Determinants of Tax Audit Effectiveness: The Case of Addis Ababa City Administration Number One Medium Tax Payer Branch Office

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Abstract: *This research study examines determinants of tax audit effectiveness. The main objective of this study was examine determinants of Tax audit effectiveness in the case of Addis Ababa city administration number one medium tax payer branch office. Data gathering techniques could include questionnaires, document analysis, and direct observation. To provide a thorough insight, the study makes use of both qualitative and quantitative data. The research design was explanatory and the research approach were mixed. Since the population is manageable the researcher applied census method. The study finds that taxpayer awareness, audit quality, and staff expertise play pivotal roles in enhancing tax audit effectiveness. The results underscore the importance of promoting taxpayer education and engagement to foster voluntary compliance and productive interactions between authorities and taxpayers. Additionally, the study highlights the significance of rigorous auditing practices, techniques, and oversight in maximizing the impact of tax enforcement efforts. However, the study also cautions against excessive organizational independence and top management involvement, emphasizing the importance of maintaining a balance for optimal outcomes. Based on these findings, the study recommends enhancing taxpayer awareness, strengthening audit quality assurance mechanisms, prioritizing auditor expertise, and adopting a collaborative approach to tax audits. These recommendations aim to improve tax compliance, revenue collection, and the overall efficiency of the tax system.*

Keywords: Tax Audit Effectiveness, Organizational Independence, Top Management Support, Awareness Level of Tax payers, Audit Quality, staff Experience

CHAPTER ONE:
1. INTRODUCTION

1.1 Background of the study

Tax is defined as a mandatory levy imposed by the authority (Sevendy et al., 2023). The authority collects taxes to distribute income generated by the economy to society in order to eliminate income inequality (Hoynes & Patel, 2018), to raise revenue for government expenditure (Wibowo & Setyowati, 2023), to manage aggregate demand (Petach & Tavani, 2022), to help meet the government's economic objectives (Rahman, 2023), and to assess a country's ability to finance social services such as health and education (Domguia, 2023), critical infrastructure such as electricity and roads, and other public goods (Adebiyi, 2023). According to Herzfeld (2023) , tax is a levy put on taxpayers to pay their legal obligations because the rich pay more than the poor, allowing the authority to redistribute it in terms of public expenditure to preserve proper economic disparity and public security. This means that it must be paid to a public authority or to the government. Dodge (2004) defined tax as a shared benefit, and tax must be used for the common good.

An audit is an independent examination of an entity by an auditor who reports on facts discovered to the best of her/his knowledge (Francis, 2004). The purpose of an audit is to make an organization answerable for its deeds (Enofe et al., 2019). If an audit is robust enough to openly show government agencies' performance gaps, it is considered effective (Olaoye & Ekundayo, 2019). If the concerns and problems of the auditors are addressed, an audit can become more successful. According to Solomon and Shields (1995), auditing is the process of independently reviewing an organization's financial statements and providing an opinion on the results in line with the terms of the auditor's employment and in compliance with professional standards and statutory regulations.

The process of conducting a tax audit involves determining the number of taxpayers who have submitted financial statements that adhere to the applicable tax laws and regulations, as well as whether or not those taxpayers have duly disclosed their tax obligations (Kim & Im, 2017). Finally, tax auditors should validate the amount of taxes that taxpayers will be required to pay and evaluate the accuracy of

the declared tax papers (Siregar et al., 2019). According to the Ethiopian Revenue and custom Authority (ERCA), a tax audit is an activity or a series of related activities carried out by tax auditors to ascertain the correct tax liabilities of a taxpayer for a specific accounting or tax period. This is achieved by examining the financial records and organizational procedures of the taxpayer to determine compliance with tax laws and to verify the veracity, fairness, accuracy, and truthfulness of tax returns and financial statements. In the majority of developing nations, tax evasion carries a prison sentence (Besley & Persson, 2014; Slemrod & Weber, 2012). Typically, evasion involves underreporting income or inflating expenses (Guyton et al., 2021; Thomas, 2015).Tax laws are frequently intricate and drawn out. As a result, those who are aware of these regulations may wind up paying a lot less in taxes than others.

The amount of evidence chosen for examination in relation to the total amount of available evidence and an ideal level of evidence is how audit effectiveness is determined. The factors affecting the effectiveness of tax audits have been specifically studied in Ethiopia by (Abera, 2016; Ayalew, 2014; Kibret, 2021; Mersha et al., 2022a). Tax audit effectiveness is crucial for governments in ensuring compliance with tax regulations (Serikova et al., 2020) and maximizing revenue collection (Adebiyi, 2023; Dimitra & Ioannis, 2015a; Mengist & Kumar, 2019a; Mersha et al., 2022a). As tax evasion and avoidance pose significant challenges, understanding the determinants that influence tax audit effectiveness becomes imperative (Ayalew, 2014; Rizqia & Lastiati, 2021a; Wahyudin et al., 2022a). Tax audits play a crucial role in ensuring compliance with tax regulations and optimizing revenue collection for governments worldwide. However, the effectiveness of these audits depends on various factors that influence their outcomes. Understanding these determinants is essential for policymakers and tax authorities to enhance the efficiency and efficacy of tax audit processes. Therefore, this study was try to examine the factor affecting tax audit effectiveness in case of Addis Ababa city administration number one medium tax payer branch office.

1.2 Statement of the problem

According to Dimitra and Ioannis (2015a), a tax audit is the process of determining whether the taxpayer has accurately declared their tax liabilities and to what extent the financial statements have been prepared in compliance with current tax regulations. When tax rules are implemented appropriately, tax audits play a significant and crucial role in tax administration compliance measures (Dimitra & Ioannis, 2015b; Nazarova & Mykhalchyshyna, 2018; Rizqia & Lastiati, 2021b). By directly and indirectly increasing tax collections and encouraging voluntary compliance, tax audits assist revenue authorities in accomplishing their goals and maintaining the state of the economy. Abera (2016) and Ayalew (2014) found that the Ethiopian Revenues and Customs Authority's (ERCA) efficient tax auditing operations have an impact on the tax revenue collection. According to empirical research, tax audits by tax authorities are ineffective

in Greek firms for a variety of reasons (Dimitra & Ioannis, 2015c). There is some research done in Ethiopia (Abera, 2016; Ayalew, 2014; Mengist & Kumar, 2019b; Mersha et al., 2022b) about determining the success of tax audits, despite the fact that they are a crucial tool for increasing revenue collection and decreasing tax evasion. To the best of the researcher's knowledge, no additional empirical research has been done on the subject of tax audit determination. As a result, the lack of sufficient research created a vacuum in the identification of the effective tax audit determinant.

This study is distinct from previous studies in that it employs several factors that influence tax audit effectiveness. Prior studies have not fully examined the factors impacting the success of tax audits effectiveness in Ethiopia. Therefore, by carefully assessing traits including tax auditor independence, competency, and support from management as well as taxpayer understanding, attitudes, and tax laws, this study aims to close a research gap. Utilizing a hybrid research methodology that blends qualitative and quantitative techniques, this study offers a thorough grasp of the variables affecting the efficacy of tax audits in ERCA.

The study aims to close this gap in the literature and offer important insights that will help policymakers and tax authorities improve the efficacy of tax audits in the area. To the best of the researcher's knowledge, no prior research has specifically looked into how staff expertise and gender affect the efficacy of tax audits. By examining these variables, the study seeks to bridge a knowledge gap by examining potential differences in the efficacy of tax audits conducted by male and female auditors, as well as the influence of staff expertise which encompasses technical knowledge and experience on the precision and comprehensiveness of audits.

1.3. Objective of the Study

1.3.1. The General Objective of the Study

The main objective of this study was to examine determinants of Tax audit effectiveness in the case of Addis Ababa city administration number one medium tax payer branch office.

1.3.2. Specific Objectives of the Study

Based on the general objective stated above, the study addressee the following specific objectives:

1. To examine the impact of staff expertise, including technical knowledge and experience, on the accuracy and thoroughness of tax audits.
2. To investigate the influence of gender on tax audit effectiveness.
3. To assess the relationship between audit quality and tax audit effectiveness.
4. To explore the connection between the Tax education of taxpayers and tax audit effectiveness.
5. To analyze how top management support affects tax audit effectiveness.
6. To examine the relationship between organizational independence and tax audit effectiveness.

1.4. Basic Research Questions

In order to answer the research objectives/ questions the determinants of tax audit effectiveness in the case of Addis Ababa city administration number one medium tax payer branch office the following research question were answered:

1. How does the level of staff expertise, including technical knowledge and experience, affect the accuracy and thoroughness of tax audits?
2. Does gender influence tax audit effectiveness?
3. How does audit quality impact tax audit effectiveness?
4. What is the relationship between the awareness level of taxpayers and tax audit effectiveness?
5. How does top management support affect tax audit effectiveness?
6. What is the relationship between organizational independence and tax audit effectiveness?

1.6. Scope and Limitation of the Study

1.6.1. Scope of the Study

This study's primary goal is to examine the variables that affect tax audit effectiveness generally and within the Addis Ababa city administration number one medium tax payer branch office. Any elements or components not specifically listed in the conceptual framework are not included in this study. The Addis Ababa city administration number one medium tax payer branch staff office of tax auditors was the source of the data for this study. The study's timeline was including audits that start in September 2023. A mixed-methods approach was used for the study, integrating quantitative and qualitative research techniques. Data gathering techniques could include questionnaires, interviews, document analysis, and direct observation. To provide a thorough insight, the study makes use of both qualitative and quantitative data.

1.6.2. Limitation of the Study

The limited generalizability of the study's findings which might be unique to the Addis Ababa city administration number one medium tax payer branch office and difficult to apply to other offices or areas is one possible drawback. Furthermore, the study's sample size may have an effect on how representative the findings are. The issues related to data availability and accessibility may have an impact on the analysis's depth and comprehensiveness. Respondent bias may have an impact on how reliable the information gathered is. Lastly, time constraints could limit how much information is gathered and how much further is explored in relation to pertinent aspects. Notwithstanding these constraints, an attempt was made to lessen their influence and interpret the results in light of the study's overall objectives.

1.7. Significance of the Study

By determining the factors that influence tax audit effectiveness, the proposed study seeks to address the optimization issue between tax collection and tax evasion and offer useful insights for tax policy makers. Policymakers can create plans to increase revenue and reduce tax evasion by knowing the elements that affect how effective tax audits are. Addis Ababa city administration number one medium tax payer branch office also gain from the study since it clarifies their part in enforcing tax laws and achieving the main goals of minimizing tax evasion and maximizing income. In addition, the study can be a helpful resource for anyone who wants to learn more about the efficacy of tax audits. Its conclusions can serve as a basis for more research.

1.8. Organizational of the study

The planned research was divided into five chapters. An overview of the research, comprising background data, the statement of the problem, general and specific objectives, the research question, significance, scope, and limitations, was included in Chapter 1. The review of relevant literature, including conceptual and empirical literature, was the main topic of Chapter 2. The methodology, including the study approach, design, sampling strategies, data sources, and data analysis procedures, was covered in full in Chapter 3. The analysis and display of data was covered in Chapter 4. Ultimately, Chapter 5 was including a summary of the study's findings, recommendations for revenue organizations and tax policy makers, and ideas for more research.

CHAPTER TWO
2. LITERATURE REVIEW

2.1 Theoretical literature Review

The next part of this study accommodated literature review of both the theoretical and empirical studies. The chapter also includes the conceptual frame works of the determinants of tax audit effectiveness.

2.1.1 Definition of Tax Audit

A tax audit is an examination of whether a taxpayer appropriately evaluated and declared their tax liability and met other obligations (Tendean, Pangerapan, And Sardjono 2024). Tax audits are components of compliance risk management that are intended to help the implementation of the voluntary compliance concept (Bugaje et al., 2023). In Ethiopia, a tax audit is a single or a series of actions taken by tax auditors to determine the right amount of taxes owed by taxpayers for a given accounting or tax period. By examining a taxpayer's organizational procedures and financial records in order to determine conformity with tax laws and validating the truth, fairness, reliability, and accuracy of tax returns and financial statements (Kibret, 2021). Tax audit is one of the compliance tactics that must be utilized to achieve tax compliance because tax evasion and avoidance use all possible measures to avoid paying the applicable tax to the government (Alm, 2019; Chalu & Mzee, 2018a). According to Nazarova and Mykhalchyshyna (2018) tax audit refers to the actions carried out by auditors in order to determine the amount of tax payable within a certain tax period; it includes the process of assessing organizational products and financial records.

2.2 Theoretical Literature review and hypothesis development

2.2.1 Determinants of Tax Audit effectiveness

The body of research on audit effectiveness has identified a number of variables, including audit quality, management support, organizational environment, audit characteristics, and organizational independence. The way these elements interact determines how effective an audit is. Wahyudin et al. (2022) found that while tax audits can effectively monitor the self-assessment system, they may not significantly increase tax revenue due to data processing and infrastructure limitations. Nurebo and Lakew (2019) highlighted the positive impact of management support, audit quality, taxpayers' awareness, and a standardized integrated government tax administration system on audit effectiveness, while tax law complexity and tax accounting and reporting were found to have a negative effect. Andri, Winarningsih, and Devano (2021) further emphasized the influence of top management support, taxpayer attitudes, and the use of taxation information systems on audit effectiveness. Kasper and Alm (2022) added to this by demonstrating that the effectiveness of audits, as measured by the detection of undeclared income, can significantly impact post-audit tax compliance.

2.2.2 Audit quality and tax audit effectiveness

The effectiveness of tax audits depends on audit quality (Chyz et al., 2023; Francis, 2023a), which is influenced by a number of variables. These characteristics include the level of personnel experience, the extent of services given, and audit planning, execution, and communication procedures (Chyz et al., 2023; Dimitra & Ioannis, 2015a; Francis, 2023a; Kalita & Tiwari, 2023). Audit findings and suggestions are only useful if management intends to adopt them. (Agoglia et al., 2015)described this phenomena using agency theory, emphasizing the need of having a good internal audit department from a managerial standpoint. Furthermore, the adoption of audit recommendations is critical to audit effectiveness (Shuwaili et al., 2023), with management acting as the customer in this scenario. Several research, including those by Abera (2016), Ayalew (2014), Francis (2023), and Ahmad et al. (2023), have found a correlation between audit quality and tax audit efficacy. A quality audit is distinguished by effective preparation, execution, and communication of audit findings. It focuses on identified risks, adheres to consistent procedures, uses the relevant legislation and technical interpretations, and keeps adequate documentation. Audit quality includes detailed audit planning, audit experience, execution and communication, working papers, and quality assurance procedures (Dhania & Setiawan, 2023; Kalia et al., 2023; Kalita & Tiwari, 2023).

Madah Marzuki and Muhammad Al-Amin (2021) highlights the impact of taxes on audit effort and quality, with lower tax rates generally leading to higher audit quality. This is crucial for the public, as high-quality audits can prevent unfair tax avoidance. Safonova, Reznichenko, and Sidenko (2020) emphasizes the interdependence of audit quality and efficiency, underscoring the need for reliable financial information and the absence of future tax liabilities. Rizqia and Lastiati (2021) further explores the role of audit quality in tax avoidance, finding that Big Four accounting firms can lower tax avoidance levels. However, the effectiveness of tax audits in supporting tax revenue is limited by factors such as data processing and infrastructure (Wahyudin et al., 2022b). These studies collectively underscore the importance of audit quality in ensuring fair tax practices and the need for effective tax audit. Based on the above discussion the researcher hypothesized:

Hypothesis one: There is a significance relationship between audit quality and tax audit effectiveness.

2.2.3 Awareness level of tax payers and tax audit effectiveness

Research on the awareness level of taxpayers and the effectiveness of tax audits has shown that both factors play a significant role in tax compliance. Idrus et al. (2020) and Sumartaya and Hafidiah (2014) found that tax penalties, tax audits, and taxpayer awareness positively influence compliance, with the latter also affecting tax evasion. Rahmayanti and Prihatiningtias (2020) further supported these findings, noting that tax penalties, audits, and awareness positively impact corporate taxpayer compliance. Fatt (2008) emphasized the need for tax practitioners to understand the meaning of tax audits and their role in preventing tax evasion. These studies collectively highlight the importance of taxpayer awareness on the effectiveness of tax audits. Suhendar and Hakim (2021) added to this by highlighting the significance of government policy, particularly tax sanctions, in influencing compliance. Based on the above discussion the researcher hypothesized:

Hypothesis two: There is a positive relationship between awareness level of tax payers and tax audit effectiveness.

2.2.4 Top management support and tax audit effectiveness

Research has shown that top management support plays a crucial role in enhancing the effectiveness of various audit processes, including internal audit (Alkebsi & Aziz, 2017), financial accounting information systems (Darma, 2018), and tax audit (Luchko & Zinkevych, 2019). In the context of tax audit, top management support can significantly influence the quality and effectiveness of the audit, leading to improved tax compliance and revenue support (Wahyudin et al., 2022c). However, the specific effect of top management support on tax audit effectiveness remains to be explored. Hence, it would be appropriate and valuable to conduct research on the specific effect of top management support on tax audit effectiveness. Based on the above discussion the researcher hypothesized

Hypothesis Three: Grater top management support within the tax authority positively influence tax audit effectiveness.

H3a: Greater top management support within the tax authority negatively influences tax audit effectiveness.

2.2.5 Organizational independence and tax audit effectiveness

A crucial element in guaranteeing the dependability and legitimacy of audit results is organizational independence. It alludes to the fact that management has no say in internal audit operations or the publication of audit results. Research has consistently demonstrated that organizational independence and audit effectiveness are positively correlated. For instance, studies conducted in the Greek business environment by (Dimitra & Ioannis, 2015c), the Bahir Dar city administration by (Ayalew, 2014), tax compliance evidence from Egypt by (Tawfik & Elmaasrawy, 2024) Ethiopian revenue and custom authority by (Abera, 2016, 2016; Mengist & Kumar, 2019b; Mersha et al., 2022b), and the Vietnam public sector by (Pham et al., 2023) all discovered a statistically significant positive correlation between independence and audit effectiveness. Independence in fact shows auditors' ability to work objectively and without conflict of interest, whereas independence in appearance ensures that auditors are viewed as independent by third parties. Auditors' assurance services are based on fundamental principles of independence, both in fact and appearance (Chalu & Mzee, 2018a; Dimitra & Ioannis, 2015b; Ussahawanitchakit & Intakhan, 2011). Based on the above discussion the researcher hypothesized.

Hypothesis four: There is a significance relationship between organizational independence and tax audit effectiveness.

2.2.6 Staff expertise and tax audit effectiveness

Research on tax audit effectiveness in has highlighted the importance of staff expertise in improving audit quality. Nugrahanto and Alhadi (2021) found that factors such as information technology and tax auditor competencies positively influence audit quality, while time pressure has a negative impact. Rizqia and Lastiati (2021) further emphasized the role of audit quality, particularly when

conducted by Big Four firms, in reducing tax avoidance. However, the study also noted that the expertise of the audit committee, particularly in understanding the company's operations, can weaken this relationship. Alhababsah and Yekini (2021) and Krishnamoorthy et al. (2023) both underscored the significance of industry and legal expertise in the audit committee, with the latter also highlighting the importance of the accounting financial expertise of the audit committee chair. These findings collectively suggest that staff expertise, particularly in the areas of technology, tax knowledge, and industry and legal expertise, is crucial in enhancing tax audit effectiveness (Krishnamoorthy et al., 2002; Mengist & Kumar, 2019a; Rizqia & Lastiati, 2021b; Wahyudin et al., 2022d). Investigating the association between staff expertise and tax audit effectiveness would be a worthwhile study project. This particular determining factor has not been thoroughly investigated, indicating a research gap in the literature. This study, by looking into the impact of staff expertise on tax audit effectiveness, could help us gain a better understanding of how tax auditors' knowledge, abilities, and experience influence tax audit outcomes. Based on the above discussion, the researcher hypothesized.

Hypothesis five: Higher levels of staff expertise are associated with increased tax audit effectiveness.

Hypothesis six: There is a significant difference in tax audit effectiveness as far as gender is concerned.

2.3 Conceptual Framework of the Study

This proposal contains five dimensions of tax audit effectiveness: audit quality, organizational independence, top management support, awareness level of tax payers and staff expertise. This proposal is based on prior research (Abera, 2016; Ayalew, 2014; Chalu & Mzee, 2018b; Sevendy et al., 2023; Wahyudin et al., 2022c) Furthermore, Figure (1) demonstrates the model of this research.

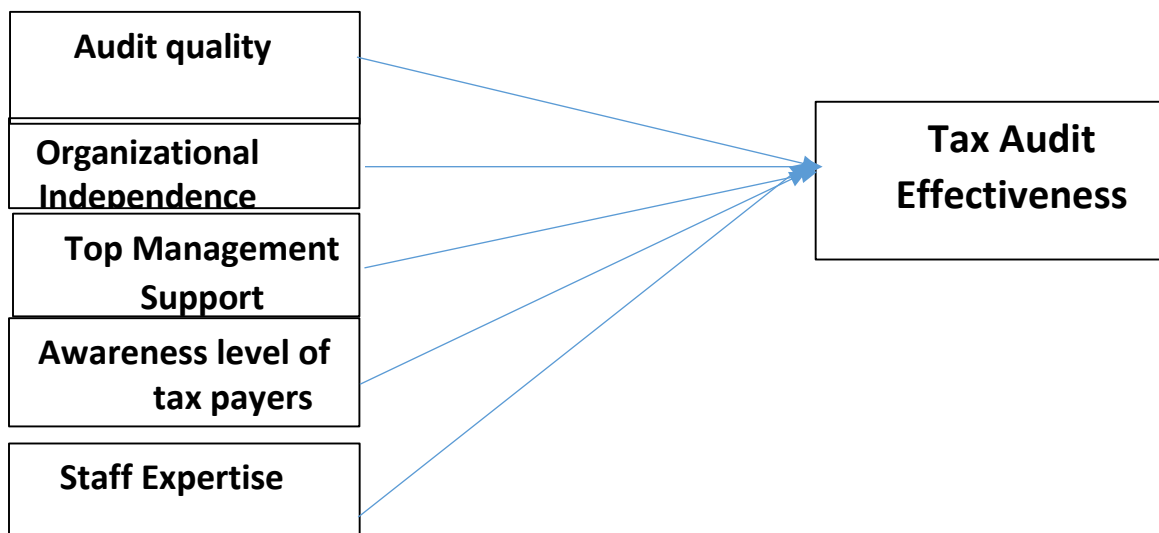**Independent variables**   **Dependent variable**

Figure 1: Conceptual framework of the study

Source: Adopted by author with related literature review 2024

CHAPTER THREE
3. RESEARCH DESIGN AND METHODOLOGY

This chapter provides a brief overview of the approach that was adopted for the study and describes the methods and techniques that was adopted to collect data for the analysis. It examines the population and sampling, data gathering techniques, data sources, and data analysis methodology. A research methodology is defined as the study of how scientific research is conducted. According to Mishra and Alok (2022), a research methodology outlines what research is about, how to proceed, how to monitor progress, and what constitutes success. Nayak and Singh (2021) define it as the methods, procedures, and tactics used to learn what we wish to know.

3.1 Research Design and Approach

This study was collect data from respondents using descriptive and explanatory survey methods. A descriptive survey is favored because it provides a comprehensive picture of the situation and assists the researcher in reducing bias in data collecting (C. Kothari & Creswell, 2004; C. R. Kothari, 2004). This design is appropriate since it will assist researchers in gathering information from respondents, namely staff of Addis Ababa city administration number one medium tax payer branch office. According to Blumberg, Cooper, and Schindler (2014) and Cooper et al. (2021),a descriptive survey depicts factual information on people, events, or reports of traits such as conduct, ability, belief, opinion, and knowledge of a specific individual or group. Descriptive research studies are ones that focus on describing the features of a certain individual or group. The justification for choosing explanatory research design is it allows researchers to investigate the causal relationships between dependent and independent variables.

There are quantitative and qualitative research methodologies (Borland Jr, 2001). The quantitative strategy entails collecting quantitative data and subjecting it to rigorous quantitative analysis in a formal and rigid manner, whereas the qualitative approach employs the subjective assessment of opinions, behavior, factors, and attitudes (Borland Jr, 2001). Quantitative research is the systematic and scientific exploration of quantitative qualities, phenomena, and their interactions. The researcher was take a blended approach that includes both qualitative and quantitative methodologies. According to Borland Jr (2001), the discrepancies between quantitative and qualitative investigations are not mutually incompatible. He contended that combining both paradigms in a study produces significant findings.

3.2 Sources of Data

The researcher was use both primary and secondary sources of data. The tool used to collect primary data was self-administered questionnaires with regard to the research topic. The secondary data also came from the available literature on the study, which included documents from the offices of Addis Ababa city administration number one medium tax payer branch office.

3.3 Population and Sampling Technics

Bell, Bryman, and Harley (2022) suggest that a population is the whole group that the research focuses on. Population also refers to a larger group of people with common observable features to which one hopes to apply the research results of (Pandey & Pandey, 2021). There are 86 auditors in Addis Ababa city administration number one medium tax payer branch office. Since the population size manageable the researcher used census method.

3.4 Data Collection Instrument

The questions to examine determinants of tax audit effectiveness at Addis Ababa city administration number one medium tax payer branch office, i.e., audit quality, top management support, awareness level of tax payers, staff expertise and organizational independence was adopted from a standard questionnaire, and the researcher was make some necessary adjustments to the questionnaires to reflect the scope of this study.

A set of close-ended questions was asked to collect information from respondents on these areas. The close-ended questions guided respondents to choose from alternatives provided by the researcher. This procedure was adopted because the staff had busy schedules, which made it difficult to attend to questionnaires when they were left with them and to make the coding of the data easy for analysis. The questionnaire asked the respondents to rate aspects based on a five-point Likert scale (1=strongly disagree, 5=strongly agree). Therefore, a Likert scale was utilized for all survey items.

Permission was obtained from the various heads of departments at Addis Ababa city administration number one medium tax payer branch office. The researcher was explaining the questions after copies of the questionnaire are given to the employees. The reason for doing this was to help the respondents obtain a better understanding to provide their independent opinion on the questions. The researcher was collect all the data by himself and perform the analysis.

3.5 Pilot Study

The questionnaire was pretested at Addis Ababa city administration number one medium tax payer branch office by employees. This was done to test the validity of the instrument and to ensure that all elements of ambiguity was removed.

3.6 Reliability and Validity of the Instruments

The validity of a scale refers to the degree to which it measures what it is supposed to measure. Cronbach's alpha is a measure of reliability (Tavakol & Dennick, 2011). Reliability refers to the consistency or dependability of a measuring instrument (Bruton et al., 2000). It is defined as the proportion of the variability in the responses to the survey,

which is the result of differences in the respondents (Meyer, 2010). That is, answers to a reliable survey will differ because respondents have different opinions, not because the survey is confusing or has multiple interpretations (Tabachnick & Fidell, 2007). To use valid and reliable instruments of data collection, the questionnaire was compiled from different reputed sources by making minor modifications to adapt it to the situation under investigation. Based on the results of the pilot test, the validity of the questions was checked, as further explanations are needed, and the questions was corrected accordingly.

Table 1 Reliability Statistics

Reliability Statistics

Cronbach's Alpha	N of Items
.907	21

The reliability statistics provided indicate that the Cronbach's Alpha for the given set of items is 0.907. Cronbach's Alpha is a statistical measure used to assess the internal consistency and reliability of a set of items or questions. It calculates the average correlation between the items in the scale, providing an estimate of the scale's reliability.

In this case, the Cronbach's Alpha value of 0.907 suggests that the set of items or questions is highly reliable and consistent. This indicates that the items are measuring the same construct or concept, and the responses are likely to be consistent and reliable across different assessments or measurements.

3.7 Data Processing

SPSS, which is a statistical package for social sciences, was used to analyze the data from the research questionnaire. A group of data that shows some commonalities was segregated

CHAPTER FOUR
4. DATA ANALYSIS AND PRESENTATION

4.1 Introduction

Chapter four delves into the fundamental process of data analysis and presentation. This chapter outlines the systematic approaches utilized to make sense of the raw data collected during the research phase. It explains the various analytical techniques, both quantitative and qualitative, that researchers employ to uncover patterns, trends, and insights from the information gathered. Additionally, this chapter emphasizes the importance of effectively communicating the research findings through appropriate data visualization and presentation formats. Out of the 86 questionnaires distributed, 81 were successfully retrieved making the response rate of 94.2%.

Table 2 Demographic profile of the respondents

and assigned different codes. All the gathered materials from the various data collection sources was diligently work to identify patterns, sequences and themes. The data was then transfer to the Statistical Package for Social Sciences (SPSS) software used for analysis.

MODEL FOR DATA ANALYSIS

This model specification was adopted from (Abera, 2016; Ayalew, 2014; Chalu & Mzee, 2018b; Sevendy et al., 2023; Wahyudin et al., 2022c).

The multiple regression equation was:

$Y = a_0 + ax_1 + bx_2 + cx_3 + dx_4 + ex_4 + fx_5 + e$

Y= Tax Audit effectiveness

where a_0 = Constant

a, b, c, d, e and f = Regression coefficients

x_1 = Audit quality

x_2 = Organizational independence

x_3 = Top management support

x_4 = Awareness level of tax payers

x_5 = Staff expertise

e = error term

The equation was solved by the use of a statistical model where SPSS version 27 was applied.

3.8. Research Ethical Considerations

This study was conducted with consideration of various ethical issues. Every employee was having the right to choose or determine whether to participate in the research project. The research participants had the right to be informed of all aspects of the research task. In addition, ethical and confidentiality concerns was observed in a way that individual respondents should never be identified in reporting survey findings and that their names were never be given to the organization or other outsiders.

4.2 Demographic profile of the respondents

Before start the analysis of the data some background information's i.e. Demographic Data, is useful in order to make the analysis more meaning full for the readers. The purpose of the demographic analysis in this research is to describe the characteristics of the sample such as the number of respondents, proportion of males and females in the sample, range of age, education level, and work experience etc.

Gender	Age	Qualification	Year of experience	Position

Male = 69%	22-25= 7%	Bachelor= 5%	<5 =10%	Financial officers =20%
Female = 31%	26-35=28%	Master =78%	6-10 year =34%	Audit Managers =17%
	36-45=46%	PhD = 2%	1-15 year = 41%	Tax Managers =11%
	46-55=19%	CPA & CA =1%	>15 year =15%	Tax Auditors =52%

Gender Representation:

69% of the respondents were male, and 31% were female, reflecting the gender distribution of the sample may indicate that the tax auditing field is still male-dominated.
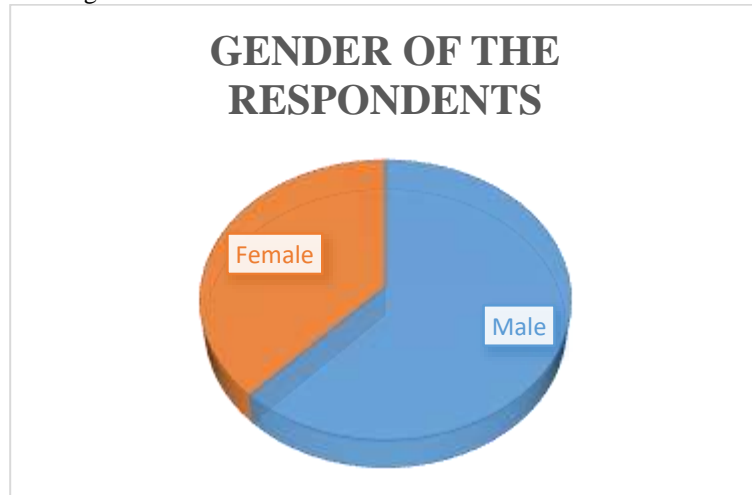

Figure 2 Gender of the respondents

Age Distribution

The respondents in this study were predominantly middle-aged, with the majority (46%) falling within the 36-45 age group and significant portions in the 26-35 (28%) and 46-55 (19%) age ranges. The mean age of the respondents was 39.2 years, indicating a sample skewed towards experienced auditor. Only a small percentage (7%) were 25 years or younger.
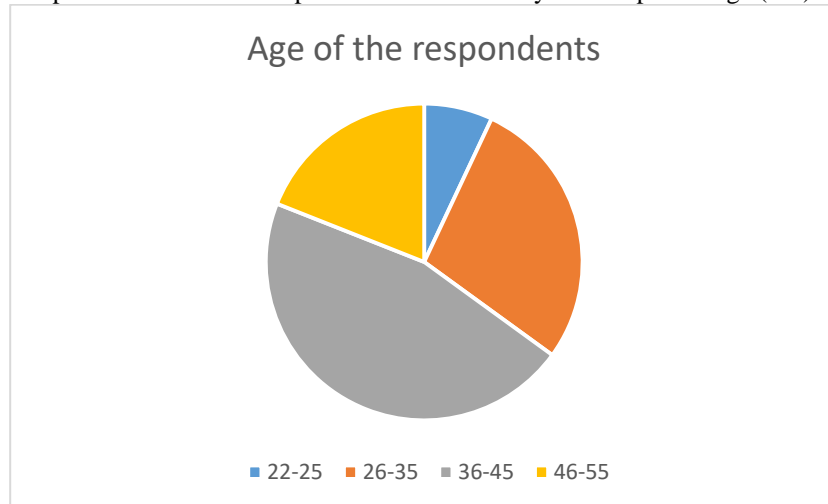

Figure 3 Age of the respondents

Educational Background:

The high level of educational attainment and professional certifications among the respondents, with over 94% holding advanced degrees or qualifications such as CPAs and CAs, suggests that this sample represents a highly knowledgeable and experienced group. This implies that the findings from the study are likely to reflect a nuanced understanding of tax-related matters and could offer valuable insights on the key determinants of tax audit effectiveness.
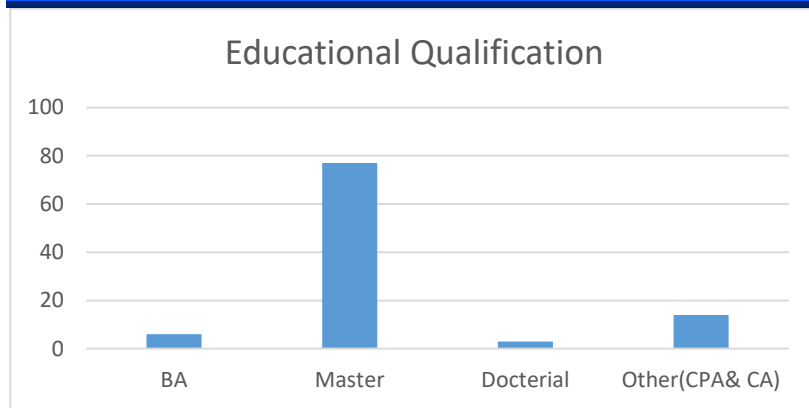
Figure 4 Educational qualification of the respondents

Work Experience:

The respondent pool in this study demonstrated a considerable depth of professional experience in the field of tax auditing, with an average of 12.4 years across the participants. This experienced demographic is further underscored by the fact that the majority, 41%, had between 11 to 15 years of relevant experience, while an additional 34% had accumulated 6 to 10 years. Furthermore, a significant 15% of the respondents had more than 16 years of expertise in this domain. Notably, only a small fraction, 10%, possessed 5 years or less of tax auditing experience.
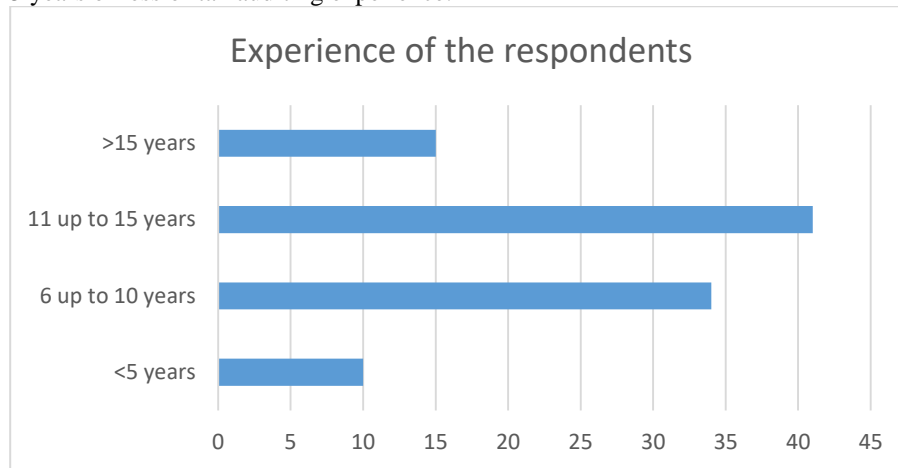

Figure 5 Experience of the respondents

Job Positions

The composition of the respondent pool, which includes a majority of 52% tax auditors, complemented by tax managers (11%), audit managers (17%), and financial officers (20%), provides a well-rounded and multifaceted perspective on the determinants of tax audit effectiveness. This diverse mix of job positions represented in the study lends credibility and depth to the analysis, as the insights are likely to reflect a comprehensive understanding of the key factors shaping the outcomes of tax audits.
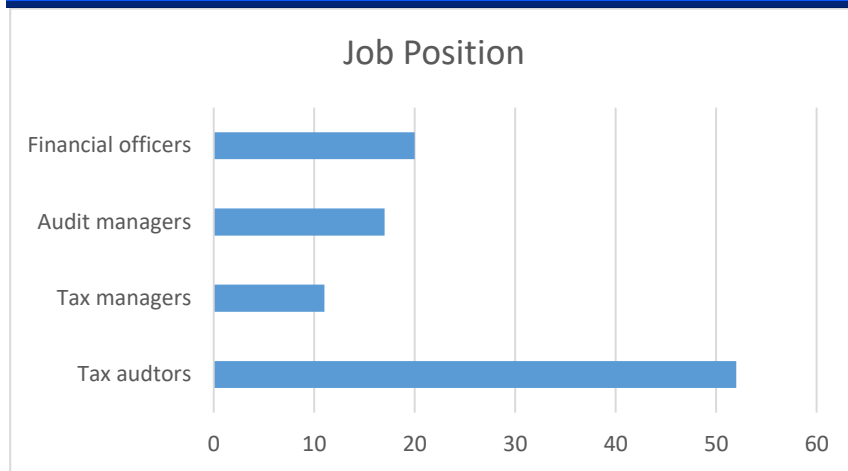
Figure 6 Job position of the respondents

4.3 Assumption Tests of Regression Analysis

4.3.1 Tests of Normality

Adhering to the recommendations of esteemed researchers like Hair et al. (2010) and Tabachnick and Fidell (2007), the assessment of normality is a critical prerequisite for the validity of statistical methods. In this study, the researcher employed both graphical and numerical techniques, including the analysis of skewness and kurtosis, to thoroughly examine the normality of the data distribution using SPSS. Specifically, the skewness and kurtosis values for all variables

were found to fall within the acceptable range of +1 to -1 for skewness and +3 to -3 for kurtosis, as suggested by Hair et al. (2003), thereby confirming the normal distribution of the data. This comprehensive evaluation of the normality assumption lends robust support to the validity and reliability of the subsequent statistical analyses conducted in the research.

Table 3 Normality Test

Variable	N	Skewness	Standard error	Kurtosis	Standard Error
TMS	81	.411	.267	-1.491	.529
TMS	81	-.004	.267	-1.755	.529
ALTP	81	.142	.267	-1.530	.529
TAE	81	.121	.267	-1.553	.529
AQ	81	.182	.267	-1.385	.529
SE	81	.752613	.271	-1.680	.529
Valid N (list wise)	81				

Source: researcher survey, (2024)

4.3.2 Test for linearity

The assessment of normality is a crucial step in the statistical analysis of data, as it helps determine the appropriate analytical techniques to be employed. Evaluating the normality of the data distribution is essential for understanding the underlying characteristics of the variables

under investigation and making informed decisions about the most suitable statistical methods.

4.3.3 Multi-Collinearity Test

In order to identify whether some of the independent variables have very high correlations with other independent variables, using collinearity diagnostics, multicollinearity estimate were

performed. Robert (2006), if collinearity is discovered one can either remove one of the variables or create a new variable that combine the previous two that were highly inter-correlated because when the predictor variables are highly correlated, they share essentially the same information and together, they may explain a great deal of the dependent variable, but may not individually contribute significantly to the model. Thus, the impact of multicollinearity is to reduce any individual independent variable's predictive power by the extent to which it is associated with the other independent variables (Solomon, 2016).

Tolerance value is an indication of the percentage of variance in the predictor that cannot be accounted for by the other predictors implying the fact that very small values indicate overlap or sharing of predictive power. Besides, if the VIF values of independent variables are beyond 10, then it is suggested that further investigation is required (Robert, 2006).

Table 4 Multicollinarity Test

Model	Collinearity Statistics	
	Tolerance	VIF
TMS	.107	9.345
OI	.228	4.386
ALTP	.149	6.715
AQ	.103	9.755
SE	.223	4.486

A Dependent Variable: TAE

Source: researcher survey, (2024)

As shown on the above table, based on the coefficients output (collinearity statistics), the obtained variance inflation factor (VIF) for all independent variables was found between 1 and 10, which means that there is no multicollinearity problems.

4.4 Correlation Analysis

Table 5 Correlation Analysis

Variable	TMS	OI	ALTP	TAE	AQ	SE
TMS	1.000					
OI	0.237**	1.000				
ALTP	0.901**	0.294**	1.000			
TAE	0.885**	0.321**	0.995**	1.000		
AQ	0.928**	0.348**	0.905**	0.906**	1.000	
SE	0.199	0,874**	0.296**	0.339**	0.324**	1

** denotes significance at the 0.01 level (2-tailed), and
* denotes significance at the 0.05 level (2-tailed).

Source: researcher survey, (2024)

The correlation analysis reveals several strong positive relationships between the variables TMS, OI, ALTP, TAE, AQ, and SE. Specifically, there is a significant positive correlation between TMS and OI (0.237**), TMS and ALTP (0.901**), TMS and TAE (0.885**), TMS and AQ (0.928**), and TMS and SE (0.199). These correlations indicate that as the value of TMS increases, the values of OI, ALTP, TAE, AQ, and SE also tend to increase. Similarly, there are also significant positive correlations between OI and ALTP (0.294**), OI and TAE (0.321**), OI and AQ (0.348**), OI and SE (0.296**), ALTP and TAE (0.995**), ALTP and

AQ (0.905**), ALTP and SE (0.324**), TAE and AQ (0.906**), TAE and SE (0.339**), and AQ and SE (0.324**). These correlations suggest that as the value of one variable increases, the values of the other variables also tend to increase.

Analysis of variance

Table 6 ANOVA Table

ANOVAª

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	102.945	5	20.589	2324.338	.000ᵇ
	Residual	.664	75	.009		
	Total	103.609	80			

a. Dependent Variable: TAE
b. Predictors: (Constant), TMS, SE, OI, ALTP, AQ

Source: researcher survey, (2024)

The ANOVA test results indicate that the regression model is statistically significant, as the p-value is less than 0.001. This suggests that the independent variables (TMS, SE, OI, ALTP, and AQ) have a significant relationship with the dependent variable (TAE), after controlling for the other independent variables in the model. The F-statistic, which is 2324, is also very large and statistically significant, indicating that the regression model is a very good fit for the data. The mean square (MS) for the regression model is 20.589, which is much larger than the MS for the residual (0.009). This suggests that the regression model explains a significant portion of the variance in the dependent variable, compared to the residual (error) term.

To sum it up, the ANOVA test results provide strong evidence that the regression model is a very good fit for the data and that the independent variables have a significant relationship with the dependent variable.

Table 7 Coefficients table

Coefficientsª

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.078	.040		-1.973	.052
	OI	-.069	.034	-.039	-2.039	.045
	ALTP	.998	.024	.993	41.424	.000
	AQ	.088	.032	.080	2.787	.007
	SE	.108	.030	.071	3.636	.001
	TMS	-.075	.024	-.089	-3.134	.002
	Adjusted R^2					.993
	F					2324***

a. Dependent Variable: TAE

Source: researcher survey, (2024)

Interpretation of the model

The multiple regression equation was:

$Y = a0 + ax1 + bx2 + cx3 + dx4 + ex4 + fx5 + e$

Y= Tax Audit effectiveness

where a0 = Constant

a, b, c, d, e and f = Regression coefficients

x1 = Audit quality

x2 = Organizational independence

x3 = Top management support

x4 = Awareness level of tax payers

x5 = Staff expertise

e = error term

When the values from the table are computed the equation become,

Tax Audit Effectiveness(Y)=-0.078+0.088(Audit Quality) – 0.069(Organizational Independence) -0.075(Top Management Support) + 0.998(Awareness Level of Tax payers) + 0.108(Staff expertise) + e

From the analysis the coefficient value for OI is -0.069. This indicates that a one-unit increase in OI is associated with a negative relationship with TAE, after controlling for the other independent variables in the model. The t-value and significance level also confirm the statistical significance of this relationship.

The coefficient for ALTP is 0.998, which is very close to 1. This indicates that a one-unit increase in ALTP is associated with a very strong positive relationship with TAE, after controlling for the other independent variables in the model. The t-value and significance level also confirm the statistical significance of this relationship.

The coefficient for AQ is 0.088, which indicates that a one-unit increase in AQ is associated with a positive relationship with TAE, after controlling for the other independent variables in the model. The t-value and significance level also confirm the statistical significance of this relationship.

The coefficient for SE is 0.108, which indicates that a one-unit increase in SE is associated with a positive relationship with TAE, after controlling for the other independent variables in the model. The t-value and significance level also confirm the statistical significance of this relationship.

The coefficient for TMS is -0.075, which indicates that a one-unit increase in TMS is associated with a negative relationship with TAE, after controlling for the other independent variables in the model. The t-value and significance level also confirm the statistical significance of this relationship.

Model Summary

From the above table, it can be inferred that the independent variable has very high correlation with dependent variable since the adjusted R value and R square value closer to 1. The R Square value of .994 also supports the overall usefulness of the model proposing that, almost all the variation in the dependent variable, which is 99.4%, is addressed by the independent variables incorporated in the model. Note that the Adjusted R Square value of .993 depicts high interpretability as well because Adjusted R Square takes into consideration the number of predictors within the context of model and gives a more realistic value of the amount of variance explained by the model. From the above analysis, it is clear that the level of fitness of the model is very high, as indicated by the high Adjusted R Square value of .993, which means that, after eliminating the variation due to the inclusion of too many independent variables, the model accounts for approximately 99.3 percent of the variation in the dependent variable. The amount of Standard Error of the model is also very less which imply that there is less standard error in the model and hence the model is very precise.

4.5 Independent Sample T test

H6: There is a significant difference in tax audit effectiveness as far as gender is concerned.

An independent sample t- test was conducted to compare tax audit effectiveness for male and female respondents. There was significance difference (t(df) =79, p=0.3) in scores for male (M= 2.253, SD= 1.105) and female (M=2.824, SD= 1.131). The magnitude of the difference in the means (mean difference = 0.570, 95& CI: -1.103 to -0.037) was significance. Hence H6 was supported.

Table 8 Group Statistics

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
TAE	Male	56	2.2536	1.10568	.14775
	Female	25	2.8240	1.13184	.22637

Source: researcher survey, (2024)

Table 9 Independent sample test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TAE	Equal variances assumed	.229	.634	-2.129	79	.036	-.57043	.26788	-1.10364	-.03722
	Equal variances not assumed			-2.110	45.224	.040	-.57043	.27032	-1.11481	-.02605

Source: researcher survey, (2024)

4.4 Summary of hypotheses test
Table 10 Summary of Hypothesis

Proposed hypotheses	Significant level P< 0.05	Decision based on the finding
H1: There is a significance relationship between audit quality and tax audit effectiveness.	. 007	Accepted
H2: There is a positive relationship between awareness level of tax payers and tax audit effectiveness.	.000	Accepted

H3: Grater top management support within the tax authority positively influence tax audit effectiveness.	.002	Rejected
H4: There is a significance relationship between organizational independence and tax audit effectiveness.	.045	Rejected
H5: Higher levels of staff expertise are associated with increased tax audit effectiveness.	.000	Accepted
H6: There is a significant difference in tax audit effectiveness as far as gender is concerned.	0.036	Accepted

Source: researcher survey, (2024)

CHAPTER FIVE

5. FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary of Major Findings

Parallel to prior research, the findings support that awareness level of taxpayers (ALTP) is a significant contributor to the effectiveness of the tax audit (TAE). Thus, the findings indicate the crucial role for enhancing the level of taxpayer's knowledge about the rules and requirements concerning taxes and audits. This concurs with research advocating for active engagement of taxpayers so as to encourage voluntary compliance as well as encouraging healthy relationships between the state and subjects – the taxpayers. Further, the paper strengthens the constraints of audit quality (AQ) on TAE accumulatively. The observed and statistically significant relationship between AQ and the TAE supports the prior empirical research indicating that comprehensive, proper, and meticulous auditing mechanisms, procedures, and supervision play a critical role in ensuring the efficiency of taxation compliance measures. In addition, the findings also indicate a significant interaction between SE and all the components of TAE. This implies that there is a positive relationship between the independent variables and the dependent variable; in other words, there is a suggestion that there is potential of improvement of tax audit outcomes through investment in the skills, knowledge as well as the capabilities of the auditors. This is in accord with earlier studies suggesting that RMS is a part of human capital applied to strengthen tax collection and efficiency.

The research then concludes that there is an inverse relationship between Organizational independence, top management support, and tax audit effectiveness. The principle of independence is very essential where the organization that is to conduct the tax auditing is different from the one being audited. However, the autonomy can also be a problem when it comes to tax audit as is evident from the following reasons. Soh and Martinov-Bennie (2015) established that the level of organizational independence increased the chance for reduced cooperation of the audited organization with the tax audit, which lowers its efficiency. The findings further reveal that support from top management is essential in the successful implementation of tax audits as well as their effectiveness, in the event that they are to be undertaken. While engaging top management in tax audit is beneficial, the involvement must not be taken to extremes as

it may have adverse effects. Similarly, Alasfour and Samy (2016) recognized that the involvement of top management in the tax audit process means the process is political; outsiders potentially changed the game by politicizing the issue without applying sufficient effort to understand it. This, in turn, could mean a lowering of the efficiency of the overall tax audit.

The study findings also led to the discovery of the fact that tax audit effectiveness was statistically significant with gender, this indicates that there is a difference in the effectiveness of tax audit concerning the neighbouring gender that correlates with prior research findings concerning gender diversity in the accounting and auditing professions. Chung and Monroe (2001) and Hardies et al. (2016) have reported earlier that gender can be the cause of managing audit tasks as well as response and results since cognitive style and communication can differ between female and males. For example, CLung and Monroe (2001) revealed that female auditors processed information more elaborately and in a more detail-oriented way than male auditors, thereby affect the quality of audit judgments. Likewise, Hardies, Breesch, and Branson (2016) showed that conservative female auditors also had lower perceived risk level than their male counterparts could result in biasing audit decisions and conclusions.

5.2 Conclusion

The findings of this study provide valuable insights into the key factors influencing the effectiveness of tax audits. Consistent with prior research, the results highlight the pivotal role of taxpayer awareness (ALTP), audit quality (AQ), and staff expertise (SE) in enhancing tax audit effectiveness (TAE). The extremely strong positive relationship between ALTP and TAE underscores the importance of promoting taxpayer education and engagement. Improving taxpayers' understanding of tax regulations and procedures can foster voluntary compliance and facilitate productive interactions between authorities and taxpayers, thereby contributing to more successful audit outcomes. The positive and statistically significant association between AQ and TAE corroborates existing evidence that rigorous auditing practices, techniques, and oversight are essential for maximizing the effectiveness of tax enforcement efforts. Continuous improvement in audit methodologies and quality assurance mechanisms is crucial for enhancing the impact of tax audits. Furthermore, the

beneficial impact of staff expertise (SE) on TAE emphasizes the importance of investing in the development of auditors' skills, knowledge, and capabilities. Strengthening the human capital within tax administration can contribute to improved performance and outcomes of tax audit processes. However, the findings also reveal a potential downside to organizational independence and top management support. While these factors are generally considered important for the effectiveness of tax audits, excessive levels of independence or top management involvement can sometimes hinder the audit process. Maintaining a balance between independence, support, and objectivity is crucial for optimizing the effectiveness of tax audits.

5.3 Recommendation

In light of the findings of this study and based on the conclusion that has been arrived at, the following recommendations can be made to improve on the current status of tax audits.

Firstly, one has to increase citizens' awareness of their role in the fiscal system and make them active users of the online platform. It will be the key argument that enhanced provision for the implementation of various education and information initiatives can enhance the awareness and voluntary compliance with the tax laws and regulations among the citizens, and promote more efficient communication between the authorities and individual or corporate taxpayers. Referring to various applications and social networks that play an important role in everyday life it is possible to facilitate communication between the Ministry of Taxes and the taxpayers.

Second, they should enhance the quality of audit assurance from tax authorities as a principal. Improving the current audit procedure, method and standards can help in establishing efficient auditing mechanisms that are effective and consistent. Ensuring the availability of sound quality control and quality assurance procedures at the tax audit function and, also, periodically reviewing the tax audits, provide insights on aspects that need overhauls.

Thirdly, steadily maintaining the growth of auditor expertise and capabilities should be a priority. Investing in the training and development of tax auditors can help foster both personal and organizational growth in several ways. Having talented

and experienced specialists in the tax audit function, as well as increasing professionals' motivation to improve their qualifications and share the results of their knowledge with others, will enhance the significance of developing the required expertise. Also, the issue of balance is a critical factor in the extent of independence a person needs while still being assisted. Having a clear Organizational governance framework that may enable a right level of organizational independence for the tax audit function so that there is also well defined involvement of top management to avoid interference during the performance of duties and also having clear checks and balance mechanisms can lead to a situation of having an efficient tax audit function characterized by the provision of value add services in a transparent, accountable and objective manner.

Finally, adopting a collaborative and holistic approach is recommended. There are also several ways of achieving improved results of the tax audit, the primary of which is promotion of cooperation between the tax authorities, taxpayers and other interested parties. Adopting a comprehensive and integrated approach to tax audit planning, implementation, and evaluation, considering the interplay of various factors, and continuously reviewing and refining the tax audit strategy and tactics based on emerging trends and best practices, can contribute to improved tax compliance, revenue collection, and the overall efficiency of the tax system.

5.4 Suggestion for future research

Future researchers interested in expanding the understanding of tax audit effectiveness should consider several promising directions. These include replicating the study in different geographical and regulatory contexts, examining the impact of emerging technologies and trends, exploring the role of behavioral and psychological factors, assessing the indirect and long-term impacts of effective tax audits, and adopting an interdisciplinary and mixed-methods approach. By pursuing these research avenues, scholars can build upon the insights provided by this study and contribute to the development of more effective tax audit strategies, ultimately benefiting tax authorities, taxpayers, and the broader economic and social well-being of communities.

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