audit is classified into Very Complex, Complex and simple. This classification will depend on many of factors ranging from size, group, trade or profession, volume of records or transactions, nature of the business to location. In practice, the scope and nature of any comprehensive audit activity to be undertaken will depend on the available evidence pointing to the likely risks of non-compliance and a taxpayer's history. An audit may also be classified and justified as complex or very complex because of the taxpayer's financial and/or unusually complex business activities (ERCA audit manual, 2014).

2.5.2. Single issue audits

According to Grandcolas (2005), issue-oriented audit focuses on a single tax type and covers no more than one or two reporting periods. Single-issue audits are confined to one item of potential noncompliance that may be apparent from an examination of a taxpayer's return. Given their narrow scope, single-issue audits typically take less time to perform and can be used to review large numbers of taxpayers involved in similar schemes to conceal non-compliance. In practice, the scope and nature of any audit activity undertaken for a particular taxpayer will depend on the available evidence pointing to the likely risks of noncompliance and a taxpayer's prior history. Extensive audit inquiries may also be justified simply because a taxpayer's financial and /or business activities are unusually complex.

2.5.3. Field Issue Audit

This is the escalation of a desk issue audit into a field activity or exercise. It is important to remember that the audit is limited to key issues of compliance or a tax type or period. Field issue audit is commonly used in examining whether a taxpayer has met his/her obligations in respect

of PAYE, VAT/TOT and Excise tax, Withholding Tax or Income Tax normally for a specified tax period. A field audit is usually carried out outside the Inland Revenue's office in the taxpayer's business premises. The need to carry it out on the taxpayer's premises is to enable the tax auditor's carry out the examination of applicable documents and also obtain appropriate information directly from the officials of the business. This takes more time and more basic documents are always required. Some documentation can also be taken down to the office for detailed verification, Ojonta (2011).

2.5.4. Desk Audit

As soon as a tax return is received in the Inland Revenue's office, such would be subjected to examination by the inspector. This examination is carried out in the tax office and routine basis indicating that most if not all the returns submitted to the tax offices are subject to this audit. The focus of the desk audit would be to ensure the 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. The essence is to ensure some level of compliance with tax laws, rules and regulations as well as confirming the administrative check or returns submitted (Ojonta, 2011).

2.5.5. Special Audit Projects

Audits can be organized as a separate project for a targeted or specific group of taxpayers in a given period to verify compliance in the sector. These audit projects may cover an industry, trade, profession or a line of businesses. They will consist of specific checks and are used to address a particular risk or to establish the degree of non-compliance in a particular sector, industry or trade. For this audit type to be effective, all taxpayers in the targeted sector must be considered and handled within the shortest time possible.(ERCA audit manual, 2014)

2.5.6. Advisory Visit Audits

It involves the auditors' visit newly established businesses. They advise them regarding tax types, filing of returns, payment of amounts due, record keeping to be maintained, refund claims, risk of audit and sanctions of noncompliance. These visits are very appropriate when introducing new tax laws (OECD, 2006).Fraud investigation: according to Krelove (2005). Fraud investigation is a type of tax audit that investigates criminal which arises from where the most serious cases of noncompliance. It helps to detect fraud, evasion, and criminal activity fraud investigation

requires special skill including meeting evidentiary requirements, seizure of pieces of evidence or records, testimony from key witnesses and preparing briefs for courts. Hence, it should be undertaken in accordance with criminal procedure laws. OECD (2004a) stated that revenue authorities should maintain a dedicated organizational unit responsible for the handling of serious cases of tax fraud or evasion.

2.5.7. Refund Audits

This is the verification of a taxpayer's claim for a tax refund before processing the refund. The predominant claim for refund is VAT and/or WHT which is submitted monthly. The details are specified in the Refund Guidelines. Grandcolas (2005) noted that the refund audit should focus only on the period covered by the claim. A pre refund audit should be undertaken to verify the taxpayer's entitlement to a refund prior to processing a first refund claim, particularly for new registrants. It is also carried out where the refund claim varies significantly from established patterns and trends. Audits of further claims should be carried out selectively

2.5.8. Registration and De-Registration Audits

Registration check is a form of unexpected visits to taxpayer's premises for new enterprises (mainly small and medium-sized) to discover businesses operating outside the tax system and a quick check on businesses to establish that they are correctly registered. It should not take more than half a day (OECD, 2006). According to Erbil (2001) in this visit, the tax officer ensures that the taxpayer: has a basic understanding of their obligations; keeps appropriate records (bookkeeping review should be mandatory in case of voluntary compliance when the turnover of the taxpayer is below the registration threshold) and issues proper invoices when required by law.

2.6. Audit Case Selection Methods

Compliance risk is the failure to comply with the tax law by taxpayers whether due to their ignorance, carelessness, recklessness, deliberate evasion/weaknesses in tax administration itself, and have been addressed only by enforcement through an audit-based approach (OECD 2004a). However, tax administrations do not have sufficient resources to perform thorough on-site audits of the activities of all taxpayers or comprehensive crosschecking of all invoices or transactions. Tax administration, with limited resources and relatively large numbers of taxpayers to administer (especially in the small and medium enterprises), must design the audit program to deploy audit resources in a risk-based way with a view to achieve the most possible compliance and revenue objective (Thomson 2008; and OECD 2004a).

Accordingly, the first key to successful audit is the case selection methodology. It is critical to select audit candidates consistent with program objectives. Whatever the audit objectives have, the ability to narrow the pasture of potential audit candidates is necessary to achieve program objectives and optimal use of audit resources. Regardless of how automated and efficient the audit process, audit effectiveness would not be realized under the selection of inappropriate audit candidates. Hence, managing an effective auditing program involves decisions as to the selection of best audit case strategy or combination of strategies. The selection strategies may vary by tax type. It may be based on either reported tax amounts or the industry type (Barreca and Ramachandran, 2004).

According to Barreca and Ramachandran (2004), Audit selection methods range from simple random selection to more complex rule-based selection, sophisticated statistical and data mining techniques. Selection strategies can vary by tax type and even within a single type. The common case selection methods include random selection of cases, screening or case review by auditors, rule base and automated risk scoring systems, and data mining and statistical analysis.

Random selection: It has no bias in audit case selection, and useful to fight corruption. This method is perceived as fair by taxpayers. However, it clearly not focused on highest risks, may have high opportunity cost if used as sole case selection method (Vellutini, 2010).Gupta (undated) noted, simple random selection has a major drawback in that both honest and dishonest taxpayers are equally treated since probability selection give equal chance of being selected for both. However, the criteria or information based selection system too has a drawback in that it presupposes certain clue of noncompliance, which may actually be sign of other things such as change in economic condition in that particular trade(OECD, 2006).

2.7 Audit Workforce Capabilities

As OECD (2006a) stated, revenue bodies must manage and develop their audit workforce to deliver their planned outcomes through increasingly designing and implementing capability or competency models. Capability or competency model refers to a formal specification of the skills, knowledge and attributes of staff that are required to perform a specific job in an efficient and effective manner. The model generally contains job descriptions, functional descriptions, and competency profiles using task-related competencies. It is typically supported by training, exams, and educational requirements to ensure and build capability. The model is used as a basis for managing performance, training, staff development, and recruitment across the audit function.

Different capabilities are required for work performed in different market segments, or on clients exhibiting different behaviors towards tax compliance. Typical points of difference are capabilities required for noncompliant aggressive clients, audit work with large businesses (deeper and more specialized knowledge about specific regulations is required for this segment), performing system and electronic data base audits, and conducting criminal and fraud cases (OECD 2006b)

Capability gaps: According to OECD (2006), revenue bodies may develop staff and address capability gaps through recruitment processes and the use of programs such as training and development programs, mentoring and coaching programs, accreditation models, job rotation and/or placement programs, career paths, knowledge sharing initiatives and knowledge tests. Capability gaps are typically gathered from various sources including quality management system results, performance system interviews and appraisals, client professionalism, satisfaction and other similar surveys, and training program evaluations .

Competency assessment: It is important for tax administrations to assess and evaluate the competencies of their staff. The direct manager commonly performs competency assessments during recruitment and promotional processes on an annual or semiannual basis for those staff maintaining current positions (OECD, 2006a). Assessments performed as part of recruitment processes are often performed by external specialists, human resource departments and/or panels of internal subject matter experts. Other events triggering capability assessments include prior to performing a new type of work, prior to starting a new role, and ongoing informal assessments and learning and development activities (OECD, 2006).

2.7.1. Required Capability

According to OECD (2006a) stated, the required capabilities of auditors are generally identified by analyzing the activities required to perform particular audit tasks, and through practice and experience. In addition to their primary role of detecting and deterring noncompliance, tax auditors are often required to interpret complex tax laws and conduct intensive examinations of taxpayer's books and records. Hence, revenue bodies pay close attention to the overall management of the tax audit function, and particularly to the strategies and methods used for recruiting, developing and managing individual audit staff.

In addition to the required core capabilities, greater attention and emphasis is needed on soft skills and other attributes. These include behavioral and motivational competencies, personal attributes such as work and integrity, feeling for the detection of fraud and irregularities, observe and detect relevant indicators in surroundings, identifies patterns and describes their significance to the situation, and effective observational skills. Familiarity with basic accounting, bookkeeping, and business and industry practices is also generally expected for all staff (OECD, 2006b).

Moreover, the required capabilities of audit managers and directors are typically identified based on the notion of coaching, communication, and leadership skills. The required capabilities for audit managers and directors often focused on leadership and management skills, technical expertise, advanced audit skills, achievement orientation, ability to develop and coach others, high level communication skills, and ability to make strategic decisions (OECD, 2006b).

2.8. Tax audit program

The audit program 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. Most governments around the world charged with overseeing the process of tax collection from individuals and companies that reside within the jurisdiction standard deviation (OECD, 2006).

A tax audit is 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 examinations such as general desk checks, compliance visits or document matching programs OECD, 2006a). As Biber (2010) noted, the role of an audit program in a modern tax administration must extend beyond merely verifying a taxpayer's reported obligations and detection of discrepancies between a taxpayer's declaration and supporting documentation. An important issue for any government and revenue collecting authority is to obtain knowledge and understanding of the reasons for taxpayer non-compliance.

The tax audit program provides visibility to the compliance and enforcement arm of the tax administration (Thomson, 2008). According to Tait (1988), effective tax auditing minimizes tax evasion and also helps tax agencies to achieve revenue objectives that ensure the fiscal health of the country and individual states. Additionally, Barreca et al. (2004) noted that the purpose of the tax audit is to check the evasion of tax and ensure compliance in accordance with the laws and regulations. Furthermore, a well-structured tax audit program can provide valuable support in gathering information on the health of the tax system (including patterns of taxpayers'

compliance behavior), educating taxpayers (improving future compliance), and identifying areas of the tax law that require clarification or addressing deficiencies in the law (OECD, 2006a).

Accurate and timely self-assessment and compliance with tax by taxpayers are achieved only through highly visible and effective audit programs, including the consistent application of strong sanctions where noncompliance is encountered. Taxpayers must feel that there is a good chance that unreported liabilities and other forms of non-compliance have been detected during an audit (Biber, 2010).

On the other hand, if an audit program is not effective, it may result in the deterioration of tax compliance and a loss of credibility of the tax administration. Taxpayers may not be deterred from minimizing their tax liabilities if they believe that there is a little chance of being audited (Ebrill, 2001). A good audit program employs strategies to optimize both the direct and the deterrent effects of audits. The first can be achieved by auditing a higher percentage of large taxpayers (Biber, 2010). Although the frequency of audit is a contentious issue, the judgment is always a delicate balance between the treatment of the audit to check the temptation to evade and the cost. Where the tax system is fairly well established, audits of registered traders are less cost a year to be audited. However, it is not only the crude number of audits that are the most useful measure of need (Tait, 1988).

The deterrent effect is best achieved by extending the program to as many taxpayers as possible at all levels (Tait, 1988). Through adequate audit strategy, tax administrations must foster, and not simply enforce, tax compliance. Tax compliance can be facilitated through improving services to taxpayers by providing them with clear instructions, understandable forms, and assistance and information as necessary. Monitoring compliance requires information systems as well as appropriate procedures to detect non-compliance (EC, 2006).

Developing an overall compliance strategy and programs, respectively, is critical for the tax authorities' ability to improve taxpayer compliance and to enhance revenue collection (Russel, 2010).The purpose of a taxpayer compliance program is to identify and respond to the most significant risks in the tax collection system through a range of measures aimed at the underlying causes of noncompliant behavior.

2.9. Tax audit standards

In conducting a tax audit, the auditor should apply the generally accepted practices of auditing as one would do in the case of other audits, e.g. an audit of a company under the companies' act (Kangave, 2004). The generally accepted auditing practices are communicated in the various

pronouncements of the respective country. The auditor should get the financial statements as well as the statement of particulars authenticated by the assessed before he verifies them. The auditor can apply the technique of selective verification depending on his evaluation of the internal control system prevalent in the entity under audit and the materiality of transactions.

In conducting the audit, the auditor should keep in mind that the basic objective behind is to assist the authorities in assessing the collect income of the assessed. For conducting the tax audit effectively an auditor needs to develop an approach that is a synthesis of taxation laws and auditing principles. The nature of tax audit is such that an auditor has to rely on various legal pronouncements in the field of taxation (Kangave, 2004).

2.10. Government Audit Revenue

The country papers bring out the dimensions of these two sources which in turn influence the areas of audit priority. These are tax and non-tax revenues. Government revenues are largely dependent on taxes legislated through various tax statutes. However, the spread of the two sources, viz. tax and non-tax revenues, varies from country to country (Eugene, 2011). According to (Mesfine, 2008) Since virtually all tax returns are accepted as filed without technical scrutiny when applying self-assessment principles, it is essential for the system to be supported by a reliable automated audit case selection system using risk-based screening techniques. An audit on the other hand, is the conduct by audit staff for appropriate verification of selected tax payers declares tax liabilities. It may also include cross checks of tax payer's records with those of tax payer's suppliers or with other source of information such as the custom authorities or other government departments and agencies, (Eugene, 2011).

2.11. Tax Compliance

The exact meaning of tax compliance has been defined in various ways. For example, Andreoni, Erard, and Feinstein (1998) claimed that tax compliance should be defined as taxpayers' willingness to obey tax laws in order to obtain the economy equilibrium of a country. Kirchler (2007) perceived a simpler definition in which tax compliance is defined as the most neutral term to describe taxpayers' willingness to pay their taxes. Compliance in pure administrational terms therefore includes registering or informing tax authorities of status as a taxpayer, submitting a tax return every year (if required) and following the required payment time frames (Ming Ling, Normala and Meera, 2005).

Taxpayers decision to tax compliance influenced by several factors. these factors may be economic factors such as tax rate probability of being audited, tax penalty; psychological factors

such as norm, moral, attitude of taxpayers; social factors such as demographic factors (Brook, 2001) and tax Administrative factors such as probability of detection, complexity of tax system, public service. Allingham and Sandmo (1972) were the first researchers to conduct empirical analysis into compliance behavior of taxpayers and they came up with a model which became known as A- S model. In the model, the compliance decision of taxpayers is considered to be affected by income of the taxpayer, tax rate, probability of audit, and fine rate. Later, the new model introduced by (Alm, 1991; Jackson &Millron, 1986). Therefore, the authors underplayed the influence of psychological and social factors including the demographic characteristics on taxpayers' behavior.

2.12. Reasons for tax Evasion

Different reasons are the causal that encourage and make taxpayers acting toward evasion has been identified by various studies and authors among are; Kirchler, Stephan, Barbaraand Ingrid (2007)and Magesa, (2014) stated that, the reasons for tax evasion can be categorized into two. The first category comprises factors that negatively affect taxpayers' compliance with tax legislation. These factors can be subsumed either contributing to a low willingness to pay taxes (low tax morale, tax system and perception of fairness, low transparency and accountability of public institutions) or high costs to comply with tax laws. The second category contains the reasons for the low ability of tax administration and fiscal courts to enforce tax liabilities (Kirchler, 2007).

These factors can be summarized as resulting from insufficiencies in the administration and collection of taxes as well as weak capacity in auditing and monitoring tax payments which limit the possibility to detect and prosecute violators. Other reasons that given rises to tax evasion includes: corruption in public office, inadequate tax education and awareness, misappropriation of taxes collected, ignorance of the tax authority, lack of adequate enforcement for default, proliferation of taxes, loopholes in the tax laws, inequitable distribution of income, absence of 'Quid Pro Quo' i.e. something of value given in return (by the government) for taxes paid, high level of illiteracy and high tax rates. Adebisi,(2010) and Guramal, Mansor&Pantamee (2015) suggested the following as reasons of tax evasion in many countries such as, unfair distribution of facilities (amenities), poor management and misuse of tax collected as well as lack of essence of civic responsibility

2.13. Effects of tax Evasion

According to Fjeldstad (1996) he says tax evasion has had a variety of fiscal effects and there are at least three reasons responsible for this, in the first place, revenue losses from noncompliance and corruption become significant at a time of substantial budget deficit. Second, horizontal and vertical equity suffer because the effective tax rates faced by individuals may differ because of different opportunities for tax evasion (Alm& Martinez, 2001).Again, Shome (2005) stressed that, an important adverse effect of tax evasion is perhaps on equity. There is horizontal and vertical inequity where in both forms of inequity, the higher-taxed person pays for the lower-taxed person since, had there been no tax evasion; the tax rates would have been lower under the premise of revenue neutrality. Third, there is a growing concern about the expanding underground economic activities, and how these activities affect economic policies (Tanzi and Shome, 1993).

Acts of corruption by tax collectors often play a role in promoting or sustaining underground economic activities and in facilitating tax evasion (Tanzi, 1995).Tax evasion and fiscal corruption thus contribute to undermining the legitimacy of government. Furthermore, citizens' disrespect for the tax laws may expand disrespect for other laws. Toby (1983) affirmed that, tax evasion has undoubtedly affected adversely the government revenue generation capability and the economy as a whole and observed that, the taxpayer indulges in evasion by resorting to various practices.

These practices erode moral values and build up inflationary pressures. This point can be buttressed with the fact that because of the evasion of tax, individuals and companies have a lot of money at their disposal. Companies declare higher dividends and individuals have a high take home profit. This increases the quantity of money in circulation but without a corresponding increase in the goods and services. This then build up what is known as inflationary trends where large money chases few goods. Russo (2010) reported that, in Italy, one of the effects of tax evasion is loss of revenue to the government. Marion and Muehlegger (2008) added that, lack of compliance with tax laws are likely to alter the distortionary costs of raising a given level of government revenue and may affect the distributional consequences of a given tax policy. In addition to, resources spent evading taxes represent a deadweight loss to the economy.

2.14. Audit effectiveness

One of the key insights gained at the 2017 TARC Workshop was from the presentation on audit effectiveness by Umar (2017). While previous research on the relationship between audit enforcement and tax compliance has traditionally focused on the effects of audit probability, detection probability and sanctions, Umar argued that the dynamics of audits in developing countries do not necessarily follow the assumptions made in advanced countries. He argued that, despite the new wave of socio-psychological variables in the aftermath of Allingham and Sandmo (1972), audit could still play a key role in tackling the large-scale tax non-compliance in developing countries.

However, there is a huge gap in our understanding of the concept of audit. Existing research findings about the topic are fragmented in terms of audit probability, detection probability, fines, and sanction severity. Many studies treat these concepts in isolation and the few that combine them neither combine them all nor treat them as dimensions of the same construct. Umar stated that segregating these concepts leads to a problem of construct validity. Instead, he advocates a construct of 'audit effectiveness', which subsumes audit probability, detection probability, and sanction effectiveness

2.15. Empirical reviews

Regarding empirical pieces of evidence on tax audit and revenue collection, the researcher comes across different studies carried out at specifying organizations in different countries but scanty studies that have been conducted to establish the potential effect of tax audit on revenue collection. The following subsection incorporates a number of studies conducted around tax audit and revenue collection.

Rhoades, (1999) study the impact of multiple components reporting on tax compliance and audit strategies. The study modeled taxpayer compliance behavior and tax authority audit strategies within the context of a multidimensional report of taxable income and analyzed the impact of component reporting requirements on taxpayer incentives to misstate the tax liability. The results of the study revealed that the impact of multi-component reporting requirements on specific taxpayers depends critically on their evasion opportunity set. The study stated that taxpayers with multiple evasion opportunities made misstatement across income components to minimize both the direct and indirect effects of detection whereas those with limited evasion opportunities pursued them less aggressively in the multi-component model.

In addition to above studies on non-compliance (Chan & Mo, 2000)also studied the effect of tax-holidays on foreign investors' tax noncompliance behavior in china's developing economy. The empirical results of the study indicated that a company's tax-holiday position affects noncompliance. Companies are least compliant during the pre-holiday period whereas most compliant during the tax exemption period. The study further indicated that domestic market-oriented companies, service companies, and joint ventures are less compliant than export-oriented companies, manufacturing companies, and wholly foreign-owned enterprises respectively. Likewise, Sen and Bala (2002) studied income tax audit operations in Bangladesh. The objective of the study was to conceptualize the term tax audit conducted by professional chartered accountants and to give an overview of the prevailing tax scenario and the operations of the income tax audit. The results of the study confirmed that Bangladesh is unable to raise enough resources through taxes.

Similarly, (Arachi & Santoro, 2007) also studied the use of tax audit strategy as enforcement for small and medium enterprises in Italy. The study focused on a major innovation in the field of tax auditing of self-employed workers and small firms. The main finding of the study was that tax enforcement for SMEs is always challenging since they usually operate on the border between the formal and the shadow economy. The study further showed that the distribution of firm size affects the optimal tax enforcement policy in two ways. First, there can be a relationship between firm size and the propensity to evade or to avoid taxes. Second, the costs and returns of tax auditing may depend on firm size. The study also argued that business sector analysis might be a valuable policy tool for developing countries, which have a large shadow economy and a high share of microenterprises.

In addition of the above studies on effect of tax audit on revenue collection(Gebeyehu, 2008) also focus on basic concepts of tax audit, and analyze the significances and role of tax audit in increasing tax revenue and in strengthening tax administration capacity. The results of the study indicated that the highest ratio of tax to GDP in Ethiopia was 13percent, which is registered in 2003/04.The study stated that personal income tax does not need critical assessment other than checking whether the amount withholds by the employer is forwarded to the respective tax authority. Whereas, business profit tax needs much effort to levy and collect due to the high-risk of understatement and evasion since most taxpayers use all mechanisms that could understate their tax liability.

(Mihret, 2011)focused on key problems in tax audit operation regarding the appropriateness of audit type used, audit rate, aptness of audit case selection methods, audit examination techniques used, and the experience and capability of audit staff resources at federal government level. The result of the study indicates that the tax audit program remains undeveloped with a slight range of tax audit activities performed targeting aptly specific risks. Further, low audit coverage, absence of compliance risk-based audit case selection strategy, scarcity of audit resources, and absence of proficient and experienced tax auditors are revealed as major problems in the study. The findings of a study conducted on taxation and tax audit challenges across 58developing countries (Carnahan, 2015), revenue systems in some developing countries have fundamental shortcomings. Besides, the increasing globalization of economic activity adds a further layer of complexity that developing countries need to manage in building and maintaining their revenue systems.

(Adediran,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 could increase the revenue base of the government and can also stamp out the incidents of tax evasion in the country. Similarly, (Alm, 2006) investigates the application of experimental methods to examine the individual compliance responses to a "certain" probability of audit and conclude that the compliance rate rises if an individual knows he will be audited and the rate falls if he knows he will not be audited.

(Mirera, 2014)Conducted study on the effects of tax audit on revenue collection in the case of the Kenya revenue authority. The study was limited to the Nairobi west region of the Kenya revenue authority and adopted a descriptive research approach. The study was conducted through secondary source of data. The data was analyzed using t-test analytical model. The finding of the study shows that the t-statistics results the parametric Pearson correlation or " value was significant for tax paid before audit and tax paid after audit which clearly indicates there is an increase in the tax paid after the audit. Thus, it is right to say that tax audit is directly related to revenue collection.

Similarly Astebha (2016) focused on tax audit practice and its challenges at Ethiopian revenue and customs authority with specific reference to large taxpayers' office. Its objectives were intended to assess the challenges in the application of tax audit in the large taxpayers; to explore how tax audit is exercised in the reduction of tax avoidance and evasion, and to examine the competency of tax auditors of Ethiopian revenue and customs authority. The principal finding of

this study was that declared income increased significantly more in the rational audit strategy group than in the control group. The results of the study indicate strongly that information concerning the use of rational audit strategies is superior to information concerning random audits, and that audit information, in general, is superior to no information.

(Mebratu, 2016) conducted a study to examine the impact of tax audit on tax compliance in Ethiopia, at federal level by using secondary macro data. To analyze the data the partial coefficient regression statistical analysis method was employed. The Pearson correlation and Bivariate regression result of the study shows, there is a strong association between probability of audit detection and the level of tax compliance. Furthermore, the regression result of the study reveals that there is a strong association between the number of audited files and the level of tax compliance. Pearson correlation and partial regression coefficient result of the study shows that there is a strong association between the probability of audit detection and the number of audited files with the level of tax compliance. The study concludes that since the contribution of tax audit on improving tax payer's compliance is significant among other measures, revenue authorities of the country and other concerned parties should give more emphasis on the role of tax audit by fulfilling the required staff and qualifications to improve tax payer's compliance and thereby increasing countries revenue through tax.

Similarly, (Jemaiyo, 2016) analyzed the determinants of tax compliance and their influence on the level of tax compliance in the real estate sector, Eldoret town-Kenya. Using ex-post facto research design, the study targeted a population of 605. A sample size of 68 respondents comprising of real estate investors, tax audit and tax compliance officers were drawn from the target population using snowball sampling and purposive sampling methods. Data was collected using a structured questionnaire and analyzed using chi-square. This study found that tax compliance cost, tax knowledge, tax penalties and tax audit had significant effect on level of tax compliance

Finally (Harelimana, 2018)examined the effects of tax audits on revenue collection in Rwanda. The study was limited to the 110 respondents of headquarter of the Rwanda revenue authority (RRA) in Kigali. The study adopted a descriptive approach. Data analysis involved statistical computations for averages, percentages, and correlation and regression analysis. Ordinary least squares (OLS) regression method of analysis was adopted to determine the inferential statistics. The finding of the study suggests that tax audit has an effect on revenue collection as according

to the t-tests there was significance in the correlation between tax collected before the audit and after the audit.

2.16. Conclusion and knowledge gap

Generally, as discussed above, all of the studies were attempted to assess tax audit focusing on the significance of tax audit practice in increasing revenue, and issues of tax audit related to large taxpayers at national level and also focused on practices and challenges of tax audit performed at a different level in different countries. For example, Gebeyehu (2008) studied tax audit practice and its significance in increasing revenue in Ethiopia; the case of Addis Ababa city administration, Mihret (2011) studied Tax Audit Practice in Ethiopia: The Case of the Federal government, Abera (2016) studied factors affecting tax audit effectiveness evidence from large taxpayers office of Ethiopian revenue and customs authority (Based on Auditors perception) and Shumetie (2019) studied perception of tax audit practices pieces of evidence from Ethiopian revenue and customs authority large taxpayers office. But, all studies unable to consider the effect of tax audit on revenue collection. Additionally, some attempts were made to assess the issues of tax audit with variable and aspects of increasing revenue, strengthening tax administration capacity, challenges in the application of tax audit in the Merkato no.2 branch office, ability of tax auditors, and tax audit operation at city administration levels. These showed that there is a research gap, on the topic of the effect of tax audit on revenue collection in the context of Addis Ababa Ethiopia.

2.17. Conceptual framework and research hypotheses

2.17.1. Conceptual framework

As a result of the empirical review and theoretical assumptions; the study has developed the following schematic representation of the conceptual framework. In doing so, the data for determining the most control variables that should have to be included in the study were chosen according to the characteristics that they create more impact on revenue collection.

Figure 2.1: conceptual framework of the study

Independent variable   dependent variable

- Tax audit resource
- Auditor's capacity
- Audit case selection
- Revenue protection system
- Tax automation
- Before audit revenue collection
- After audit revenue collection

Revenue Collection
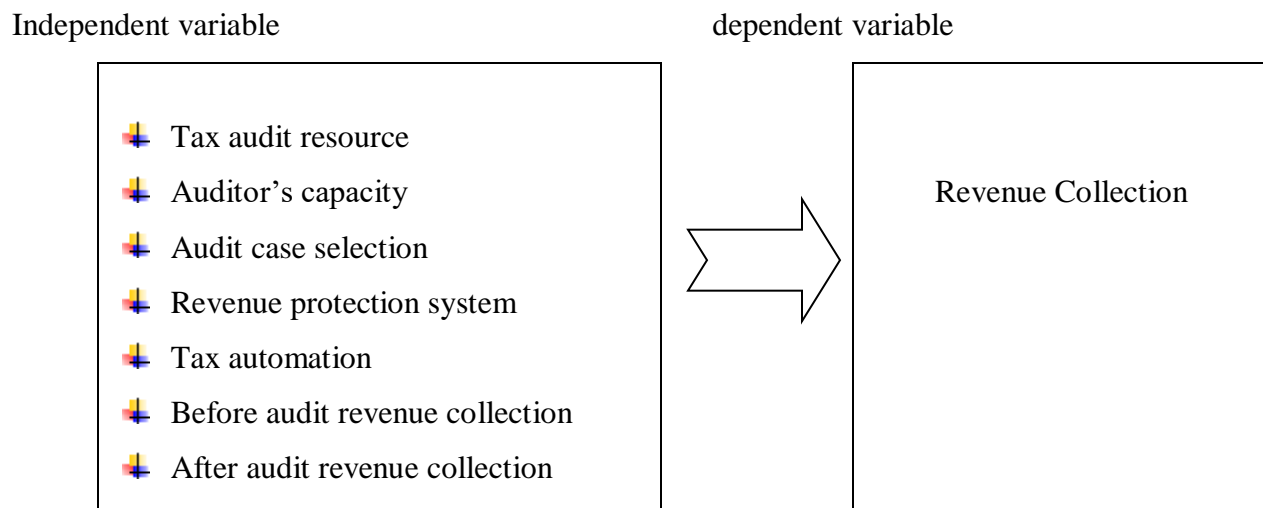
Source: compiled by a researcher from past empirical studies

2.17.2 Hypotheses Development

Revenue bodies typically have at their disposal a finite level of resources to conduct the day to day business of revenue administration. Given the many tasks to be performed and the inevitable decisions that must made on priorities, a process is required to determine how those resources are to be allocated. In some member countries, revenue bodies have relatively limited discretion as to how staff resources are to be spread across the various areas of work, while in others broad discretion is given to senior management on how resources are to be allocated. (Eugene, 2011)

Tax administrations do not have sufficient resources to perform thorough on-site audits of the activities of all taxpayers or comprehensive crosschecking of all invoices or transactions. Tax administration, with limited resources and relatively large numbers of taxpayers to administer (especially in the small and medium enterprises), must design the audit program to deploy audit resources in a risk-based way with a view to achieve the most possible compliance and revenue objective (Thomson 2008).

H1: Tax audit resource has a positive and significant effect on revenue collection.

According to OECD (2006a), revenue bodies must manage and develop their audit workforce to deliver their planned outcomes through increasingly designing and implementing capability or competency models. Capability or competency model refers to a formal specification of the skills, knowledge and attributes of staff that are required to perform a specific job in an efficient and effective manner. The model generally contains job descriptions, functional descriptions and competency profiles using task-related competencies (OECD, 2006b).

It is typically supported by training and educational requirements to ensure and build capability. Different capabilities are required for work performed in different market segments or on clients exhibiting different behaviors towards tax compliance. Typical points of difference are capabilities required for noncompliant aggressive clients, audit work with large businesses (deeper and more specialized knowledge about specific regulations is required for this segment), performing system and electronic data base audits, and conducting criminal and fraud cases (OECD, 2006b).

According to OECD (2006a) the required capabilities of auditors are generally identified by analyzing the activities required to perform particular audit tasks and through practice and experience. In addition to their primary role of detecting and deterring noncompliance, tax auditors are often required to interpret complex tax laws and conduct intensive examinations of taxpayers' books and records. Hence, revenue bodies pay close attention to the overall management of the tax audit function and particularly to the strategies and methods used for recruiting, developing and managing individual audit staff. Thus, tax auditors should have a capability to: conduct investigations, determine compliance, tax accounting and financial analysis, conduct research and analysis, make effective decisions under the law, effective communication, apply work processes and procedures, and manage own work and relationships (OECD, 2006b).

H2: Auditors capacity has a positive and significant effect on revenue collection.

Accordingly, the first key to successful audit is the case selection methodology. It is critical to select audit candidates consistent with program objectives. Whatever the audit objectives have, the ability to narrow the pasture of potential audit candidates is necessary to achieve program objectives and optimal use of audit resources. Regardless of how automated and efficient the audit process, audit effectiveness would not be realized under the selection of inappropriate audit candidates. Hence, managing an effective auditing program involves decisions as to the selection of best audit case strategy or combination of strategies. The selection strategies may vary by tax type. It may be based on either reported tax amounts or the industry type (Barreca and Ramachandran, 2004).

According to Barreca and Ramachandran (2004), Audit selection methods range from simple random selection to more complex rule-based selection, sophisticated statistical and data mining techniques. Selection strategies can vary by tax type and even within a single type. The common

case selection methods include random selection of cases, screening or case review by auditors, rule base and automated risk scoring systems, and data mining and statistical analysis.

H3: Audit case selection has a positive and significant effect on revenue collection.

Lutfunnahar (2007) identified the determinants of tax share and revenue performance for Bangladesh along with 10 other developing countries for the 15 years through a panel data analysis. The results obtained suggest international trade, broad money, external debt and population growth to be significantly determinants of tax efforts. The study concluded that Bangladesh and other countries have low tax effort (less than unity index) and are not utilizing their full capacity of tax revenue and therefore have the potential for financing budgetary imbalance through raising tax revenue.

Harelimana (2018) indicate that Revenue protection system is significantly correlated to the revenue collection (r=0.656, p<0.01).There a Strong positive relationship between Revenue protection system and revenue collections as indicated by correlation of 0.656. This shows that the sampled data can be applied to the general population across RRA at 95%confidence level.

H4: Revenue protection system has a positive and significant effect on revenue collection.

Revenue protection is a holistic utility approach and can be defined as all those utility activities that ensure that losses are minimized, both from revenue and a cost perspective. Gasteiger (2011) indicated that automated system enhances administration with the provision of multiple scenarios that allow senior management in a multi-campus university system to generate multiple income scenarios, make well informed decisions concerning the operation of their institution and timely calculation and allocation of resources to academic departments. In Kenya, Kioko (2012) indicated that the macro model performs better the variations in funds allocated to counties than the representative tax system.

H5: Tax automation has a positive and significant effect on revenue collection.

According to Nyakamba(2014)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 means that the more the tax audit conducted the more revenue is collected.

H6: Before audit revenue of tax payers has a negative and significant effect on revenue collection.

H7: After audit revenue of tax payers has a positive and significant effect on revenue collection.

<center>CHAPTER THREE</center>
<center>RESEARCH DESIGN AND METHODOLOGY</center>

3.1. Introduction

This chapter provides the reader with an overview of the methodological considerations and assumptions underlying the research process. It describes the methods and procedures that the researcher used in order to achieve the research objectives. The chapter covers the research approach used in the study, research design, target population, source of data and data collection and finally how the data is analyzed.

3.2. Research design

This study was conducted in Addis Ababa revenue bureau (ARB) of Markatot.no.2 branch offices to investigate the effect of tax audits on revenue collection. The researcher used an explanatory research design to examine the effect of tax audits on revenue collection. Explanatory research seeks to explain the phenomena being studied (Kothari, 2004). So, in this case, the researcher used explanatory research design to determine the correlation between tax audit and revenue collection.

3.3. Research approach

There are three types of research approaches, namely qualitative, quantitative, and mixed approaches. Qualitative approach used mostly when the researcher needs to develop a complex, holistic picture, analyzes words, reports, detailed view of informants, and conducts the study in a natural setting and involves studies that do not attempt to quantify their results through statistical summary or analysis (Creswell, 2009). The rational reason for the adoption of quantitative approach includes: to develop knowledge of cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories, employee strategies of inquiry such as experiments and surveys (Creswell, 2009).

The mixed research approach is a means to collect both qualitative and quantitative data and analyses together to answer the research questions. In other words, it involves the collecting and "mixing" or integration of both quantitative and qualitative data in a study. A mixed-methods approach is one in which the researcher tends to base knowledge claims on pragmatic (Creswell, 2009). Even though, each approach has its own objective and application time, in the selection process one should take into account the nature of the research problem or issues being addressed. Consequently, the study in hand requires analyzing the relationship between variables based on theories and hypothesis testing using statistical procedures due to the nature of the

study. By saying so, this study used a mixed approach in order to investigate the effect of tax audits on revenue collection.

3.4. Population of the study

As per the data that the researcher found from the Merkato no.2 branch office human resource department on march, 2020 there are a total number of 313 employees; among them,64(52 auditors 11 team leaders and1 audit processes owner) of them are currently working at tax audit department. The target population of the study was all tax auditors, team leaders 'and tax audit processes owner found in ARB Merkato no.2 branch offices. This is because there is a need to address experts in the area who are familiar with the work and deep knowledge in the area of the study; they are a close attachment with tax audit functions and so as to obtain detail primary information

3.5. Data and collection methods

The data used in this study consists of both primary and secondary data. The primary data was collected through questionnaires that are prepared with the open-ended and closed-ended type of questions and Secondary data was collected from different operational manuals and documents of the company.in addition to different kinds of literatures including published and unpublished books, yearly or quarterly reports, journal or articles, and other relevant official reports.

3.6. Data analysisand presentation

To analysis, the collected data the researcher used descriptive statistics. Descriptive statistics were used to determine the minimum, maximum, mean, and standard deviation. A multiple regression model analysis was used to determine the relative importance of variables. The Data was presented quantitatively using a graph, table, percentage, and pie-charts and also data presented by qualitatively by using narrations. To conduct this study, the researcher used statistical tools for SPSS software.

3.7. Model specification and Description of Variables

To examine the effect of tax audit on revenue collection, there is an estimated equation where Revenue collection in ARB of Merkato No. two branch office is reflected as a function of the following variables

$$RC= f\ (TR,CA,AC,RP,TA,BA,AA,)\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

RC = Revenue collection (measured as amount of revenue collected from tax payers under each month and natural logarithm is used).

TR = Tax audit resource

CA = capacity of the auditors

AC = audit case selection

RP = revenue protection system

TA= tax automation

BA = income before audit

AA = income after audit

The above equation number (1) can be re written in the following econometric model with its functional forms.

$$RC = \beta 0 + \beta 1 BAt + \beta 2 AAt + \beta 3 TRt + \beta 4 ACt + \beta 5 \ CAt + \beta 6 \ RPt + \beta 7 \ TAt + c \ldots\ldots\ldots\ldots (2)$$

Whereas; β0 is the intercept and βi (i=1, 2, 3, 4, 5, 6, 7) represents the coefficient for each of the independent variables.

C = is the constant term of the regression.

3.8. Definition of Variables

3.8.1. Dependent Variable

Revenue collection: revenue collection is used as a dependent variable in this study and measured as the amount of tax collected from taxpayers under two month interval. The variable is measured by the natural logarithm of the amount collected from taxpayers.

3.8.2. Independent Variables

Tax audit

A tax audit is an examination of whether a taxpayer has correctly assessed and reported their tax liability and fulfilled other obligations. Generally, an audit will examine the issues seen as most significant to achieving an accurate assessment of a taxpayer's tax liability. The study under consideration used seven variables to measure the tax audit and those are tax audit resources, auditors' capacity, and audit case selection, revenue protection system, and tax automation, income before and after the audit.

3.8.3. Variable Measurement

In this study revenue collection was measured using seven hypothetical questions. The use of hypothetical questions can increase reliability of results and minimizes respondents' dishonesty when answering the questionnaire (Troutman, 1993). The respondents were asked to relate each hypothetical with revenue collection performance and would undertake the same action if they faced the same situation using 'strongly disagree' to 'strongly agree', using a Likert Scale of 1 to 5 respectively.

Table 3.1 Summary of Expected sign of Variables used in regression

Variables	Abbreviation	Descriptions	Expected signs
Revenue collection	LRC	Revenue collected under each month in birr	
Tax audit resource	TR	Measured by proxy questions	+
Audit case selection	AC	Measured by proxy questions	+
Capacity of auditors	CA	Measured by proxy questions	+
Revenue protection system	RP	Measured by proxy questions	+
Tax automation	TA	Measured by proxy questions	+
amount before audit	BA	Amount reported before tax under each month	-
amount after audit	AA	Amount reported after tax under each month	+

Source: Compiled by the researcher based on earlier studies

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION

4.1. Introduction

In the preceding chapters, important literature that gives understanding about the topic was reviewed and used to identify the knowledge gap in the area of the study. In line with reviewed literature; the research problem, research objectives, research hypotheses & the research design used for this study were also discussed. This chapter deals with the descriptive statistics of the data collected, correlation analysis, normality tests, and other important assumptions that are discussed to see if the model was viable.

4.2. Descriptive Analysis of the Study

In order to achieve the objective of the study; the researcher was used purposive sampling; to select a sample of respondents from the total 313 population, So the data collected through a questionnaire distributed to respondents were analyzed and discussed. At the same time information obtained from secondary sources such as reports and related forms, action has been analyzed by using different tools. From the total population of 313 employees of Merkato no.2 branch office as of 2011E.C data collected from the human resource development team, the number of target sample sizes selected for study was only tax auditors of Merkato no.2 branch 64 in number. The researcher has distributed 64 questionnaires to respondents but only 60 questionnaires were returned and the rest of the respondents did not return the questionnaire. As it can be discussed in the following subsections of the chapter; the study was targeted tax auditors as a population of the study. The questionnaire was prepared and distributed to the respondents; each variable was represented by proxy questions; the independent variable selected for the study was tax audit resources, audit case selection methods, the capacity of tax auditors, Revenue protection system, tax Automation, the amount before audit and amount after an audit. The data collected were analyzed through SPSS version 24.

4.3. Response Rate

The researcher has distributed 64 questionnaires to respondents but only 60 questionnaires were returned and the rest of the respondents did not return the questionnaire. As Yesegat (2008).stated, the response rate of 71.8 percent was reasonably good in consideration of the difficulty to collect data in poor developing countries; Ethiopia in particular. Therefore, the response rate for the study was 94%. This indicates that the response rate was greater than the average response rate. As it can be discussed in the following subsections of the chapter; the

study was targeted tax auditors as a population of the study. The questionnaire was prepared and distributed to the respondents; each variable was represented by proxy questions; the independent variable selected for the study was tax audit resources, audit case selection methods, the capacity of tax auditors, Revenue protection system, tax Automation, amount before audit and amount after audit. The data collected were analyzed through SPSS version 24.

4.4. Reliability of Research Tool

4.4.1. Reliability of questionnaire.

The reliability of the questionnaire was evaluated using the "Cronbach's alpha" and all the **5** items of the Research questions were considered for the calculation. To measure the reliability of the questionnaire, the researcher applied a preliminary reliability test from 20 tax auditors. According to different statistic books a reliability coefficient exceeding 0.5 for any test or scale was an acceptable reliability coefficient. Therefore, as we can see the (Cronbach's alpha) 0.701 indicates that the questionnaire administered in this study.

Table 4.4.1 Reliability Statistics

Case Processing Summary			N	%
Cases	Valid		20	100.0
	Excluded[a]		0	0.0
	Total		20	100.0
a. List wise deletion based on all variables in the procedure.				
Reliability Statistics				
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items		
0.701	0.724	5		

4.5. Descriptive Statistics of Variables of the Study

According to Best (1977), the standard deviation of the score from 1-1.80 is lowest, from 1.81-2.61 is lower, from 2.62-3.41 is average/moderate, from 3.42-4.21 is good/high, and 4.22-5 is considered very good; Besides, the decision rules used in the analysis was average mean less than 3 was considered as low, the average mean equal to 3 was considered as medium and average mean greater than 3 was considered as high (Best and khan1995).

The mean distribution of the dependent variable (RC) of the study is 12.87 which are greater than 3 and standard deviation statistics for RC is 0.14, which is less than 1.it shows the revenue

collection performance in Merkato no.2 branch office is greater than its moderate level.

The mean distribution of amount before the audit is 12.02 which are still greater than 3 and the standard deviation of 0.64 which is less than 1 which indicates that the amount of tax provided by taxpayers to the tax authority before making any audit is greater than its moderate level. Which implies that; the taxpayers report their total earning during the year to tax authority greater than the average amount the tax authority expect from them. On the other hand; the average mean value of variable income after- tax audit is 10.03 with a standard deviation value of 0.72 this implies that amount of revenue collected after audit increases due to audit of the books of the taxpayers.

Tax audit resource abbreviated as TR, is proxied by the number of audit staff, resource materials, qualification and experience of the auditors, the capability of auditors, and the commitment of individual auditors in performing audit activities. The data collected concerning tax audit resources reveals that the mean distribution of 3.8 which are greater than 3 and the standard deviation of 0.27 which is less than 1; even though the standard deviation for a variable is less than moderate level, the mean value of the variable shows that because of the respondents there is high tax audit resource in Merkato no.2 branch office.

Audit case selection which is abbreviated by AC is determined by the responsibility of the audit team, intelligence input support for audit program, frequency of auditing, availability of resources, and potential of taxpayers. The mean value of audit case selection was 3.50, which is greater than 3 and this implies that respondent's attitude on audit tax selection in Merkato no.2 branch office audits is greater than its moderate level. The variation of audit case selection measured by standard deviation was 0.33 which is less 1 of its moderate score. The other independent variable is the capacity of auditors abbreviated as CA and proxied by the skill of officers, the ability to understand tax audit manual, training of auditors, and capacity of auditors in analyzing the audit standards. The data collected from the respondents with regard to the capacity of the auditors shows the mean value of 3.86, which implies that the auditors at large taxpayers, has a capacity to perform the audit programs. The variation of each observation from its mean value for this variable is 0.43.

The variable revenue protection system is considered as an important variable in deciding the government revenue collection performance. The proxy used to measure this variable was the confidentiality of tax audit, the legal framework of the country, and strengthens of the audit manual. The data collected with this variable shows the mean value of 3.66 and the standard

deviation of 0.36. This implies that in a view of the respondents' response the revenue protection system in large taxpayer's offices is above the moderate level required by the government. The last variable of the study is tax automation abbreviated as TA and measured by application of tax automation, and educational level of the existing auditors to with tax automation. The data collected with this variable shows the mean value of 3.84 and the standard deviation of 0.44. The result of the data implies that the tax automation system at Merkato no.2 branch office is greater the moderate level required by tax authorities.

Table 4.5: Descriptive Statistics of Variables of the Study

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
RC	60	12.62	13.11	12.8703	0.13979
BA	60	11.13	12.78	12.0240	0.64418
AA	60	8.31	11.26	10.0348	0.72635
TR	60	3.20	4.40	3.8800	0.27109
AC	60	3.20	4.20	3.5033	0.33037
CA	60	3.00	4.60	3.8667	0.43983
RP	60	3.00	4.20	3.6657	0.36714
TA	60	3.20	6.20	3.8400	0.44767
Valid N (list wise)	60				

Source: Field survey, 2019

4.6. Correlation Analysis and Discussion

Correlation analysis is a statistical tool which is used to measure the strength or degree of linear association between two variables. The correlation coefficient, which always lies between -1 and+1 was used to measure the strength and magnitude or degree of linear association between two variables. A correlation coefficient of +1 shows a strong and positive linear relationship between two variables. On the contrary, a correlation coefficient of -1 indicates a strong and negative linear association between two series. A correlation coefficient of 0 shows that there no linear relationship between two variables. The result of correlation analysis is discussed in detail as follows:

Table 4.6: Correlation between the Variables of the Study

		RC	BA	AA	TR	AC	CA	RP	TA
		Correlations							
RC	Pearson Correlation	1	-.390**	0.060	-0.167	0.211	.601**	.608**	0.176
	Sig. (2-tailed)		0.002	0.649	0.202	0.105	0.000	0.000	0.178
	N	60	60	60	60	60	60	60	60
BA	Pearson Correlation	-.390**	1	-0.040	0.039	-.345**	-.600**	0.154	0.134
	Sig. (2-tailed)	0.002		0.761	0.765	0.007	0.000	0.240	0.306
	N	60	60	60	60	60	60	60	60
AA	Pearson Correlation	0.060	-0.040	1	0.028	-0.114	0.071	-0.058	-0.033
	Sig. (2-tailed)	0.649	0.761		0.829	0.387	0.592	0.662	0.802
	N	60	60	60	60	60	60	60	60
TR	Pearson Correlation	-0.167	0.039	0.028	1	0.232	0.017	-0.097	0.169
	Sig. (2-tailed)	0.202	0.765	0.829		0.075	0.897	0.460	0.198
	N	60	60	60	60	60	60	60	60
AC	Pearson Correlation	0.211	-.345**	-0.114	0.232	1	0.185	-0.161	0.169
	Sig. (2-tailed)	0.105	0.007	0.387	0.075		0.157	0.218	0.198
	N	60	60	60	60	60	60	60	60
CA	Pearson Correlation	.601**	-.600**	0.071	0.017	0.185	1	.315*	0.114
	Sig. (2-tailed)	0.000	0.000	0.592	0.897	0.157		0.014	0.387
	N	60	60	60	60	60	60	60	60
RP	Pearson Correlation	.608**	0.154	-0.058	-0.097	-0.161	.315*	1	0.216
	Sig. (2-tailed)	0.000	0.240	0.662	0.460	0.218	0.014		0.097
	N	60	60	60	60	60	60	60	60
TA	Pearson Correlation	0.176	0.134	-0.033	0.169	0.169	0.114	0.216	1
	Sig. (2-tailed)	0.178	0.306	0.802	0.198	0.198	0.387	0.097	
	N	60	60	60	60	60	60	60	60

** & * are significant at 1% and 5% significant level.

Source: SPSS 24 output.

The coefficient of correlation between revenue collection and amount of revenue before audit was -0.390. It shows that there is weak and negative relationship between them. The relationship between two variables is significant at 1% level of significance. This implies that since the tax payers at Merkato no.2 branch office reports their earning to the tax authority less than the required level, before audit amount of tax has significant negative effect on the revenue collection performance of the office. Another variable employed in the study was tax amount after audit. The coefficient of correlation between the variable is 0.060, which indicates that there positive correlation between amount after tax and revenue collection performance and the relationship between two variables is insignificant even at 10% level of significance. The third variable is audit tax resource. The correlation coefficient between two variable shows -0.167 and this implies that revenue collection performance and audit tax resource have weak negative relationship but they are even not significant at 10% significance level. On the other hand, the relationship between audits case selection and revenue collection performance is positive and significant at 10% significant level. This implies that more attention of audit case selection program more revenue collection. The auditors' capacity is found strongly and positively correlated with revenue collection performance of the office. The correlation analysis shows a coefficient of 0.601 and statistically significant at 1% significance level. Revenue protection system and, tax automation are also found positively correlated with revenue collection performance. The correlation analysis shows a coefficient of 0.608 and 0.176 for revenue protection system and tax automation respectively. The Revenue protection system significant at 1% significance level but tax automation even not significant at 10% significance level with revenue collection performance.

4.7. Multiple Regression Analysis

The study employed multiple regression models in the form of ordinary least square (OLS) and used a cross-sectional data from auditors in Merkato no.2 branch office. The researcher undertook the diagnostic tests for the assumption of classical linear regression model (CLRM) before directly going to the multiple linear regression models.

4.7.1 Results for Test of Classical linear Regression Model (CLRM) Assumptions

Diagnostic test is made to make sure that the classical linear regression model assumption violated or not. In this study an attempt is made to test Heteroscedasticity, Autocorrelation, normality and Multi-collinearity the result of which are presented and discussed as follows.

4.7.1.1. Test for no heteroscedasticity (homoscedasticity) {var (ut) = σ2 <∞}

One of the important assumptions of the classical linear regression model is Heteroscedasticity. As noted by brooks (2008) Heteroscedasticity assumption state that the disturbances appearing in the population regression function are homoscedasticity; that is, they all have the same variance. The variance of each disturbance term ui, conditional on the chosen values of the explanatory variables, is some constant number equal to σ2. This is the assumption of Heteroscedasticity, or equal (homo) spread (scedasticity), that is, equal variance (Gujarati, 2004). If the error term ui do not have constant variance its said to be there is Heteroscedasticity problem.

Heteroscedasticity makes our parameter estimates no longer BLUE – they are still unbiased, but no longer have a minimum variance. Unfortunately, SPSS does not have built in procedure to test for heteroscedasticity. The test can be done by writing some codes. Despite not having built in procedure to test for heteroscedasticity, we can plot standardized residuals (ZRESID) against the standardized predicted values (ZPRED). If there is no heteroscedasticity, the plot should look random. If u sees a pattern, such as a funnel shape or a curve, this indicates heteroscedasticity. A curve shape, in particular, could indicate some non-linearity in the relation that you failed to take into account. The following figure shows the result of heteroscedasticity of the model. The following hypothesis is set for the heteroscedasticity test.

H0: There is no Heteroscedasticity problem in the model.

H1: There is Heteroscedasticity problem in the model.

Figure 4.7.1: Result of Heteroscedasticity test

Scatterplot
Dependent Variable: RC
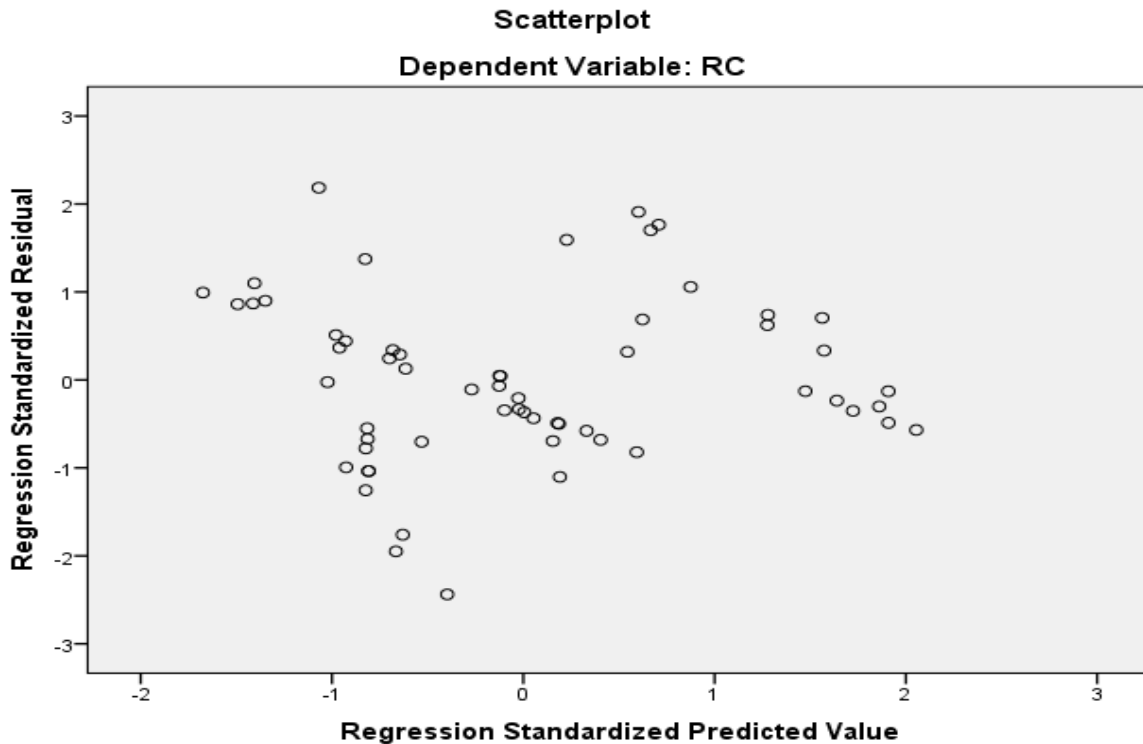
Source: SPSS 24 output

As we can observed from the above figure 4.6.1; the plot the residuals have a random pattern, which signifies that there is no sign of heteroscedasticity. So, the null hypothesis of no heteroscedasticity should not reject.

4.7.1.2. Test for assumption of no autocorrelation {cov (ui, uj) = 0 for i ≠ j}

The diagnostic test for CLRM assumption of no autocorrelation was tested by this study. According to Gujarati, (2004) the assumption of no autocorrelation between the disturbances assumes that given any two X values, Xi and Xj (i≠j), the correlation between any two ui and uj (i≠j), is zero. According to Chris Brooks (2008) it is assumed that the errors are uncorrelated with one another. If the errors are not uncorrelated with one another, it would be stated that they are 'auto correlated' or that they are 'serially correlated.

This assumption was tested by Durbin Watson (DW) test of autocorrelation. Durbin-Watson (DW) is a test for first order autocorrelation-- i.e. it tests for a relationship between an error and its immediate previous value. One way to motivate the test and to interpret the test statistic would be in the context of a regression of the time t error on its previous value. DW has 2 critical values: an upper critical value (dU) and a lower critical value (dL), and there is also an intermediate region where the null hypothesis of no autocorrelation can neither be rejected nor

not rejected. The rejection, non-rejection, and inconclusive regions are shown in the following figure.

Figure 4.7.2: Rejection, non-rejection and inclusive area for DW test.
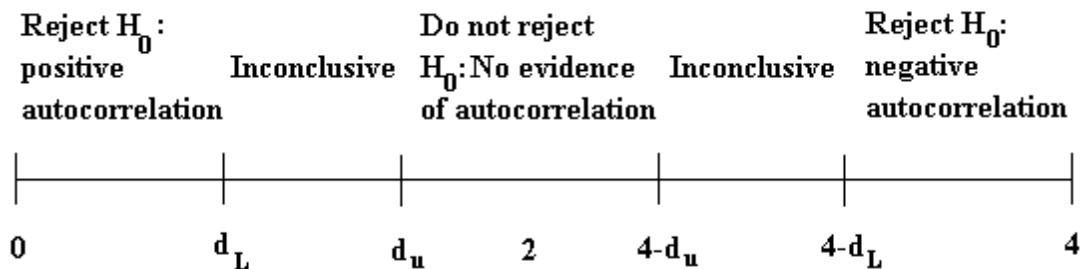
In line with Brooks (2008) the following criteria are related to the decision rule to reject and not to reject the null hypothesis of DW test. The null hypothesis should rejected and the existence of positive autocorrelation presumed if DW is less than the lower critical value DL; the null hypothesis is also rejected and the existence of negative autocorrelation presumed if DW is greater than 4 minus the lower critical value DL;

The null hypothesis is not rejected and no significant residual autocorrelation is presumed if DW is between the upper critical value DU and 4 minus the upper critical value DU.

The null hypothesis is neither rejected or fails to be rejected if DW is between lower critical value DL and the upper critical value DU or if DW is in between4 minus the upper critical value dU and 4 minus the lower critical value DL. Therefore, the hypotheses of the autocorrelation test were formulated as follows:

H0: There is no autocorrelation problem in the model

H1: There is autocorrelation in the mode

Table 4.7.3: Result of Auto correlation test

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.826ᵃ	0.683	0.640	0.08383	1.860
a. Predictors: (Constant), TA, AA, CA, TR, AC, RP, BA					
b. Dependent Variable: RC					

Source: SPSS 24 output

The DW test statistic value for the model was 1.860 for a total observation of 60 responders with 7 independent variables. Thus the decision value for the test implies that there is no autocorrelation problem in the model. According to Brooks (2008) if the DW test lies between 1.5 and 2.5 there is no issue of autocorrelation in the model. So, the null hypothesis of no autocorrelation is accepted because there is no evidence of autocorrelation in the study.

4.7.1.3. Test for presence of multi-collinearity in the model

The other CLRM assumption tested in this study was the multi-collinearity assumption. According to Brooks (2008) the absence of multi-collinearity assumption says that the explanatory variables are not correlated with one another. If there is no relationship between the explanatory variables, they would be said to be orthogonal to one another. If the explanatory variables were orthogonal to one another, adding or removing a variable from a regression equation would not cause the values of the coefficients on the other variables to change.

A small degree of association between explanatory variables will almost always occur but will not cause too much loss of precision. However, a problem occurs when the explanatory variables are very highly correlated with each other, and this problem is known as multi-collinearity. Perfect multi-collinearity occurs when there is an exact relationship between two or more variables. In this case, it is not possible to estimate all of the coefficients in the model. Perfect multi-collinearity will usually be observed only when the same explanatory variable is inadvertently used twice in a regression.

According to Gujarati, (2004) multi-collinearity refers to the existence of more than one exact linear relationship, and according to the author, the assumption of no multi-collinearity says that there are no perfect linear relationships among the explanatory variables. Correlation matrix is very helpful to check any existence of strong correlations between the independent variables. The variables which have this strong relationship might be assumed as not explaining the model with the other correlated variable.

This means that; the two correlated variables cannot explain together the model and in this case, one of the variables (the one that is considered as insignificant for the study) must be eliminated from the model. In doing so, analyzing the multi-collinearity issues that, the model can have is important. If existence of high correlation between any two independent variables in the model is confirmed; the problem of multi-collinearity arises; and this makes significant variables insignificant by increasing its standard error. So, here under the issue of multi-collinearity is performed through correlation matrix.

Table 4.7.4: Result of multi-collinearity test

		BA	AA	TR	AC	CA	RP	TA
					Correlations			
BA	Pearson Correlation	1	-0.040	0.039	-.345**	-.600**	0.154	0.134
	Sig. (2-tailed)		0.761	0.765	0.007	0.000	0.240	0.306
	N	60	60	60	60	60	60	60
AA	Pearson Correlation	-0.040	1	0.028	-0.114	0.071	-0.058	-0.033
	Sig. (2-tailed)	0.761		0.829	0.387	0.592	0.662	0.802
	N	60	60	60	60	60	60	60
TR	Pearson Correlation	0.039	0.028	1	0.232	0.017	-0.097	0.169
	Sig. (2-tailed)	0.765	0.829		0.075	0.897	0.460	0.198
	N	60	60	60	60	60	60	60
AC	Pearson Correlation	-.345**	-0.114	0.232	1	0.185	-0.161	0.169
	Sig. (2-tailed)	0.007	0.387	0.075		0.157	0.218	0.198
	N	60	60	60	60	60	60	60
CA	Pearson Correlation	-.600**	0.071	0.017	0.185	1	.315*	0.114
	Sig. (2-tailed)	0.000	0.592	0.897	0.157		0.014	0.387
	N	60	60	60	60	60	60	60
RP	Pearson Correlation	0.154	-0.058	-0.097	-0.161	.315*	1	0.216
	Sig. (2-tailed)	0.240	0.662	0.460	0.218	0.014		0.097
	N	60	60	60	60	60	60	60
TA	Pearson Correlation	0.134	-0.033	0.169	0.169	0.114	0.216	1
	Sig. (2-tailed)	0.306	0.802	0.198	0.198	0.387	0.097	
	N	60	60	60	60	60	60	60
** & * are significant at 1% and 5% significant level								

Source: SPSS 24 output

Based on the result of correlation matrix, which is shown in the above table 4.6.4; it is better to discuss about the issue of multi-collinearity by taking the benchmarks of Cooper & Schindler (2009); which suggests that, a correlation above 0.8 should be considered as a problem of multi-collinearity. So, as it can be seen from the above table correlation matrix, there is no worry of multi-collinearity issue in this model; since, the highest correlation is 0.600 which is found between amount after audit amount before audit and Capacity of auditors.

4.7.1.4. Test for normality

The last diagnostic test for CLRM assumption of normality assumption was tested by this study. The assumption says that disturbances are normally distributed. Frequency distributions come in many different shapes and sizes. It is quite important, therefore, to have some general descriptions for common types of distributions. In an ideal world our data would be distributed symmetrically around the center of all scores. As such, if we drew a vertical line through the center of the distribution then it should look the same on both sides. This is known as a normal distribution and is characterized by the bell-shaped curve. This shape basically implies that the majority of scores lie around the center of the distribution (so the largest bars on the histogram are all around the central value). The following figure shows the result of normality test with regard to the data conducted.

Figure 4.7.5: The result of normality test
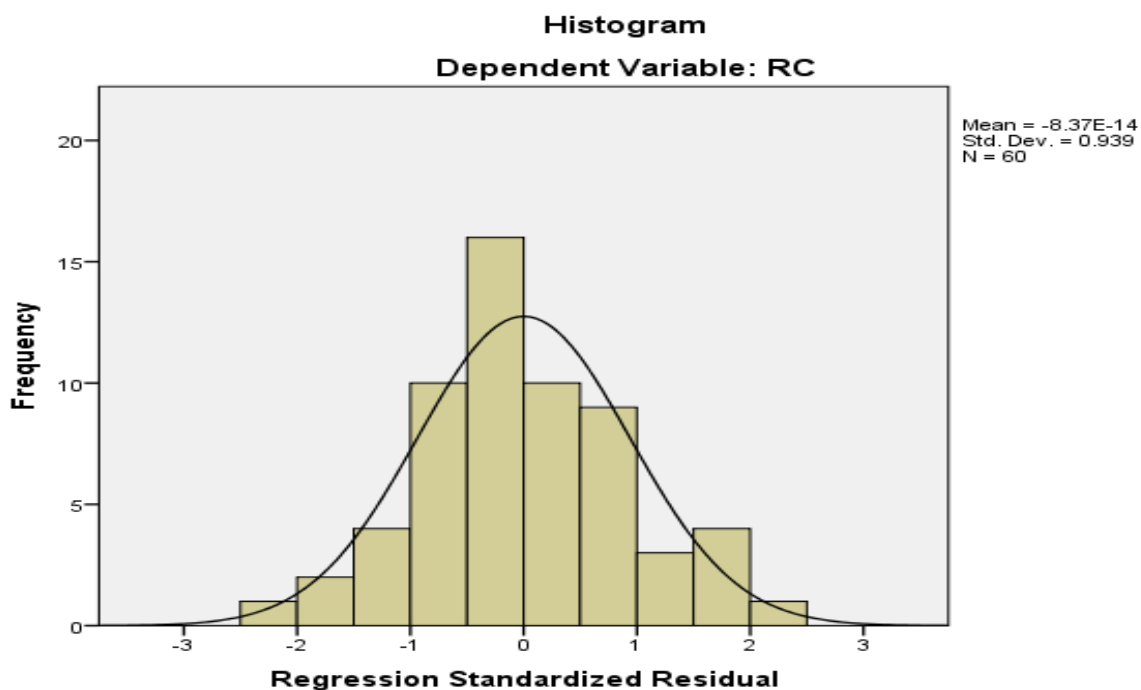
Source: SPSS 24 output

4.8. Multiple regression output and its discussion

In this study, multiple regression analysis was carried out to get the predictive value of the variables considered. This was basically made to determine the linear combination of the constructs. The dependent variable of the study is revenue collection performance (RC) and independent variables are amount before audit (BA), amount after audit (AA), audit tax resources (TR), audit case selection (AC), auditors' competence (CA), revenue protection system

(RP) and tax automation (TA).

$$LRCt = \beta 0 + \beta 1 LBAt + \beta 2 LAAt + \beta 3 TRt + \beta 4\ ACt\ + \beta 5\ CAt$$

$$+ \beta 6\ RPt + \beta 7\ TAt + c$$

Table 4.8.1: Model summary

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.826[a]	0.683	0.640	0.08383	1.860
a. Predictors: (Constant), TA, AA, CA, TR, AC, RP, BA					
b. Dependent Variable: RC					

Table 4.8.2: Result of ANOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.788	7	0.113	16.010	.000[b]
	Residual	0.365	52	0.007		
	Total	1.153	59			
a. Dependent Variable: RC						
b. Predictors: (Constant), TA, AA, CA, TR, AC, RP, BA						

The regression model output was presented in below table 4.7.3 and it shows the coefficients, standard errors, t-values, and p-values for explanatory variables. The overall summary of the model is presented in the above table 4.7.1.This implies the R-squared, adjusted R-squared and standard error of the estimates. The ANOVA result table shows F-statistics and probability (F-statistics) for the regression. The R-squared and Adjusted R-squared statistic of the model were 68.3% and 64% respectively.

The explanatory power of independent variables such as amount before audit, amount after audit, audit tax resources, capacity of the auditors, audit case selection, protection of revenue and tax automation, on the change in dependent variable (revenue collection performance) was explained 68.3%. The result of Adjusted R-squared shows that change on dependent variable (RC) was

explained was explained 64% by the independent variables employed in the study. Therefore, 31.7% of change on dependent variable (RC) was explained by other factors which are not included in the model. The null hypothesis of F-statistic (the overall test of significance) which says the Adjusted R-squared is equal to zero was rejected at 1% significance level. F-value of 0.000 shows strong statistical significance which enhanced the reliability and validity of the model.

Table 4.8.3: Result of regression coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	12.332	0.444		27.782	0.000
	BA	-0.066	0.025	-0.303	-2.584	0.013
	AA	0.019	0.015	0.101	1.271	0.209
	TR	-0.083	0.043	-0.161	-1.950	0.057
	AC	0.089	0.038	0.211	2.351	0.023
	CA	0.056	0.037	0.177	1.513	0.136
	RP	0.232	0.036	0.610	6.422	0.000
	TA	0.019	0.027	0.060	0.706	0.484
a. Dependent Variable: RC						

The model equation is

RC=12.332-0.066(BA)+0.019(AA)-0.083(TR) +0.089(AC) +0.056(CA) +0.232(RP) +0.019(TA)

The result of regression out reveals that before audit amount of the taxpayer income has a negative relationship with revenue collection performance with a beta coefficient value of -0.066 and statically significant at a 1% significance level. The result of the regression output implies that 1 unit increases the income of the taxpayers before audit causes the revenue collection performance to decrease by 6.6 percent and statistically significant at a 1% significance level.

The negative relationship between two variables can be expected since Ethiopia applies a progressive tax system. For that, if the companies earning ability before making any audit tax increases it will increase the level of revenue collection for that purpose the taxpayers are encouraged to understate the total earning of the companies by overstating artificial expenses.

On the other hand, the relationship between revenue collection performance and after audit amount of tax found positively correlated. The result of regression analysis implies that 1 unit increase the amount of tax after audit cause's revenue collection performance to increase 1.9 percent and not statically significant even at a 10 percent significance level. This result also the same with the result of Abinet (2016) which says that the value of Significance level (p-value) associated with't' is 0.34, and it becomes 0.17 when we divided it by 2 for one- tailed test. This indicates that the value of 'p' is greater than 0.05, which implies statistically there is no significance of tax collection after Tax Audit. But this doesn't mean, there is no relationship between ABA & AAA, rather it shows that their relationship is not statistically significant.

The variable audit tax resources have a negative relationship with revenue collection performance at Merkato no.2 branch office. The result of regression out implies that a 1 unit increase in tax audit resources causes revenue collection performance to decrease by 8.3% and statically significant at a 10 percent significance level. The implication of the negative relationship between the variables is an indication that; Merkato no.2 branch office does not fulfill the questions provided under audit tax resources. The questions were included are; whether there is enough audit staff to perform audit programs in the office, enough resource materials, experienced and qualified audit staff, and necessary training to improve the capability of the auditors. So, the result of the data collected from respondents implies that the Merkato no.2 branch office has no enough audit tax resources to perform the audit activities.

An audit case selection at Merkato no.2 branch office found positively and statically affects revenue collection performance. The result of regression out reveals that 1 unit increase in audit case selection causes revenue collection performance to increase by 8.9 percent and statically significant at a 5 percent significance level. This implies that; the more the office focus on audit case selection the more the revenue will collect. So, it is possible to understand that; Merkato no.2 branch office is performing its audit case selection in line with the questions provided under the variable of the study.

The auditors' capacity found positively correlated with the revenue collection performance of the office. The result of regression out reveals that 1 unit increase in auditors' capability causes revenue collection performance to increase by 5.6 percent and not statically significant even at a 10 percent significance level. Since auditor's capacity was measured by auditors' skill, frequency of training given, and ability to understand the audit manual; the more auditors capacity the more revenue collection performance.

The revenue protection system found positively affects revenue collection performance and statistically significant. The result of regression output reveals that 1 unit increase in revenue protection system causes the revenue collection performance to increase by 23.2 percent and statistically significant at a 1 percent significance level. On the other hand tax automation found positively affects revenue collection performance and not statically significant. The result of regression output shows that 1 unit increase in tax automation leads the revenue collection performance to increase by 1.9 percent and not statically significant even at a 10 percent significance level. The implication behind the positive relationship between revenue collection performance and tax automation is that; increase the level of tax automation(updated software's for revenue collection, a different type of application for revenue collection) speed up overall service quality of the office and reduce the compliance cost.

The above result also the same as the result of Harelimana (2018) which says the Revenue protection system is statistically significant in explaining revenue collection at RRA. An F statistic of 4.85 indicated that the combined model was significant. From the analysis, a p-value of less than 0.05 (p-value =0.0000) was obtained. This implies that the simple linear model with the Revenue protection systemas the only independent variable is significant.

In contrast with this study result, the result of Harelimana (2018) says that tax automation is statistically significant in explaining the revenue collection of RRA. An F statistic of 7.658 indicated that the combined model was significant. From the analysis, a p-value of less than 0.05 (p-value =0.0000) was obtained. This implies that the simple linear model with tax automation as the only independent variable is significant.

Table 4.9: Summary of Expected sign and actual result of Variables used in regression

Independent Variables	Expected sign effect	Actual effect	Hypothesis status
Tax audit resource	Positive and significant	Negative and significant	Reject
Audit case selection	Positive and significant	Positive and significant	Accepted
Capacity of auditors	Positive and significant	Positive and in significant	Reject
Revenue protection system	Positive and significant	Positive and significant	Accepted
Tax automation	Positive and significant	Positive and in significant	Reject
amount before audit	Negative and significant	Negative and significant	Accepted
amount after audit	Positive and significant	Positive and in significant	Reject

Source: Compiled by a research from a finding of the study.

CHAPTER FIVE

SUMMARY OF MEASURE FINDING, CONCULISION AND RECOMMENDATION

5.1. Introduction

This chapter is the last chapter of this study; which sum up the whole thesis in comprehensive manner. Accordingly, in the first part of this chapter, an overview of the thesis and its major findings are presented and finally the chapter ends up with recommendations for policy implications.

5.2. Summary of the Finding

This study is conducted to examine the effect of tax audit on revenue collection; evidence from ARB, Merkato no.2 branch office. In doing so, some variables measured as proxy to the tax audit was included. The study was conducted through primary and secondary data conducted from ARB, Merkato no.2 branch office and the secondary data collected was covers 10 years monthly observation (2009-2018).

The study adopted explanatory research design and mixed research approach. In order to estimate the extent of the effects of each variable, several tests were needed to be done. Firstly, a multi-collinearity test was checked through correlation matrix; in order to see, if there was any issue between variables. Then, other tests (such as the auto correlation, normality, and heteroscedasticity tests), were confirmed that a model is feasible.

To analyze the descriptive statistics, the researcher used the mean, maximum, minimum and standard deviation of all variables. Further, the researcher discussed regression analysis to determine the effect of independent variables on the dependent variable. Therefore, in line with the specific objective of the study the researcher reached at the following conclusion. The finding of the study reveals that revenue collection is positively correlated with the variables included in the study except revenue before audit and tax audit resource. Subsequently the following sections discuss the finding of each variable.

The result of regression analysis indicates that; the variable tax audit resource (which is measured by number of staffs, availability of audit materials, experience and qualification of the auditors, and commitment of the auditors) has a negative effect on revenue collection and statistically significant at 10 percent significance level. On the other hand; auditors' capacity (which is measured by skill of auditors, capacity of the auditors, frequency of audit training and quality of audit manuals) has a positive effect on revenue collection performance and not

statically significant even at 10 percent significance level.

The variable revenue protection system (which is measured by confidentiality of tax audit and legal frame work of audit activities) has a positive and significant effect on revenue collection performance. The result of regression analysis reveals that revenue protection system has positive effect and statistically significant at 1 percent significance level. Additionally, audit case selection (which is measured by level of responsibility of team leaders, and frequency of audit activities) has positive effect on revenue collection and statically significant at 5 percent significance level.

The income of tax payers before audit has a negative effect on revenue collection and statically significant at 1 percent significance level. While on the other hand; income after audit of tax payers has a positive and insignificant effect on revenue collection at ARB, Merkato no.2 branch office. Finally The result of regression analysis show that tax automation (updated software's for revenue collection, different type of application for revenue collection) has positive effect on revenue collection and not statically significant even at 10 percent significance level in ARB, Merkato no.2 branch office.

5.3. Conclusion

Taxation is key source of revenue for the government of Ethiopia followed by external loan grants and assistances. In addition, taxation is used to allocate economic resources for government's priority by directing economic agents to the development goals foreseen by the government through the incentive schemes embedded within the prevailing tax laws. The responsibility to collect revenue in Ethiopia rests with the Addis Ababa revenue bureau (ARB); in which one of the branches is Merkato no.2 branch office

The study was conducted through primary and secondary data collected from Merkato no.2 branch office and the secondary data collected was covers 10years pre two month observation (2009-2018 G.C). The study adopted explanatory research design and mixed research approach. In order to estimate the extent of the effects of each variable, four tests were tested. Firstly, a Multicollinearity test was checked through correlation matrix; in order to see, if there was any issue between variables. Then, other tests (such as the auto correlation, normality, and heteroscedasticity tests), were confirmed that a model is feasible. To analyze the descriptive statistics, the researcher used the mean, maximum, minimum and standard deviation of all

variables. Further, the researcher discussed regression analysis to determine the effect of tax audit on revenue collection.

The potential amount of tax revenue that might be found with the target taxpayer and the possibility of collecting evaded tax return, is the secondary objective of tax administration, have been also considered for conducting audit. Moreover, the case selection decision is based the information from SIGTAS, past case histories of taxpayers, third parties such as banks and informants, and intelligence team. However, the use of SIGTAS does not provide reliable decision to assure appropriate risk selection due to absence of well-organized and clean data. Further, there is no specified time range within which the taxpayers are expected to present their data. Once the data is collected, audit cases have been selected using both the previous case selection system (random selection) and automated risk-scoring system concurrently. Automated tax return filing system is partially implemented. However, a compliance approach, in the form of a risk-based audit program, is not yet in place, and the audit functionality of SIGTAS is not being fully utilized for risk assessment.

Finally Tax audit actually has an effect to revenue collection according to the ANOVA analysis and model analysis on the above mentioned variables on tax audit with reference to revenue collection. This clearly indicates that tax audit affect revenue collection performance. That in essence means that the more the tax audit conducted the more revenue is collected. From the above finding of the study the researcher can concluded that; tax audit found the significant variable which affect revenue collection performance at ARB, Merkato no.2 branch office.

5.4. Recommendation

Based on the finding of the study; the following points are recommended for this study to improve revenue collection problems and voluntary compliance of ARB, Merkato no.2 branch office tax payers with the tax rules and regulations so as to meet revenue need of the government. The management of ARB, Merkato no.2 branch office shall improve tax audit resources by improving the number of audit staffs, resource materials, qualification and experience of the auditors, capability of auditors, and the commitment of individual auditors in performing audit activities.

Continuous education should be provided to the tax payers by ARB, Merkato no.2 branch office in order to create awareness about their rights and obligations so as to build and develop a better partnership with them and also to create citizens who have better understanding of taxation

which will engender honest and voluntary compliance.

To increase awareness level of ARB, Merkato no.2 branch office, attention must be given to educate communities as well as tax payers through different techniques like mass media, preparing broachers and having face to face discussion with the trade societies.

To make effective audit at minimum cost and risks, audit cases must be selected based on risk criteria by taking in to consideration the concept of materiality that items of little importance, which do not affect the judgment or conduct of a reasonable user, do not require auditor investigation.

It is better to use Sampling while performing audit because it is more efficient than testing 100% of a population. In tax audits a representative sample can save both parties time and money. For best results, an audit should be focused on the targeted risks conducted technically and procedurally, referenced comprehensively and accurately and also audit case must be completed on time schedule. The management of ARB, Merkato no.2 branch office shall improve the overall revenue protection system by introducing different types of technologies such as expanding standard integrated government tax administration system (SIGTAS), Asycuda++, cash register machine, the use of E-filling tax payment system by creating awareness and promotion about the system to increase revenue collection performance of the office.

To ensure that tax automation adoption leads to an increase in revenue collection performance. The government should implement an effective ICT infrastructure in the country in order to allow easier accessibility of automated revenue collection systems by customers. The organization on the other hand should also improve on ICT infrastructure in order to support effective implementation and use of automated revenue collection systems. The organization should also conduct continuously employees training programs on use of ICT based revenue collection systems and also extend by training the customers on how to use the systems.

Finally, the branch office should increase the number and improve the capability of total audit staff resources to achieve required audit rate and audit quality that might improve overall revenue collection performance. There should be appropriate need assessment and employees should have been given training based on the gap identified. Auditors should have been given continuous training so that their skills are kept up-to-date and relevant. Further, the bureau should supply sufficient computers and other necessary audit resources for auditors.

5.5. Direction for Future Research

This study only considered the effect of tax audit on revenue collection evidenced from ARB, Merkato no.2 branch office by using several variables which are used a proxy for tax audit. It is recommended for future researchers should widen the research period to have a longer time series data which can give more reliable results than the period used in this study and further assesses other factors of tax audit that has significant to generate revenue collection which is not considered in this study since R-square of the study is 68.3%. Additionally, in line with the effect of tax audit, it is better to conduct a study on determinants of revenue collection in Ethiopia.

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ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDENTS

Appendix 1

Questionnaire

Dear Respondent,

My name is Anbesa Diriba Senbeta. I am MBA in Accounting and Finance student at the St. Marry University. Currently, I am doing research on the **"the effect of tax audit on revenue collection: evidence from Merkato no.2 branch office"**.

The aim of the research is to examine the effect of tax audit on revenue collection with evidence from Merkato no.2 branch office. To supplement the data, the researcher seeks to gather relevant information from all tax auditors using self-administered questionnaire.

Participation in this research is completely voluntary. I would promise that all information you provide would be strictly confidential.

1. **Questions regarding tax audit resources**

No	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		5	4	3	2	1
1	AGRA-Merkato no.2 branch office has enough audit staff to perform auditing to all selecting taxpayers'					
2	Does AGRA- Merkato no.2 branch office have enough audit resource materials for Audit program?					
3	AGRA- Merkato no.2 branch office has enough qualified and experienced audit staff to perform tax					

No	Statements	audit program				
4	Does AGRA- Merkato no.2 branch office perform a continuous assessment to Improve the capability of auditors and staff resources?					
5	An individual auditor averagely accomplished audit cases assigned a year					

2. Questions regarding audit case selection methods

No	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		5	4	3	2	1
1	Does the tax audit department have responsible audit team for selecting the audit cases?					
2	Does tax audit case selection is supported by intelligence Input?					
3	Does every tax payers at AGRA- Merkato no.2 branch office audited once in a year					
4	Audit case selection is based on the availability of resource for tax audit					
5	Audit case selection is based on taxpayer's high tax potential					

3. Questions regarding capacity of tax auditors

No	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		5	4	3	2	1
1	Appropriate and skilled officers are assigned during tax audit.					

2	Tax audit manual enhance your capacity during audit					
3	Tax auditors take sufficient training on audit in different business sectors					
4	The audit manual provides adequate assurance for quality Standards.					
5	Auditors have the capacity of analyzing the financial Statement.					

4. Questions regarding Revenue protection system

No	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		5	4	3	2	1
1	Confidentiality of tax audit is provided for the audit manual and improve revenue collection					
2	The Legal Framework empowers auditors to have access to taxpayers, records and third party information					
3	The audit manual protects the rights of both the tax authority and the taxpayer					
4	The audit manual provides adequate assurance for quality standards					
5	The tax audit manual is widely used by tax auditors of AGRA- Merkato no.2 branch office					

5. Questions regarding Tax Automation

No	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		5	4	3	2	1
1	The application of tax automation improve revenue					

	collection					
2	Applying tax automation decreases tax compliance					
3	The educational level of existing auditors is enough to deal with tax automation software					
4	Applying tax automation increases service quality					
5	Applying tax automation improve professional background					

Appendix 2: The result of correlation analysis

		RC	BA	AA	TR	AC	CA	RP	TA
					Correlations				
RC	Pearson Correlation	1	-.390[**]	0.060	-0.167	0.211	.601[**]	.608[**]	0.176
	Sig. (2-tailed)		0.002	0.649	0.202	0.105	0.000	0.000	0.178
	N	60	60	60	60	60	60	60	60
BA	Pearson Correlation	-.390[**]	1	-0.040	0.039	-.345[**]	-.600[**]	0.154	0.134
	Sig. (2-tailed)	0.002		0.761	0.765	0.007	0.000	0.240	0.306
	N	60	60	60	60	60	60	60	60
AA	Pearson Correlation	0.060	-0.040	1	0.028	-0.114	0.071	-0.058	-0.033
	Sig. (2-tailed)	0.649	0.761		0.829	0.387	0.592	0.662	0.802
	N	60	60	60	60	60	60	60	60
TR	Pearson Correlation	-0.167	0.039	0.028	1	0.232	0.017	-0.097	0.169
	Sig. (2-tailed)	0.202	0.765	0.829		0.075	0.897	0.460	0.198
	N	60	60	60	60	60	60	60	60
AC	Pearson Correlation	0.211	-.345[**]	-0.114	0.232	1	0.185	-0.161	0.169
	Sig. (2-tailed)	0.105	0.007	0.387	0.075		0.157	0.218	0.198
	N	60	60	60	60	60	60	60	60
CA	Pearson Correlation	.601[**]	-.600[**]	0.071	0.017	0.185	1	.315[*]	0.114
	Sig. (2-tailed)	0.000	0.000	0.592	0.897	0.157		0.014	0.387
	N	60	60	60	60	60	60	60	60
RP	Pearson Correlation	.608[**]	0.154	-0.058	-0.097	-0.161	.315[*]	1	0.216
	Sig. (2-tailed)	0.000	0.240	0.662	0.460	0.218	0.014		0.097
	N	60	60	60	60	60	60	60	60
TA	Pearson Correlation	0.176	0.134	-0.033	0.169	0.169	0.114	0.216	1
	Sig. (2-tailed)	0.178	0.306	0.802	0.198	0.198	0.387	0.097	
	N	60	60	60	60	60	60	60	60

[**]. Correlation is significant at the 0.01 level (2-tailed).

[*]. Correlation is significant at the 0.05 level (2-tailed).

Appendix 3: Result of Auto correlation test

				Model Summary^b		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.826^a	0.683	0.640	0.08383	1.860

Appendix 4: Result of Heteroscedasticity test

Scatterplot

Dependent Variable: RC
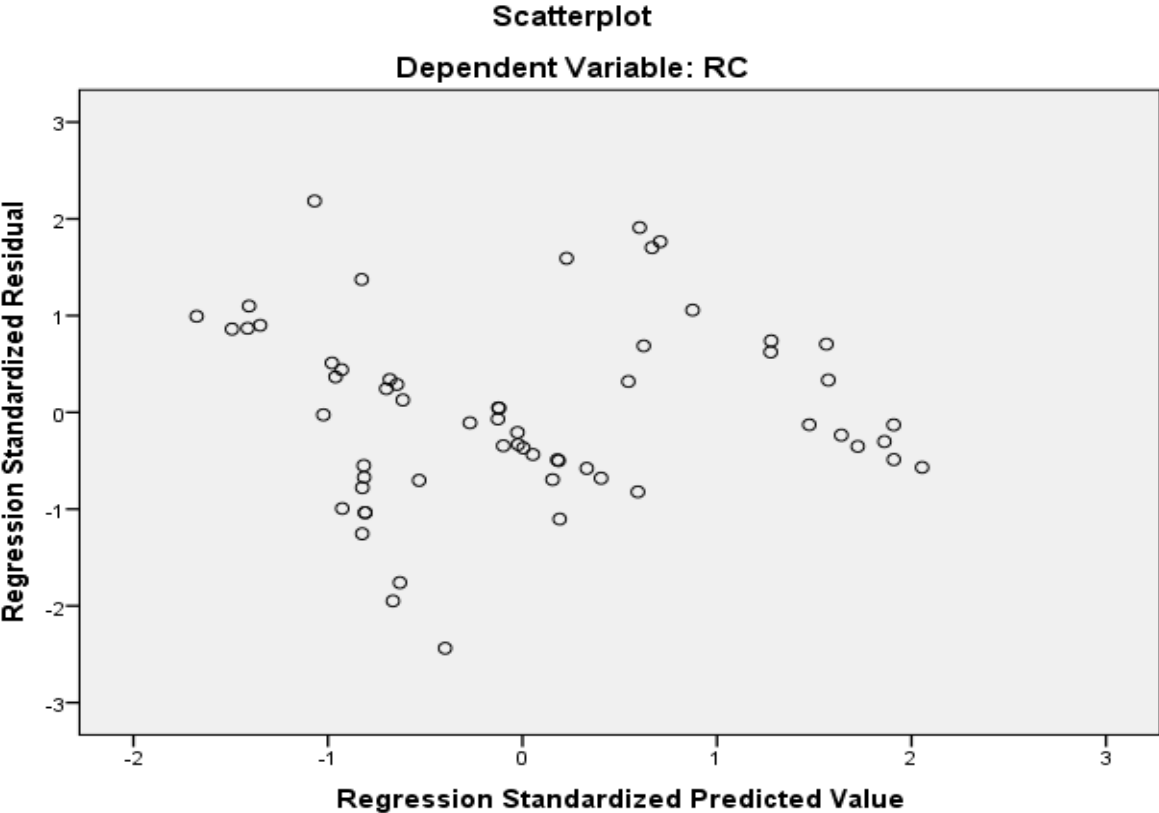
Appendix 5: Result of normality test

Histogram
Dependent Variable: RC

Mean = -8.37E-14
Std. Dev. = 0.939
N = 60
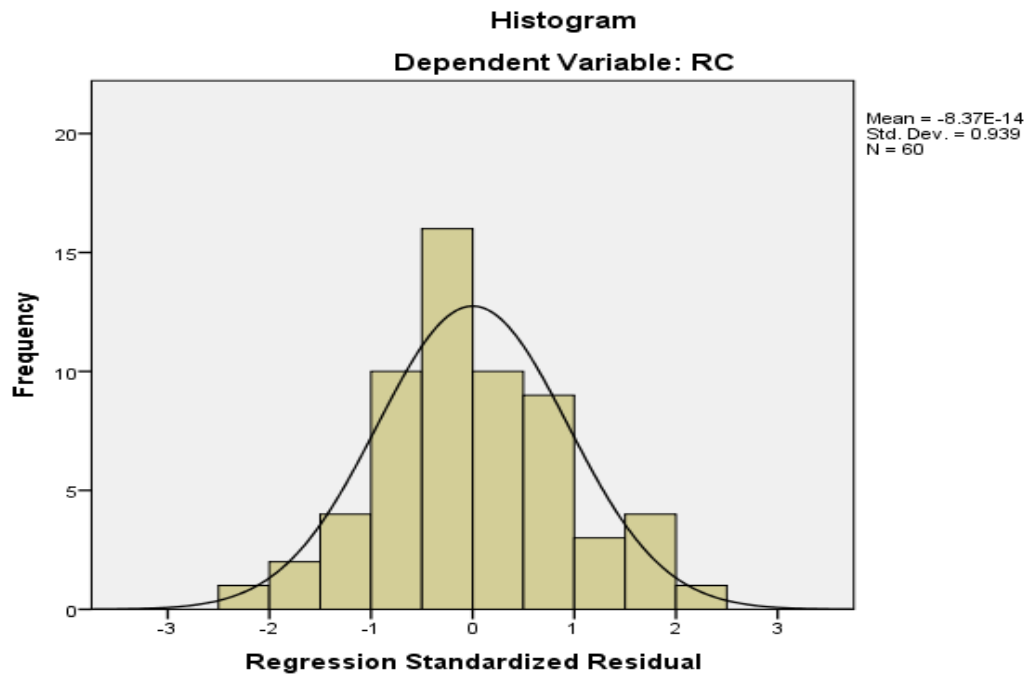
Appendix 6: Result of multiple regression

<table>
<tr><th colspan="7">Coefficients^a</th></tr>
<tr><td rowspan="2">Model</td><td></td><td colspan="2">Unstandardized Coefficients</td><td>Standardized Coefficients</td><td rowspan="2">t</td><td rowspan="2">Sig.</td></tr>
<tr><td></td><td>B</td><td>Std. Error</td><td>Beta</td></tr>
<tr><td>1</td><td>(Constant)</td><td>12.332</td><td>0.444</td><td></td><td>27.782</td><td>0.000</td></tr>
<tr><td></td><td>BA</td><td>-0.066</td><td>0.025</td><td>-0.303</td><td>-2.584</td><td>0.013</td></tr>
<tr><td></td><td>AA</td><td>0.019</td><td>0.015</td><td>0.101</td><td>1.271</td><td>0.209</td></tr>
<tr><td></td><td>TR</td><td>-0.083</td><td>0.043</td><td>-0.161</td><td>-1.950</td><td>0.057</td></tr>
<tr><td></td><td>AC</td><td>0.089</td><td>0.038</td><td>0.211</td><td>2.351</td><td>0.023</td></tr>
<tr><td></td><td>CA</td><td>0.056</td><td>0.037</td><td>0.177</td><td>1.513</td><td>0.136</td></tr>
<tr><td></td><td>RP</td><td>0.232</td><td>0.036</td><td>0.610</td><td>6.422</td><td>0.000</td></tr>
<tr><td></td><td>TA</td><td>0.019</td><td>0.027</td><td>0.060</td><td>0.706</td><td>0.484</td></tr>
<tr><td colspan="7">a. Dependent Variable: RC</td></tr>
</table>