



**The Effect of Internal Audit Function on Enhancing
Revenue Collection Efficiency: the case of Addis Ababa
City Government Revenue Bureau**

By

Mintesinot Mulugeta Tesfamariam

**Addis Ababa University
College of Business and Economics
MSc in Accounting & Auditing**

Advisor

Kelifa Srmolo (PhD)

December 2024

Addis Ababa, Ethiopia

**The Effect of Internal Audit Function on Enhancing Revenue
Collection Efficiency: the case of Addis Ababa City Government
Revenue Bureau**

By

Mintesinot Mulugeta Tesfamariam

**A Thesis Submitted to College of Business and Economics, Department of
Accounting and Finance in Partial Fulfillment of the Requirements for the
Degree of Master of Science in Accounting & Auditing**

**Addis Ababa University
College of Business and Economics
MSc in Accounting & Auditing**

Advisor

Kelifa Srmolo (PhD)


December 2024

Addis Ababa, Ethiopia

Declaration


I Mintesinot Mulugeta declare that this thesis is my original work and it is the result of my own effort prepared under the advice of Kelifa Srmolo (PhD). The entire sources of material used for the project have been duly acknowledged. This research project has not been submitted for any degree either in part or full in this university or any other higher institutions rather it is presented for the partial fulfillment of MSc in Accounting & Auditing.

Declared By: Mintesinot Mulugeta

Signature: 

Date: January 2024

Confirmed By: Kelifa Srmolo (PhD)

Signature: 

Date: 22/02/2025

Certification

This is to certify that the thesis by Mintesinot Mulugeta, The Effect of Internal Audit Function on Enhancing Revenue Collection Efficiency the case of Addis Ababa City Government Revenue Bureau was submitted in partial fulfillment of the requirements for MSc in Accounting & Auditing complies with the regulations of the university. Further, the thesis meets the accepted standard with respect to originality and quality.

Approved by the Board of Examiners

Kelita Srmolo (PhD) [Signature] 12/03/2025
Advisor Signature Date

Takere Fufa, PhD [Signature] March 10/2025.
Internal Examiner Signature Date

Chair of Department or Graduate Program Coordinator

Acknowledgement

I would like to thank the God above all, for allowing me to finish this thesis proposal. I would like to thank Kelifa Srmolo (PhD) for his advice and the staffs of the Human Resources Management Team of Addis Ababa City Government's Revenue Bureau at Head Office and Branches Who allow me, in order to carry out the required work and use and access organizational data and materials.

Table of Contents

Declaration	i
Certification	ii
Acknowledgement	iii
Table of Contents.....	iv
List of Tables.....	vii
List of Figures.....	vii
Acronyms and List of Abbreviations	viii
Abstract.....	ix
Chapter One.....	1
1. Introduction	1
1.1 Background of the Study.....	1
1.2 Background of the Organization.....	3
1.3 Statement of the Problem	4
1.4 Research Questions	5
1.5 Objectives of the study.....	6
1.5.1 Specific Objectives.....	6
1.6. Significance of the study	6
1.7 Study Scope and Limitation	7
1.8 Organization of the Paper.....	7
Chapter Two	8
2 Literature Review	8
2.1 Introduction	8
2.2 Definition and Concept of Internal Audit	8
2.3 Historical Evolution of Internal Audit	9
2.4 Theories of Internal Audit	10
2.4.1 Agency Theory.....	10
2.4.2 Resource-Based View Theory.....	11

2.4.3. Stakeholder Theory.....	11
2.5 Internal Audit Functions.....	12
2.5.1 Risk Assessment and Management	13
2.5.2 Internal Control Evaluation.....	13
2.5.3. Compliance and Ethics	14
2.5.4. Operational Auditing on Information and Communication	14
2.5.5. Continuous Monitoring and Auditing.....	15
2.6 Empirical Literature Review	15
2.7 Research Gaps	17
2.8 Conceptual Framework	18
2.8.1 Variables	19
2.8.1.1 Dependent Variable	19
2.8.1.2 Independent Variables	20
2.9 Research Hypothesis	20
Chapter Three.....	21
3. Research Design and Methodology	21
3.1 Introduction	21
3.2 Research Design & Approach of the study	21
3.3 Types and Sources of Data	21
3.4 Target Population of the Study	22
3.5 Sampling Techniques	22
3.6 Data Collection Method	23
3.7 Soundness of Measurement Used	24
3.8 Method of Data Analysis.....	25
3.9 Time Horizon of the study.....	25
3.10 Ethical Considerations.....	25
Chapter Four.....	27
4. Data Presentation and Analysis	27
4.1 Introduction	27
4.2 Response Rate.....	27

4.4 Descriptive Statistics	30
4.5 Tests of Distribution of Data	32
4.6 Correlation Analysis	34
4.7 Ordinal Logistic Regression	37
4.8 Results and Discussions	43
Chapter Five.....	45
5. Summary of Major Finding, Conclusion, Recommendation and Direction for Future Research	45
5.1 Introduction	45
5.2 Summary of Major Finding	45
5.3 Conclusion.....	46
5.4 Recommendation	47
5.3.1 Theoretical Contribution.....	47
5.3.2 Practical Implications	48
5.5. Direction for Future Research	49
References.....	1
Appendix	lvii
Appendix 1: Questionnaire.....	lviii
Appendix 2: SPSS Outputs	lxii
Appendix 2.1: Reliability Statistics.....	lxii
Appendix 2.2: Descriptive Statistics	lxii
Appendix 2.3: KMO and Bartlett's Test with Scree Plot	lxix
Appendix 2.4: Case Processing Summary.....	lxx
Appendix 2.5: Descriptives	lxx
Appendix 2.6: Tests of Normality.....	lxxii
Appendix 2.7: Correlations.....	lxxiii
Appendix 2.8: Parameter Estimates	lxxiv

List of Tables

Table 3.1 Total Population and Sample Size Determination.....	23
Table 3.2 Reliability Statistics	24
Table 4.1 Demographic Characteristics of Respondents.....	28
Table 4.2 Descriptive Statistics.....	30
Table 4.3 Tests of Normality	33
Table 4.4 Correlations	35
Table 4.6 Model Fitting Information.....	38
Table 4.7 Omnibus Test.....	38
Table 4.8 Goodness-of-Fit	39
Table 4.9 Pseudo R-Square.....	40
Table 4.10 Test of Parallel Lines	40
Table 4.11 Parameter Estimates.....	41

List of Figures

Figure 2.1 Conceptual Framework.....	19
--------------------------------------	----

Acronyms and List of Abbreviations

AACGRB	Addis Ababa City Government Revenue Bureau
AI	Internal Audit
CE	Compliance and Ethics
CMA	Continuous Monitoring & Auditing
ERCA	Ethiopian Revenue and Customs Authority
ERCE	Enhancing Revenue Collection Efficiency.
ICE	Internal Control Evaluation
IIA	Institute of Internal Auditors
OAIC	Operational Auditing on Information & Communication
RAM	Risk Assessment and Management
SPSS	Statistical Package for Social Science

Abstract

The issues of globalization, transparency, integrity and improvement of government service delivery increase the need for governance and accountability. Consequently, this phenomenon leads the interest to internal audit function in organization. The purpose of this study is to examine the effect of Internal Audit Function on Enhancing Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau. Population of the study are both management and staffs of internal audit, tax audit and tax assessment departments of Addis Ababa City Government Revenue Bureau that are a total of 902. From this target population a sample size of 278 were selected for the study. The study uses a combination of descriptive and explanatory research design through a quantitative research approach. Mainly primary data which were collected through Closed-ended questionnaire were used and analyzed through SPSS. The result shows Internal Audit Function affects Enhancing Revenue Collection Efficiency positively with statically significance. Finally, the study recommends that Addis Ababa City Government Revenue Bureau shall focus on developing robust risk management frameworks in that internal audit department shall execute systematic risk assessments that evaluate the likelihood and effect of various risks that are related to the organizations main objective which is revenue collection. Further, the organization shall consider strengthening the implementation of vigorous internal control and evaluation system for maintaining and enhancing their efficiency in supporting revenue collection.

Key words: *Internal Audit. Compliance and Ethics, Continuous Monitoring & Auditing, Revenue Collection Efficiency, Internal Control Evaluation and Risk Assessment and Management*

Chapter One

1. Introduction

This chapter introduces the study and provides an overview of its key aspects, including background of the study, background of the organization, statement of the problem, the research objectives, scope and limitation of the study, significance of the study and organization of the paper. It sets the stage for the subsequent sections by outlining the purpose and relevance of the study.

1.1 Background of the Study

Internal audit is a profession and activity involved in advising organization regarding how to better achieve their objectives through managing risks & improving internal control. It involves the utilization of a systematic methodology for analyzing business process or organizational problems and recommending solutions. The scope of internal auditing within an organization is broad and include various internal control related activities such as the review of the effectiveness & efficiency of operations; compliance with the organization laws, regulation, directives, policy and procedures; risk assessment, investigating fraud and safeguarding of assets, therefor it assure operational efficiency of the organization (Asare, 2009).

The internal audit function is an integral part of organizations, providing independent and objective assurance on the effectiveness of risk management, internal control, and governance processes. Over the years, numerous studies have been conducted to explore various aspects of the internal audit function, aiming to understand its role, challenges, and effect on organizational performance and efficiency. The internal audit function has evolved significantly over time to meet the changing needs of organizations. Initially, it emerged as a compliance-focused activity, primarily concerned with verifying financial records and ensuring adherence to regulations. However, with the increasing complexity and risks faced by organizations, the role of internal audit expanded to encompass broader areas such as risk management, internal control, and governance.

As organizations recognized the importance of effective internal audit practices, academic researchers and practitioners began conducting studies to examine various aspects of the

internal audit function. These studies aimed to provide insights into the value, challenges, and best practices associated with internal audit, contributing to the professionalization of the field.

According to Jung, Y., & Cho, M. K. (2022); research has focused on understanding the roles and responsibilities of internal auditors within organizations. These studies examine the scope of internal audit activities, the reporting lines, and the interaction between the internal audit function and other organizational units. Moreover, as per studies by Gramling et al. (2014), that examined the factors that impact the objectivity and independence of internal auditors. This research explores the reporting structure, organizational culture, and the presence of safeguards to ensure that internal auditors can operate independently.

The findings of studies on the internal audit function have practical implications for organizations. They provide insights into the best practices that can enhance the effectiveness of internal audit activities. For example, research has highlighted the importance of robust internal audit risk assessment methodologies, continuous professional development for internal auditors, and alignment between internal audit and organizational strategies (Netshifhefhe et al., 2024).

Internal auditors must contribute to the management function of maintaining effective internal control, risk management, and corporate governance. In Ethiopia public organization although Internal auditing focus on traditional activities. It play a critical role in promoting transparency, accountability, and good governance within public organizations. In Ethiopia, the internal audit function assumes particular importance in ensuring effective utilization of public resources, preventing corruption, and enhancing organizational performance.

Assefa et al. (2020), explained that the internal audit function enhances governance by promoting accountability, integrity, and transparency in public organizations. The internal audit function in Ethiopian public organizations plays a fundamental role in enhancing governance. It provides independent and objective assurance to management and stakeholders by evaluating the effectiveness of internal controls, risk management systems, and compliance with laws and regulations. Through its audits, the internal audit function helps identify weaknesses in governance structures, recommends improvements, and ensures adherence to ethical standards.

1.2 Background of the Organization

Addis Ababa City Government Revenue Bureau traces its origins back to the establishment of the Revenues and Customs Authority of Ethiopia (ERCA) in 2010. ERCA is the organization responsible for collecting income from customs duties and local taxes in Ethiopia. ERCA was created as part of the Ethiopian government's efforts to reform and modernize the tax administration system. Prior to its establishment, tax collection in Ethiopia was fragmented among various regional and local authorities. The introduction of ERCA aimed to centralize and streamline the tax collection processes, ensuring more efficient revenue mobilization for the government.

Under ERCA's jurisdiction, the Addis Ababa City Government Revenue Bureau was established to oversee tax collection and administration specifically within the city of Addis Ababa. The bureau operates under the guidance and regulations set forth by ERCA, ensuring compliance with national tax laws and regulations. The primary mandate of the Addis Ababa City Government Revenue Bureau is to collect revenue from various sources, including local taxes, fees, and charges within the city. This includes business income tax, value add tax, property taxes, business license fees, trade permits, land lease fees, and other local taxes imposed by the city government. The bureau is responsible for implementing tax policies, conducting audits, enforcing compliance, and providing taxpayer services within its jurisdiction.

As a subsidiary body of ERCA, the Addis Ababa City Government Revenue Bureau operates within the broader framework of the Ethiopian tax administration system. It collaborates with other tax authorities and government agencies to ensure coordinated efforts in revenue collection, compliance enforcement, and taxpayer education. The establishment of ERCA and its subsequent subsidiary, the Addis Ababa City Government Revenue Bureau, has contributed to the strengthening of tax administration in Ethiopia. Through centralized coordination, improved systems, and enhanced enforcement measures, these organizations play a crucial role in generating revenue for the government, supporting public service delivery, and promoting economic development in Addis Ababa and across the country.

1.3 Statement of the Problem

The internal audit function plays a critical role in organizations, providing independent and objective assurance on the effectiveness of risk management, internal control, and governance processes. As organizations face increasing complexity and risks, the internal audit function has evolved to encompass broader areas beyond compliance and financial verification.

According to Diamond, May (2002 p.4), the audit function has always been viewed as an integral part of the government financial management and increasingly as an instrument for improving the performance of the public sector. It has a great role in public as well as private sector like evaluation and improvement of risk management, control and governance process rather than the traditional financial and compliance audit.

Research on the internal audit function has evolved to address the changing needs and challenges faced by organizations. By exploring various dimensions such as roles, independence, effectiveness, and challenges, studies in this field contribute to a deeper understanding of the internal audit function's value and impact.

As argued by Hay et al.(2012) & Ramlall (2016) the effectiveness and value of the internal audit function have been a significant focus of research. Studies have investigated the Effect of internal audit activities on organizational performance, risk management, and control processes. They have also examined the factors that contribute to the value-added by internal auditors.

J. Kinfu (2006) explained the critical means to monitor ethics and governance in public organizations of Ethiopia can be through the audit function. Emerging technologies, such as data analytics and automation, have the potential to transform internal audit practices and improve revenue generation processes. J. Kinfu (2006) further states that despite of these internal auditing still focus on traditional activities, such as: financial and compliance auditing. Less attention is given to operational audits or the application of techniques like, statistical sampling and computer auditing. Internal auditors must often solve every day problems of the organization. However, they spend most of their time ensuring that accounting records are properly maintained and reliable: instead of consulting the managers in different controlling

strategies to improve good governance and facilitate the way of achieving the planned activities of the organization.

Moreover, one of the primary gaps in research on the roles of the internal audit function is the limited focus on revenue collection. While many studies have examined the financial control and compliance aspects of internal audit, there is a scarcity of research specifically exploring the contribution of the internal audit function to enhancing revenue collection activities within public organizations. Income or revenue collection involves strategies such as revenue optimization, cost reduction, and business development, and the role of the internal audit function in supporting these activities remains relatively unexplored.

On top of the absence of sector-specific research limits such as revenue authorities, as remarked by Damme et al. (2008), developing countries like that of Ethiopia, collecting revenue efficiently presents significant challenges. These struggle with various obstacles related to both the design and administration of their revenue systems. Factors such as limited resources, weak infrastructure, and corruption often hinder the implementation of effective revenue collection mechanisms. Additionally, complex tax structures, lack of proper enforcement, and low levels of public trust in government institutions contribute to the difficulties in ensuring that revenue are collected in a fair and efficient manner. Since Addis Ababa revenue bureau is part of the nation's tax force, these issues create a cycle of inefficiency that undermines the ability of governments to generate the revenue needed for development and public services. Therefore student researcher observe the need to direct more attention to understanding how internal audit can contribute to revenue collection. As a result in this study the researcher aim to investigate the Effect of internal audit function on enhancing revenue collection in Addis Ababa Revenue Bureau.

1.4 Research Questions

1. What is the effect of Risk Assessment and Management on Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau?
2. What is the effect of Internal Control Evaluation on Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau?
3. What is the effect of Operational Auditing on Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau?

4. How compliance and Ethics do affects Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau?
5. What are the effect of Continuous Monitoring and Auditing on Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau?

1.5 Objectives of the study

The main objective of the study is to examine the Effect of Internal Audit Function on Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau (AACGRB).

1.5.1 Specific Objectives

1. To examine the effect of Risk Assessment and Management on Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau.
2. To investigate the effect of Internal Control Evaluation on Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau.
3. To examine the effect of Operational Auditing on Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau.
4. To come across how Compliance and Ethics affects Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau.
5. To examine the effect of Continuous Monitoring and Auditing on Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau.

1.6. Significance of the study

It is expected that the study would determine how Internal Audit Function affect Enhancing Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau (AACGRB), and it subsequently suggest ways to make improvements. It also seeks to provide methods for improving efficiency in the process of generating revenue. Because of this, the study could be very important in helping the country develop by suggesting ways to increase the bureau capability in revenue collection.

The results of this study are anticipated to provide light on the connection between revenue collection efficiency and internal audits, as well as serve as a benchmark for various regional states, governmental organizations, and business groups. Furthermore, this study will be addition to the body of current literature in essence it will be helpful to academics and researchers who want to use the results as a foundation for ongoing and future research on the

topic. Additionally, it give good feedback regarding the procedure's efficiency of revenue collection, enhances and highlights the internal Audit functions shortcomings to the management, and demonstrates the city government's ability to earn sufficient revenue.

1.7 Study Scope and Limitation

The topic of internal audit and its function is extensive and covers a wide range of subjects and issues that require investigation at various levels of government, including federal, regional, and local administrations. Conducting a comprehensive investigation at all levels would provide a more complete understanding of the issue compared to what this particular study has contributed. However, the researcher faced limitations in terms of resources, which made it impractical to investigate the issue at all levels. As a result, the study focused specifically on the Effect of internal audit function on enhancing revenue collection efficiency within the geographical scope of the Addis Ababa City Government Revenue Bureau.

The study utilize a cross-sectional time horizon. Methodologically, the study centered on examining the effect of internal audit function on enhancing revenue collection efficiency. Although there are other factors that could potentially affect revenue collection efficiency, which is not taken into account in this study. As a result, the model only controlled for the most significant variables based on various empirical evidence. So it will focus on five variables: Risk Assessment & Management, internal Control Evaluation, Operational Auditing, Compliance and Ethics; and Continuous Monitoring.

The study had certain limitations. Firstly, since the data collection relied on self-reporting by respondents, there might be instances of non-compliance where participants failed to return the questionnaire on time or provided incomplete data. This lack of cooperation and timeliness may hindered the ability to make broader generalizations from the study.

1.8 Organization of the Paper

In terms of organization, the paper was divided into five chapters. The first chapter provided a general introduction, while the second chapter discussed relevant literature in the field. The third chapter presented the research design and methodology. Chapter four contained the results and discussion, and finally, the fifth chapter presented a summary, conclusions, recommendations and future research direction.

Chapter Two

2 Literature Review

2.1 Introduction

Under this section the summary of different related literature are presented. Especially literatures which are discussing about the internal audit definition, historical evolution, type, scope and responsibility, role of internal audit and its function and revenue collection are briefly summarized and presented in this chapter.

2.2 Definition and Concept of Internal Audit

Internal audit is a vital function within organizations, providing independent and objective assurance on the effectiveness of governance, risk management, and control processes. Internal audit can be defined as "an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes" (IIA, 2018, p. 3). This definition encapsulates the core principles of independence, objectivity, and value creation that underpin the practice of internal audit.

The concept of internal audit revolves around providing assurance, advice, and insights to stakeholders in an organization. Internal auditors examine and evaluate various aspects of an organization's operations, including governance, risk management, control systems, and compliance with laws and regulations. Their objective is to identify areas of improvement, assess the effectiveness of internal controls, and contribute to the achievement of organizational objectives.

Internal audit serves as a critical component of corporate governance by providing stakeholders with an independent and objective assessment of the organization's governance processes. It helps ensure that the board of directors and senior management are adequately informed about the effectiveness of internal controls, risk management practices, and compliance with regulatory requirements (Pickett, 2017). By conducting regular audits and assessments, internal auditors assist in promoting transparency, accountability, and ethical conduct within the organization.

2.3 Historical Evolution of Internal Audit

Internal audit, as a discipline, has undergone a remarkable historical evolution, transforming from rudimentary controls in ancient civilizations to a vital function in today's complex business environment. The origins of internal audit can be traced back to ancient civilizations where control mechanisms were established to ensure accuracy and accountability. In Mesopotamia, Egypt, and Rome, scribes were appointed to record transactions, verify inventories, and prevent fraud (Kaplan, 2011). These early controls laid the foundation for the concept of internal verification and the importance of accurate financial records.

With the advent of the Industrial Revolution, organizations grew in size and complexity, necessitating more rigorous controls. Business owners and managers recognized the need for internal oversight and began appointing individuals to inspect and verify financial records and processes. However, internal audit functions during this period were often informal and performed by employees who held other responsibilities within the organization (Braithwaite, 2004).

The mid-20th century marked a turning point in the evolution of internal audit. In 1941, The Institute of Internal Auditors (IIA) was founded, providing a platform for professionals to exchange knowledge and establish standards (IIA, n.d.). This era witnessed the recognition of internal audit as a specialized profession, with a focus on financial controls and the accuracy of financial statements. During the 1970s and 1980s, internal audit began to broaden its scope beyond financial controls. Organizations recognized the need to assess operational efficiency, compliance, and risk management. Internal auditors started playing a more strategic role, offering insights and recommendations to improve organizational performance and mitigate risks (Sarens & De Beelde, 2006). This period also saw the emergence of the practice of risk-based auditing, aligning audits with the organization's objectives and risk profile.

The late 20th and early 21st centuries witnessed significant changes that further shaped the evolution of internal audit. High-profile corporate scandals, such as Enron and WorldCom, prompted regulatory reforms and increased scrutiny of corporate governance. Internal audit gained prominence as a key component of effective governance, assisting organizations in identifying and addressing control weaknesses and fraud risks (Knapp, 2015).

Technological advancements also played a pivotal role in transforming internal audit practices. The adoption of data analytics, computer-assisted audit techniques (CAATs), and automated tools enabled auditors to analyze vast amounts of data, identify anomalies, and provide more comprehensive and efficient assurance (Gebre, 2017). These tools empowered internal auditors to shift from manual testing to proactive data-driven analysis. In the present day, internal audit has evolved into a multidimensional discipline, encompassing financial and operational controls, risk assessment, compliance, and governance. Internal auditors act as trusted advisors, providing independent assurance and insightful recommendations to senior management and the board of directors (IIA, 2018).

Furthermore, the role of internal audit continues to evolve in response to emerging trends and challenges. The increasing complexity of global business, advancements in technology, cybersecurity threats, and the growing focus on environmental, social, and governance (ESG) issues are shaping the future of internal audit. Internal auditors are adapting by expanding their skill set, embracing data analytics and automation, and addressing emerging risks in a dynamic and agile manner (Deloitte, 2020).

2.4 Theories of Internal Audit

Various theories have been proposed to explain the purpose, objectives, and practices of internal auditing. Three theories explaining the link between internal audit function and efficient revenue collection are used in a theoretical analysis of this study. These include Agency Theory, the Resource-Based View Theory, and the Stakeholder Theory.

2.4.1 Agency Theory

The Agency Theory posits that conflicts of interest exist between principals (owners/shareholders) and agents (management/employees) due to information asymmetry and divergent goals (Jensen & Meckling, 1976). The Agency theory was brought forward by Jensen and Meckling (1976). The theory was developed from the work of Jensen and Meckling “The Theory of the Firm”. The theory is concerned about solving the problem that may exist between the principals and agents of the principals. The internal audit function is considered as a mechanism to reduce agency costs by monitoring and controlling the behavior of agents. Internal auditors, acting as independent appraisers, provide assurance to shareholders by

evaluating the efficiency and effectiveness of internal controls and risk management systems (Adams, 1994).

The Agency Theory aligns with revenue collection efficiency by reducing agency costs and enhancing the efficiency and effectiveness of internal controls. Internal auditors, acting as agents of shareholders, monitor and evaluate managerial performance and accountability, thus deterring fraud and ensuring compliance with regulations. By reducing the risk of financial irregularities and optimizing resource utilization, the Agency Theory can contribute to income generation improvement (Adams, 1994).

2.4.2 Resource-Based View Theory

The Resource-Based View Theory emphasizes the importance of internal resources and capabilities as sources of competitive advantage (Barney, 1991). In the context of internal auditing, this theory suggests that internal auditors possess unique knowledge and skills that, when effectively utilized, can contribute to enhancement of revenue collection. By conducting risk assessments, identifying process inefficiencies, and recommending improvements, internal auditors enable organizations to optimize resource allocation and enhance income collection potential.

The Resource-Based View Theory aligns with revenue collection improvement by leveraging internal auditors' unique knowledge and skills to identify and exploit opportunities for enhanced resource allocation. By assessing risks, streamlining processes, and recommending improvements, internal auditors enable organizations to optimize their resource base and improve income generation potential. This theory recognizes the strategic value of internal auditors in driving organizational performance (Alqudah et al, 2023).

2.4.3. Stakeholder Theory

Freeman (1984) developed a stakeholder theory. Combining organizational and social science disciplines, Freeman developed this theory (Wheeler et al., 2002). The theory states that the organization should be considered as a group of stakeholders, and in order to ensure stakeholder interests, needs and views are being taken into account when managing it. Stakeholder Theory postulates that organizations should consider the interests of all stakeholders, including shareholders, employees, customers, suppliers, and the wider society

(Freeman, 1984). Internal auditors, guided by this theory, focus on ensuring transparency, accountability, and ethical behavior throughout the organization. By promoting responsible business practices and risk management, internal auditors contribute to the overall sustainability and reputation of the organization, which can positively impact income generation.

The Stakeholder Theory bring into line with revenue collection enhancement by emphasizing responsible business practices and risk management. Internal auditors, by promoting transparency, accountability, and ethical behavior, contribute to the organization's reputation and sustainability. A positive reputation enhances customer trust and attracts investors, leading to increased tax or revenue collection potential. By considering the interests of all stakeholders, internal auditors create value that positively impacts revenue generation (Akisik, O., & Gal, G. 2017).

While all three theories offer valuable insights, the Resource-Based View Theory appears to be the most suitable for enhancing revenue collection efficiency. It recognizes the strategic role of internal auditors in optimizing resource allocation and enhancing organizational performance. By identifying inefficiencies and recommending improvements, internal auditors can directly impact revenue or tax collection potential. Moreover, the theory link with the modern business landscape, which emphasizes the importance of sustainable competitive advantage through effective resource utilization. To sum up, the Resource-Based View Theory provides a comprehensive framework for internal auditors to contribute to revenue collection enhancement. By leveraging their unique knowledge and skills, internal auditors can identify opportunities for enhanced resource allocation, streamline processes, and drive organizational performance.

2.5 Internal Audit Functions

Organizations face a number of challenges, including increased regulatory scrutiny, evolving risks and the need for effective management to fit with today's complex business environment. In this context, it is clear that, in order to ensure the integrity, reliability and efficiency of an organization's operations, internal audit plays a crucial role. The functions of internal audit and the role it plays in organizations is explained here under.

2.5.1 Risk Assessment and Management

Risk assessment refers to a careful evaluation of the factors which may affect the possibility that organizational objectives will not be achieved. This means identifying and analyzing relevant risks related to achieving the objectives of an organization (Karagiorgos et al., 2009). They further state that risk assessment is the process of identifying and analyzing management risks to prepare financial statements which will be presented in a manner consistent with the general accepted accounting principle. Through risk assessment and evaluation of internal controls, the internal audit function strengthens an organization's risk management efforts. By identifying potential risks and providing recommendations for their mitigation, internal auditors enable management to make informed decisions and reduce the likelihood of adverse events. Internal auditors play a vital role in identifying and assessing risks that may affect an organization's objectives.

According to IIA (2018) internal auditors analyze operational, financial, and compliance risks, providing valuable insights to management for effective risk management strategies. Internal auditors employ various techniques such as risk workshops, interviews, and data analysis to assess risks comprehensively and objectively.

2.5.2 Internal Control Evaluation

Evaluating and enhancing internal controls is another critical responsibility of the internal audit function. When it comes to internal control, the control environment shapes the organization's culture by affecting its employees' control consciousness (Whittington and Pany, 2001). The basis for all other internal control elements is the control environment. It includes elements such as the commitment and skill of those carrying out assigned tasks, the board of directors or audit committees, the management philosophy and operating style, the organizational structure, and the integrity and ethical values of the staff members tasked with developing, implementing, and overseeing the controls. Internal auditors examine the design and operational effectiveness of controls to ensure they mitigate risks effectively (IIA, 2018). By identifying control weaknesses and recommending improvements, the internal audit function strengthens the control environment and reduces the likelihood of fraud, errors, and non-compliance.

2.5.3. Compliance and Ethics

Compliance and Ethics of control activities refer to policies, procedures, and mechanisms put in place to ensure directives of the management are properly carried out. The way in which control activities are to be carried out is determined by the appropriate and accurate documentation of policies and guidelines on procedures.

Ensuring compliance with applicable laws, regulations, and internal policies is an essential aspect of the internal audit function. It also provides sufficient information for auditors to assess the overall adequacy of control design in relation to financial management practices, these monitoring activities shall ensure that all appropriate measures are adopted with a view to mitigating risks and achieving organizational objectives. Internal auditors assess the organization's adherence to legal and regulatory requirements, ethical standards, and industry best practices (IIA, 2018). By doing so, they help the organization maintain its reputation, avoid legal penalties, and foster a culture of integrity and ethical behavior.

2.5.4. Operational Auditing on Information and Communication

Information is essential for all organizational levels. It makes it possible for instructions and feedback to flow, aiding the organization in achieving its objectives. Aldridge and Colbert (1994), internal control requires that all pertinent information be identified, captured, and communicated in a form and time frame that enable people to carryout their financial reporting responsibilities. It is necessary to have information from both inside and outside the company. Instructions carry information from the highest levels down. In order to keep other industry participants from learning sensitive and tactical knowledge, information must be distributed on a need-to-know basis. As a result, information must be shared in a timely way, be dependable, relevant, and realistic. Internal auditors examine operational processes and procedures to assess their efficiency, effectiveness, and adherence to best practices. This includes evaluating the utilization of resources, identifying process inefficiencies, and recommending improvements.

2.5.5. Continuous Monitoring and Auditing

Monitoring refers to a periodic assessment of the quality of an internal control system. In view of the fact that internal controls are processes, it is usually accepted that they need to be properly monitored in order to assess their quality and efficiency over time. Monitoring provides assurance to the organization that the findings of the audits and other reviews will be promptly determined (Mahadeen, et al. 2016). Internal auditors establish systems and processes for continuous monitoring and auditing of key controls and risk areas. This involves the use of technology and data analytics to identify anomalies, trends, and potential areas of concern.

According to Mahadeen, et al. (2016), organizations use monitoring controls to examine the effectiveness of their internal controls. These controls monitor the company's internal control operational state and provide the necessary framework and answers to guarantee that internal controls inside the organization operate as efficiently as possible. The individual assessment is carried out by the internal audit unit of the company.

On the other hand, ongoing monitoring requires all levels of the company's leadership to examine, assess, and judge the efficacy and efficiency of the operational operations carried out by their individual divisions. Monitoring makes it possible to track performance, which makes it essential for determining improved performance across the board for the organization Doyle and McVay (2005).

2.6 Empirical Literature Review

In terms of empirical evidence on internal audit functions and revenue collection, the researcher has found that various studies have been carried out in specifying organizations around the world but only few studies are conducted to establish a possible effect of internal audits functions on enhancing revenues collection. Various studies regarding on internal audit functions and revenue collection efficiency have been included in the next section.

As explained by Hay et al. (2012), the effectiveness and value of the internal audit function have been a significant focus of research. Studies have investigated the Effect of internal audit activities on organizational performance, risk management, and control processes.

Research made by Bett, C. C. (2014), indicates a positive correlation between the presence of a robust internal audit function and improved financial performance. Effective internal audit

practices contribute to better financial management, cost control, and revenue optimization, leading to enhanced operational efficiency.

According to Ibrahim (2017), People's awareness is shaped by the control environment and determines the tone of the organization. The control environment is a foundation for all others of the components of the internal control system. It's made up of elements such as management, Philosophy and the way it operates, structure of an organization, competence and the commitment of the people performing the tasks, the auditors and the directors, and the integrity and the ethical values of persons entrusted with the establishment, management and supervision of controls.

On the other hand Kikonyogo (2017) examined the effect of internal controls at the Kampala Capital City Authority on revenue collection. The researcher found a positive and significant association between control activities, control environment and monitoring with revenue collection using a cross sectional design and a sample of 72 respondents who were employees of the Kampala Capital City Authority. In order to enhance the performance of the revenue collection function, the study recommended that organizations involved in the collection of revenue should establish an appropriate control environment, carry out effective control activities and carry out effective monitoring.

The main source for fraud and abuse is revenue, so a robust system of Internal Control needs to be set up in order to collect tax (Sigilai, 2017). An Internal Control System is built on an organization's confidence in its ability to perform specific tasks, prevent mistakes and loss as well as ensuring compliance with all applicable laws and regulations through surveillance and improvement of the organization itself. The firm's activities in the field of finance.

Further a study made by Viljoen, P. C., & Barac, K. (2015), demonstrated that organizations with a strong internal audit function are better equipped to manage risks effectively. By identifying and addressing risks, internal auditors help organizations avoid costly errors, reduce operational disruptions, and enhance overall risk management capabilities

According to Kamara, A. K. (2023), internal audit functions play a critical role in identifying process inefficiencies and proposing remedial measures. Studies have shown that organizations that actively engage internal audit in process optimization experience improved efficiency, reduced cycle times, and enhanced resource allocation.

A local study entitled “*An Empirical Analysis on Effects of Internal Control System on Tax Revenue Audit Performance; Evidence from Ethiopian Ministry of Revenue South and Southwestern Districts*” which conducted by Tarekegn, Yosef & Gutu (2020), examines the impact of internal control systems on the performance of tax revenue audits in the specific context of the Ethiopian Ministry of Revenue's South and Southwestern Districts. The researchers conducted an empirical analysis to investigate how the effectiveness of internal control systems influences the efficiency and effectiveness of tax revenue audits. They gathered data from the Ministry of Revenue's South and Southwestern Districts and analyzed it using multiple regression analysis on SATA 14 software. The study found that a strong internal control system positively affects the performance of tax revenue audits. When an organization has robust internal control measures in place, it helps to ensure compliance with tax regulations, reduces the likelihood of errors or fraud, and enhances the overall efficiency of the audit process. The researchers observed that effective internal controls lead to improved detection of tax evasion, increased revenue collection, and enhanced audit quality.

Furthermore, the findings of this study have implications for tax authorities and policymakers, suggesting that investing in and strengthening internal control can have significant benefits in terms of tax revenue audit performance. By implementing and maintaining effective internal control mechanisms, tax authorities can improve their ability to identify non-compliance, reduce tax evasion, and ultimately enhance revenue collection.

2.7 Research Gaps

Various studies have been reviewed that provide a comprehensive overview of the role and impact of internal audit functions and internal control systems on organizational performance, risk management, financial performance, and revenue collection. However, several research gaps identified in that few of those studies show positive relationship but none of studies were in the perspective of Addis Ababa Revenue Bureau. Some research gaps that were identified is discussed here.

There is a lack of comparative studies that examine the effectiveness of internal audit functions across different industries, sectors, or countries especially in geographical and methodological context of Addis Ababa City Government Revenue Bureau. Such studies could provide insights into how contextual factors influence the effectiveness of these functions.

While studies like Bett (2014) and Tarekegn, Yosef & Gutu (2020) focus on financial performance and revenue collection, there is limited research on the non-financial impacts of internal audit functions, such as their effect on communication, and ethics. Also the studies do not extensively explore the role of technology (e.g., data analytics, artificial intelligence) in enhancing the effectiveness of internal audit functions. As organizations increasingly adopt digital tools, understanding how technology can be leveraged to improve internal audit processes is crucial.

On the other hand, While Sigilai (2017) highlights the importance of internal controls in preventing fraud, the study is limited on the specific mechanisms through which internal audit functions can detect and prevent fraud. More studies are needed to explore the relationship between internal audit practices and fraud risk management.

Regarding risk management and measurement of internal audit functions the studies shows gaps, in that although Viljoen & Barac (2015) discuss the role of internal audit in risk management, there is a need for more research on how internal audit functions can be integrated with enterprise risk management. Again there is a lack of standardized metrics for measuring the effectiveness of internal audit functions. Developing and validating such metrics could help organizations assess the impact of their internal audit activities more accurately.

Furthermore, while some studies, like Kamara (2023), discuss the role of internal audit in process optimization, there is limited research on the long-term impact of internal audit functions on overall organizational performance, including revenue generating efficiency. On top of this .while Ibrahim (2017) mentions ethical values, there is limited research on how the ethical climate of an organization such as compliance and ethics influences the effectiveness of internal audit functions on enhancing operational efficiency.

2.8 Conceptual Framework

Based on the literature review the following conceptual framework is formed to shows the direction of the flow of the research. Conceptual Framework illustrates the relationship between the independent variables (Risk Assessment and Management, Internal Control Evaluation, Operational Auditing on Information & Communication, Compliance and Ethics

and Continuous Monitoring and Auditing with dependent variable (Enhancing Revenue Collection Efficiency)

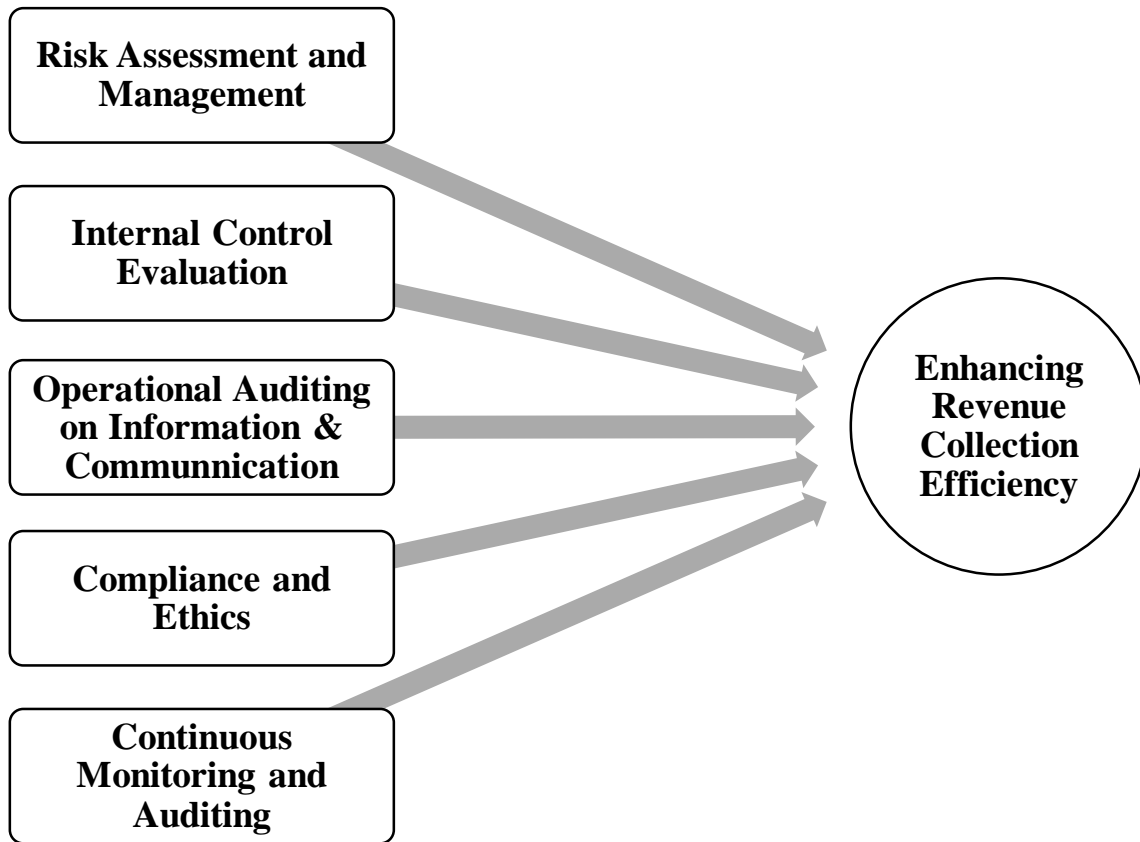


Figure 2.1 Conceptual Framework adopted from Muchoki, (2020) and Tarekegn, Yosef & Gutu, (2020)

2.8.1 Variables

To conduct these study variables were extracted from similar studies carried out in the past. The variables were related to the basic functions of internal audit and revenue collection efficiency.

2.8.1.1 Dependent Variable

The purpose of this study is to examine the effect of Internal Audit Function on Enhancing Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau. Thus Enhancing Revenue Collection Efficiency is the dependent variable.

2.8.1.2 Independent Variables

The independent variables are Risk Assessment and Management, Internal Control Evaluation, Operational Auditing on Information & Communication, Compliance and Ethics and Continuous Monitoring and Auditing.

2.9 Research Hypothesis

As explained previously the main drive of this study is to examine the Effect of Internal Audit Function on Enhancing Revenue Collection Efficiency in Addis Ababa City Government Revenue Bureau. Therefore in order to see the relationship the researcher formulated the following hypothesis.

H_{a1} Risk Assessment and Management has a positive and statistically significant relationship with Enhancing Revenue Collection Efficiency.

H_{a2} There is a positive and statistically significant relationship between Internal Control Evaluation and Enhancing Revenue Collection Efficiency.

H_{a3} Operational Auditing on Information & Communication has a positive and statistically significant relationship with Enhancing Revenue Collection Efficiency.

H_{a4} Compliance and Ethics has a positive and statistically significant relationship with Enhancing Revenue Collection Efficiency.

H_{a5} There is a positive and statistically significant relationship between Continuous Monitoring & Auditing; and Enhancing Revenue Collection Efficiency.

Therefore the multiple regression equation will be;

$$\bullet \text{ ERCE} = \alpha + \beta_1 \text{RAM} + \beta_2 \text{ICE} + \beta_3 \text{OAIC} + \beta_4 \text{CE} + \beta_5 \text{CMA} + \varepsilon$$

Where:

ERCE refer to Enhancing Revenue Collection Efficiency.

RAM refer to Risk Assessment and Management

ICE refer to Internal Control Evaluation

OAIC refer to Operational Auditing on Information & Communication

CE refer to Compliance and Ethics

CMA refer to Continuous Monitoring & Auditing

ε - Stochastic Error term

Chapter Three

3. Research Design and Methodology

3.1 Introduction

The purpose of this chapter is to give an insight into the research design and methodology used by researcher in order to collect data that can be used to answer as well as met study objectives set out in previous chapter. This chapter includes research design of the study, research approach, types and sources of data, target population of the study, sampling techniques, data collection method, soundness of measurement used and method of data analysis.

3.2 Research Design & Approach of the study

Efficiency of internal audit function in supporting organizational revenue collection and collection performance is a topic that requires further research. As a result the study adopts a quantitative research approach through a combination of descriptive and explanatory research design to explore the relationship between internal audit function and revenue collection efficiency. As explained by Kothari (2004, p.2), descriptive research studies are those sorts of researches that have an interested in describing the attribute of a particular individual, and or of a group. *“The interest of descriptive research is the portrayal of the situation as it looks at present.”* Whereas Explanatory research is a type of research design that aims to understand the cause-and-effect relationship between variables. It seeks to explain why certain phenomena occur and how they are related. In the context of this study, explanatory research is employed to investigate the extent to which internal control function enhance revenue collection efficiency within Addis Ababa City Government Revenue Bureau.

3.3 Types and Sources of Data

In these study primary data was used. And a structured questionnaire were employed to collect primary data from both management and staff of Internal Audit, Tax Assessment and tax auditors departments of the Addis Ababa City Government Revenue Bureau. Moreover, secondary data were includes studies already carried out, articles, books, tax audit reports and so on.

3.4 Target Population of the Study

Due to the fact that experts with experience and deep knowledge in the field of the study need to be addressed. Moreover they are closely linked to the revenue collection function and need to be able to obtain detailed information on the main elements of the study. Therefore, the study target all management and staffs, Tarekegn, Yosef & Gutu (2020) with in each of the Internal Audit, Tax Audit and Tax Assessment departments of the Addis Ababa City Government Revenue Bureau. (See Table 3.1). Consequently, according to the data collected by the researcher from the human resources department of the organization in May 2024 there are 902 staffs with those departments. So the sampling frame was the total 902 staffs.

3.5 Sampling Techniques

In order to determine the sample size, the researcher uses a simplified formula for the proportion provided by Yamane (1967:886), which is a simplified formula for the calculation of the sample size. A 95% confidence level, a precision of 5% and 0.5 % variability are used.

$$n = \frac{N}{1 + N(e)^2}$$
$$n = \frac{902}{1+902(0.05)^2} = 277.11$$
$$n = \underline{\underline{278}}$$

Where: N = Total size of Population e = Level of precision n = Sample size

The total determined sample size is proportionally allocated to stratum (See table 3.1) on the bases

of subsequent formula: $nh = n \left(\frac{NH}{N} \right)$

Where; nh = Stratum Allocation

n = Sample Size

NH = Stratum Population

N = Total Population

Or $i = n * pi$

Where: **i** represent Stratums

Pi stand for the proportion of population included in stratum **i** and

n symbolize the whole(total) sample size,

- At the time of questionnaires distribution, sample sizes with decimal numbers are approximated to the closest or nearest number.

Table 3.1: Total Population and Sample Size Determination

No.	Branches	Departments				Population Proportion	Sample Size Based on Population Proportion
		Internal Audit	Tax Audit	Tax Assessment	Total		
1	Head Office	25	73	25	123	14%	37.91
2	Large Tax Payers Brach office	11	71	23	105	12%	32.36
3	Addis Ababa No1 Medium Tax Payers Branch Office	6	56	17	79	9%	24.35
4	Addis Ababa No2 Medium Tax Payers Branch Office	7	59	16	82	9%	25.27
5	Merkato No1 Medium Tax Payers Branch Office	6	48	15	69	8%	21.27
6	Merkato No2 Medium Tax Payers Branch Office	6	45	14	65	7%	20.03
7	Addis Ketema Sub City Small Tax Payers Branch Office	5	24	11	40	4%	12.33
8	Bole Sub City Small Tax Payers Branch Office	5	21	9	35	4%	10.79
9	Kolfe Sub City Small Tax Payers Branch Office	5	20	8	33	4%	10.17
10	Nifas Silk Sub City Small Tax Payers Branch Office	5	23	10	38	4%	11.71
11	Kirkos Sub City Small Tax Payers Branch Office	4	20	9	33	4%	10.17
12	Lideta Sub City Small Tax Payers Branch Office	4	19	8	31	3%	9.55
13	Gulele Sub City Small Tax Payers Branch Office	4	18	9	31	3%	9.55
14	Arada Sub City Small Tax Payers Branch Office	4	24	10	38	4%	11.71
15	Yeka Sub City Small Tax Payers Branch Office	5	22	11	38	4%	11.71
16	Akaki Sub City Small Tax Payers Branch Office	4	25	8	37	4%	11.40
17	Lmi kura Sub City Small Tax Payers Branch Office	4	14	7	25	3%	7.71
Total		<u>110</u>	<u>582</u>	<u>210</u>	<u>902</u>	<u>100%</u>	<u>278</u>

3.6 Data Collection Method

As a researcher mentioned before, to fulfill the objective of the study, primary data were collected through the use of closed-ended questionnaires. The questionnaire surveys are administered to employees within the bureau, and they provide quantitative data on participants' perceptions and experiences with internal audit functions and revenue collection efficiency. The questionnaire is carefully adopted from similar studies carried out in the past to ensure that the questions are clear, concise, and relevant to the research objectives.

3.7 Soundness of Measurement Used

Structured questionnaires was used for the instrument used to collect the primary data and the participants were given the opportunity to fill in the questionnaires themselves. From similar studies carried out in the past, the items related to the internal audit functions and revenue collection have been adopted (Muchoki, 2020), (Tarekegn, Yosef & Gutu, 2020). Furthermore, advisors' and experts' suggestions and comments have been taken into account.

Table 3.2 Reliability Statistics

Variables	Cronbach's Alpha
Risk Assessment and Management	.861
Internal Control Evaluation	.874
Operational Auditing	.855
Compliance and Ethics	.857
Continuous Monitoring and Auditing	.884
Enhancing Revenue Collection Efficiency	.855
Overall (For 6 Variables)	.884

Source: Own survey December 2024

Given that values above 0.70 are typically seen as appropriate for guaranteeing dependability in social scientific research, the scale appears to have strong internal consistency, according to the Cronbach's Alpha values in the table, which range from 0.855 to 0.884 (Field, 2018). The variable that contributes most to the scale's total reliability is Continuous Monitoring and Auditing, which has the highest score (0.884). Despite having the lowest scores (0.855), Operational Auditing and Enhancing Revenue Collection Efficiency nevertheless exhibit sufficient reliability and fall within the acceptable range. Overall, the results of the reliability statistics show that the scale is internally consistent, with each item making a sufficient contribution to the measurement's reliability and being appropriate for use in this study.

Regarding validity that ensure measurement tool or test accurately measures what it is intended to measure, the study use content validity which normally assessed through expert reviews, where subject matter experts evaluate whether the test items are appropriate for measuring the construct of interest. This is evaluated by the study advisor. Additionally, as indicated in Appendix section of this paper (refer Appendix 2.3: KMO and Bartlett's Test with Scree Plot),

a KMO value =.905 ensures that the interactions between variables are strong enough to justify the use of factor analysis, which is foundational for testing construct validity and Bartlett's Test of Sphericity significant p-value ($p < 0.05$) implying that variables are sufficiently correlated to each other for factor analysis, ensuring that the relationships detected by factor analysis reflect real patterns and contribute to construct validity. Collectively, these measures guarantee that the data is appropriate for factor analysis and that the factors extracted will provide valid insights into the constructs under measure (Brown, T. A. (2015).

3.8 Method of Data Analysis

In order to arrive at meaningful conclusions, the data gathered is subjected to a thorough analysis. Statistical methods such as descriptive statistics, correlation analysis and regression analyses were used to analyze quantitative data from the questionnaires. These methods are useful for the identification of patterns, trends and relationship between variables. The statistical analysis allows researchers to quantify the effect of internal audit function on tax revenues and to assess the strength of the relationship. For this purpose research analysis software SPSS version 23 (Statistical Package for social Science) was used.

3.9 Time Horizon of the study

As far as the study period is concerned, it is limited to a single time period. According to Sekaran & Bougie (2016), one shot or cross-sectional studies can be embraced in which data are accumulated only a single time, maybe over a time of days or weeks or months, so as to respond research question.

3.10 Ethical Considerations

In light of the ethical considerations highlighted by Rani, R., & Sharma, R. K. (2012), the researcher meticulously addressed several key points to ensure the integrity and ethical soundness of the study. These measures were designed to uphold the principles of transparency, informed consent, and confidentiality, which are paramount in ethical research practices.

Participants were explicitly informed that the research was conducted as part of the researcher's master's degree thesis. Additionally, they were made aware that the findings could potentially be utilized by Addis Ababa Revenue Bureau to enhance revenue collection

efficiency. This transparency aligns with contemporary ethical standards, which emphasize the importance of clearly communicating the purpose and potential applications of research to participants.

The researcher prioritized obtaining informed consent from each participant, ensuring that this was not treated as a mere procedural formality but as an ongoing, dynamic process. Participants were provided with ample opportunity to weigh the potential risks and benefits of their involvement, ask questions, and make an informed decision. Written consent was secured only after participants had thoroughly considered these factors.

The researcher took deliberate steps to address privacy and confidentiality concerns, ensuring that sensitive information was safeguarded against unauthorized access. Participants were assured that their data would be stored securely on a password-protected personal computer, accessible exclusively to the researcher. Furthermore, the researcher committed to being transparent about any unforeseen findings that might emerge during the study, particularly those that participants were not initially meant to know. This proactive approach to data management and participant communication is consistent with recent ethical guidelines that stress the importance of protecting participant autonomy and privacy in research.

Chapter Four

4. Data Presentation and Analysis

4.1 Introduction

In these section of the thesis the researcher will cover response rate, demography of respondents, descriptive statistics on both dependent and independent variables of the study, correlation analysis, non-parametric tests and result discussions.

4.2 Response Rate

To achieve the objective of the study, the researcher employed purposive sampling, Creswell & Creswell, (2017) to select a sample of respondents from the total population of 902 individuals (Etikan et al., 2016). Then the researcher selected a target sample size of 278 respondents from the organization for the study and distributed 278 questionnaires. Out of this 270 were returned, the rest of the respondents did not return the questionnaire.

Only 270 of the 278 questionnaires that the researcher handed to respondents were returned; the remaining respondents did not return any of the surveys for a various reasons. According to Yesegat (2008), the response rate of 71.8 percent was respectably high given how challenging it is to get data in underdeveloped nations, with Ethiopia being one example. As a result, 97.12% of respondents completed the research. This means that the response rate was higher than it was on average. The research focused on management and staffs with in each of the Internal Audit, Tax Audit and Tax Assessment departments as a demographic, as will be covered in the subsequent section. Each variable was represented by a proxy question in the prepared questionnaire that was given to the respondents.

4.3 Demography of Respondents

As shown blow on Table 4.1 Demographic Characteristics of Respondents, gender distribution of 270 individuals, with 141 males (52.2%) and 129 females (47.8%), indicating a nearly balanced representation between the two genders. Males slightly outnumber females by 4.4%, suggesting a marginally greater proportion of males in the sample. Based on the results there are no missing or invalid data entries in the gender category. The relatively equal gender split

ensures that the sample is not heavily biased toward one gender, which enhances the potential generalizability of the findings that will be derived from this study.

Table 4.1 Demographic Characteristics of Respondents

Demographic Characteristics		Frequency	Percent	Valid Percent	Cumulative Percent
Gender of Respondent	Male	141	52.2	52.2	52.2
	Female	129	47.8	47.8	100.0
	Total	270	100.0	100.0	
Respondent Age Bracket	18-30	86	31.9	31.9	31.9
	31-45	164	60.7	60.7	92.6
	Above 45	20	7.4	7.4	100.0
	Total	270	100.0	100.0	
Respondent Highest level of Educational Qualification	Diploma	6	2.2	2.2	2.2
	First Degree	178	65.9	65.9	68.1
	Master's Degree	86	31.9	31.9	100.0
	Total	270	100.0	100.0	
Respondent Position Currently	Director	2	.7	.7	.7
	Branch Manager	6	2.2	2.2	3.0
	Work Process Administrator	26	9.6	9.6	12.6
	Team Coordinator	41	15.2	15.2	27.8
	Worker	195	72.2	72.2	100.0
	Total	270	100.0	100.0	
Respondent Years of Service in Current Organization	Below 2 years	10	3.7	3.7	3.7
	2-5years	100	37.0	37.0	40.7
	6-9 Years	116	43.0	43.0	83.7
	10-14 years	31	11.5	11.5	95.2
	Above 15years	13	4.8	4.8	100.0
	Total	270	100.0	100.0	

Source: Own survey December 2024

Regarding age distribution of respondents, a significant concentration lies in the 31-45 age range, which represents 164 individuals or 60.7% of the respondents. The 18-30 age group comprises 86 employees (31.9%), while the Above 45 age group has the smallest representation, with only 20 individuals (7.4%). This suggests that the respondents is predominantly composed of employees in the mid-career stage (31-45 years old), with a much smaller proportion of younger (18-30) and older (Above 45) workers. This skewed distribution

emphasizes a relative influence on the interpretation of findings as a result of experience of respondents that are pertinent to the study.

On the other hand Respondent Highest level of Educational Qualification reveals a dominant presence of respondents holding a first degree, which constitutes 65.9% of the total. This suggests that the majority of the population is well-educated, likely possessing a foundational level of higher education that could ensure the reliability of collected data. In contrast, those with a master's degree represent 31.9%, indicating a significant segment of the population has pursued further education beyond the undergraduate level. Meanwhile, only 2.2% hold a diploma, suggesting that lower educational qualifications are minimally represented in this study. This educational distribution highlights a highly educated demographic, which could be important for understanding the questionnaires and implications of the study's findings.

Table 4.1 also shows the distribution of respondents across different job Positions within the organization. Based on the result the largest group consists of workers, who make up 195 employees, or 72.2% of the respondents, indicating that the majority of the respondents are in operational or technical roles. The next largest category is Team Coordinators with 41 employees (15.2%), and then Work Process Administrators, with 26 employees (9.6%), followed by Branch Managers, comprising 6 employees (2.2%). The smallest group is Directors, with just 2 individuals (0.7%). This distribution highlights a hierarchical structure with a significant emphasis on lower-level operational staff, while managerial and executive positions make up a very small portion of the respondents which a reflection of the total population.

Finally, the above table presents respondent years of service in current organization or experience distribution of respondents. As indicated the majority have substantial tenure within their companies, with the largest group (43%) having between 6 to 9 years of experience. This suggests a well-established workforce that likely possesses considerable organizational knowledge and expertise which is guarantee the gathered data reliable to the study. Following this, 37% of respondents fall within the 2 to 5 years of experience grouping, indicating a significant portion of relatively newer employees who may bring fresh perspectives and adaptability. In contrast, those with less than 2 years of experience represent only 3.7%, while 11.5% have between 10 to 14 years, and 4.8% has over 15 years of experience. This distribution

highlights a respondents that is predominantly composed of individuals with moderate to significant experience, which is crucial for study.

4.4 Descriptive Statistics

In this part, an analysis is presented regarding the effect of internal audit function on enhancing revenue collection efficiency at Addis Ababa City Government Revenue Bureau. A descriptive statistical examination of the variables is conducted, utilizing mean, standard deviation and coefficient of variation (CV). The analysis encompasses internal audit function and their relationship to revenue collection efficiency. The results from the questionnaire were analyzed in relation to the specific items associated with these variables. To capture the level of agreement among respondents, a five-point Likert scale was employed (1 - Strongly Disagree, 2 - Disagree, 3 - Neutral, 4 - Agree, and 5 - Strongly Agree). The interpretation of these results follows the classification outlined by Zaidatol (2012): Mean = 1.00 – 2.33 indicates Low, Mean = 2.34 – 3.67 indicates Moderate, and Mean = 3.68 – 5 indicates High. In reference to the decision rule established by Joshka (2014), the coefficient of variation (CV) is calculated as follows: $CV = \text{standard deviation} / \text{mean}$. According to Joshka (2014), a CV of 1 or greater indicates a relatively high level of variation, whereas a CV of less than 1 suggests low variation. Consequently, distributions with a coefficient of variation exceeding 1 are classified as high variance, while those with a CV below 1 are deemed to exhibit low variance.

Table 4.2 Descriptive Statistics

Variables	N	Mean	Std. Deviation
Risk Assessment and Management	270	3.1185	.64654
Internal Control Evaluation	270	3.0644	.61493
Operational Auditing	270	3.1104	.62379
Compliance and Ethics	270	3.0696	.69809
Continuous Monitoring and Auditing	270	3.0926	.65545
Enhancing Revenue Collection Efficiency	270	3.6123	.59906
Valid N (listwise)	270		

Source: Own survey December 2024

As indicated in the above table the Risk Assessment and Management variable has a mean of 3.1185 and a standard deviation of 0.64654. The relatively high standard deviation compared to the mean suggests moderate variability within the data. This implies that while the average value in Risk Assessment and Management is fairly stable, there is a notable degree of fluctuation in the individual data points. Based on the result of $CV = 0.2073$ which is low variation and consistency of Risk Assessment and Management could be considered moderate, with potential for improvement in reducing variability.

Regarding Internal Control Evaluation, the mean is 3.0644 and the standard deviation is 0.61493. The standard deviation here is slightly lower than that of Risk Assessment and Management, indicating there is somewhat lower degree of variability in Internal Control Evaluation. However, the average response or collected data is still subject to noticeable fluctuations, suggesting moderate consistency. With a $CV = 0.2007$ close to Risk Assessment and Management, Internal Control Evaluation shows a similar distribution but slightly less spread. The variability reflect a moderate perception of respondents to the items with in the variable, but efforts could be made to reduce the range of outcomes and improve predictability, especially in settings Internal Control Evaluation is crucial.

On the other hand, Operational Auditing has a mean value of 3.1104 and a standard deviation of 0.62379. Similar with Risk Assessment and Management and Internal Control Evaluation, Operational Auditing shows moderate variability, as the standard deviation is quite similar to the other values analyzed above. The mean is also close to the others, indicating a consistent average. Operational Auditing's performance or outcomes appear to be moderately consistent with low variation, $CV = 0.2005$, indicating Operational Auditing is moderately perceived by the respondents.

Table 4.2 also indicates mean and standard deviation value for the item list in Compliance and Ethics variable, consequently the mean is 3.0696 and the standard deviation is 0.69809, the highest standard deviation of all variables. This indicates a higher level of variability compared to the other variables with in the study, suggesting that the Compliance and Ethics variable values is more spread out and less predictable. Although the variable has high variations compared to other variable with the study, it has still low coefficient of variation ($CV = 0.2274$) (Joshka, 2014).

The Continuous Monitoring and Auditing variable was among the predicting variables of the study that has a mean value of 3.0926 and a standard deviation of 0.65545. The relatively high standard deviation here, similar to Risk Assessment and Management, suggests moderate to high variability in the data. This indicates that individual values in Continuous Monitoring and Auditing are scattered more widely around the mean, suggesting moderate inconsistency. While the mean is fairly stable, there is low coefficient of variation (CV= 0.2119).

For ERCE, the mean is 3.6244 and the standard deviation is 0.6005. This dataset has the lowest standard deviation among the rows, indicating the least amount of variability relative to the mean. The data for ERCE is more consistent and predictable compared to the others. While the mean is higher, the relatively lower standard deviation suggests that the data points are tightly clustered around the average, making ERCE the most stable and reliable of the datasets in terms of consistency. However, depending on the application, further investigation into why ERCE is more consistent could offer insights for optimizing other datasets.

Finally, the descriptive analysis produced by the Statistical Package for Social Science (SPSS) for the dependent variable Enhancing Revenue Collection Efficiency indicates a combined mean value of 3.6123 with a standard deviation 0.59906, signifying the least amount of variability relative to the mean and the standard deviation showed a low coefficient of variance, $CV = 0.1658$ (Joshka, 2014). The relatively lower standard deviation suggests that the data points are tightly clustered around the average, making Enhancing Revenue Collection Efficiency the most stable and reliable. Consistent with the earlier variables, when we compare the mean result of 3.6123 to our reference point (Zaidatol, 2012), we find that this mean score lies in the moderate range, signifying that any result less than 3.67 is regarded as moderate. From this, the researcher concludes that the respondents view internal audit function in Enhancing Revenue Collection Efficiency is moderate requiring effort to improve.

4.5 Tests of Distribution of Data

Testing the distribution of data prior to further analysis is crucial for ensuring the validity and suitability of statistical tests. Statistical theory indicates that numerous commonly utilized parametric tests (such as t-tests and ANOVA) depend on the assumption that the data adheres to a normal distribution. When this assumption is not met, the outcomes of these tests may be erroneous or deceptive. Additionally, the resilience of parametric tests against breaches of

normality is often influenced by factors including sample size and the extent of deviation from normality. Particularly, small sample sizes can lead to skewed results if normality is not achieved (Field, 2013). Assessing the distribution enables researchers to select the proper statistical tests whether parametric or non-parametric tailored to the data's characteristics, thereby preventing errors.

Table 4.3 Tests of Normality

Variables	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Risk Assessment and Management	.111	270	.000	.963	270	.000
Internal Control Evaluation	.134	270	.000	.944	270	.000
Operational Auditing	.136	270	.000	.933	270	.000
Compliance and Ethics	.106	270	.000	.964	270	.000
Continuous Monitoring and Auditing	.141	270	.000	.966	270	.000
Enhancing Revenue Collection Efficiency	.156	270	.000	.932	270	.000

a. Lilliefors Significance Correction

Source: Own survey December 2024

The outcomes from both the Kolmogorov-Smirnov and Shapiro-Wilk tests reveal that all variables show significant departures from normality. The Kolmogorov-Smirnov statistics vary from .106 to .156, with p-values of .000, while the Shapiro-Wilk statistics fall between .933 and .966, also presenting p-values of .000 for all variables, which indicates that the null hypothesis of normality is rejected ($p < .05$). These results imply that none of the variables' distributions follow a normal distribution, suggesting that non-parametric statistical approaches are necessary for subsequent analysis (Razali & Wah, 2011).

When evaluating data derived from Likert scales, which are generally ordinal and may not adhere to a normal distribution, using ordinal regression or non-parametric regression methods tends to be more suitable than conventional linear regression. By their very nature, Likert scale data signifies ordered categories (e.g., Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree) rather than continuous variables, which make it unsuitable for linear regression that presupposes normal distribution and continuous outcomes (Pallant, 2020).

For data that is not normally distributed and comes from Likert scale items, ordinal logistic regression (also referred to as proportional odds regression) is typically the preferred approach.

This regression technique is specifically tailored for ordinal dependent variables, like responses from a Likert scale, where the outcome variable has a logical order but the gaps between the categories are not considered equal (Field, 2013). This method enables the exploration of the relationship between the ordinal outcome and one or more independent variables, without making assumptions about normal distribution or uniform intervals between the categories of the Likert scale.

4.6 Correlation Analysis

Correlation analysis is a statistical technique employed to evaluate the strength and direction of the relationship between two or more variables. The main objective of correlation is to measure how closely two variables move in relation to each other. A positive correlation suggests that when one variable rises, the other tends to rise as well, whereas a negative correlation indicates that an increase in one variable usually leads to a decrease in the other. Correlation coefficients can range from -1 to +1, with values that are closer to either extreme reflecting stronger relationships, or values that are nearer to zero denoting weak or no correlation (Field, 2013).

Spearman's rho is a statistical tool that is used to measure the strength and direction of a monotonic relationship between two variables. Unlike Pearson's correlation, which requires the assumption of a linear relationship and continuous data, Spearman's rho is applicable to ordinal data or cases where the relationship is monotonic but not necessarily linear (Field, 2013). One of the primary benefits of Spearman's rho is its flexibility in handling non-parametric data, including situations where distributions are skewed. The method works by ranking the values of the data and examining how the rankings of the two variables align. This makes Spearman's rho especially valuable when dealing with outliers or when data does not meet the assumptions of normality, making it a more robust alternative in many practical situations, particularly in social science research (Dancey & Reidy, 2017).

The interpretation of Spearman's rho is based on similar principles as Pearson's correlation but is specifically applied to monotonic relationships, rather than those that are strictly linear. The Spearman correlation coefficient ranges from -1 to +1, with +1 representing a perfect positive monotonic relationship (both variables increase together), -1 signifying a perfect negative monotonic relationship (as one variable increases, the other decreases), and 0

indicating the absence of a monotonic relationship (Field, 2013). Typically, correlations between 0.3 and 0.5 (or -0.3 to -0.5) are considered moderate, while values exceeding 0.5 or falling below -0.5 indicate a strong correlation (Dancey & Reidy, 2017).

Table 4.4 Correlations

			RAM	ICE	OA	COET	CMA	ERCE
Spearman's rho	RAM	Correlation Coefficient	1.000					
		Sig. (2-tailed)	.					
		N	270					
	ICE	Correlation Coefficient	.534**	1.000				
		Sig. (2-tailed)	.000	.				
		N	270	270				
	OA	Correlation Coefficient	.689**	.522**	1.000			
	Sig. (2-tailed)	.000	.000	.				
	N	270	270	270				
COET	Correlation Coefficient	.599**	.514**	.663**	1.000			
	Sig. (2-tailed)	.000	.000	.000	.			
	N	270	270	270	270			
CMA	Correlation Coefficient	.343**	.334**	.485**	.417**	1.000		
	Sig. (2-tailed)	.000	.000	.000	.000	.		
	N	270	270	270	270	270		
ERCE	Correlation Coefficient	.586**	.545**	.645**	.573**	.549**	1.000	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.	
	N	270	270	270	270	270	270	

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

Source: Own survey December 2024

It is important to note that Spearman's rho measures the strength of a monotonic relationship, which may not be linear. Therefore, even though a high Spearman's rho suggests a consistent directional relationship between the ranks of the two variables, it does not imply a linear connection. Researchers should be mindful that correlation does not imply causation; that is, the presence of a correlation does not necessarily mean one variable causes the other (Frost, 2020). For more thorough investigation into causal links, further analyses such as regression modeling or experimental designs are recommended (Cohen et al., 2013).

Based on the Spearman's rho correlation table, the researcher observe the relationships between the Enhancing Revenue Collection Efficiency (dependent variable in the study) and five independent variables: Risk Assessment and Management, Internal Control Evaluation, Operational Auditing, Compliance and Ethics, and Continuous Monitoring and Auditing. According to Dancey and Reidy (2017), Spearman's rho is a non-parametric measure of the strength and direction of a monotonic relationship between two variables, meaning it assesses whether one variable tends to increase or decrease as the other does, but not necessarily in a linear fashion. Spearman's rho values range from -1 to +1, with values closer to +1 indicating a stronger positive relationship, and values closer to -1 indicating a stronger negative relationship.

The Spearman's rho between Enhancing the Revenue Collection Efficiency and Risk Assessment and Management is 0.586, which suggests a moderate positive monotonic relationship. This means that as enhancing the Revenue Collection Efficiency increases, Risk Assessment and Management tends to increase as well. A coefficient of 0.586 indicates a moderate level of correlation, which is considered statistically significant given the p-value of 0 ($p < 0.01$). This indicates that the observed relationship between ERCE and RAM is highly unlikely to have occurred by chance. The sample size for this correlation is 270, meaning that the correlation is based on a relatively large number of observations, which helps ensure the reliability of the results.

On the other hand The Spearman's rho for Enhancing the Revenue Collection Efficiency and Internal Control Evaluation is 0.545, indicating a moderate positive monotonic relationship. This result implies that as Revenue Collection Efficiency increases, Internal Control Evaluation tends to increase as well. Similar to the previous correlation, the p-value is 0 ($p < 0.01$), suggesting that this relationship is statistically significant. The finding further confirming that the correlation is unlikely to have arisen by random chance.

The correlation coefficient between Enhancing the Revenue Collection Efficiency and Operational Auditing is 0.645, suggesting a moderate to strong positive association. This implies that as Revenue Collection Efficiency rises, Operational Auditing tends to rise too. A coefficient of 0.645 indicates a relatively strong link, revealing that Revenue Collection Efficiency and Operational Auditing exhibit a clearer monotonic relationship when compared

to the other predicting variables. The p-value for this correlation is also 0 ($p < 0.01$), which verifies the statistical importance of the relationship.

Whereas, the Spearman's rho for Enhancing Revenue Collection Efficiency, and Compliance and Ethics is 0.573, suggesting a moderate positive monotonic association. As Revenue Collection Efficiency increases, Compliance and Ethics is likely to increase as well. This correlation is also statistically significant, with a p-value of 0 ($p < 0.01$), indicating that the relationship is highly improbable to be a result of random chance.

The other dependent variable examined was Continuous Monitoring and Auditing. The correlation coefficient of 0.549 between Enhancing Revenue Collection Efficiency and Continuous Monitoring and Auditing, as shown in the table, indicates a moderate positive association. Similar to the other correlations, this finding reveals that an increase in ERCE is associated with an increase in Continuous Monitoring and Auditing. The p-value ($p < 0.01$) confirms that this correlation is statistically significant and not due to chance.

To sum up, all correlations between dependent variable (Enhancing Revenue Collection Efficiency) and the other independent variables are positive and statistically significant at the 0.01 level, as indicated by the p-values of ($p < 0.01$) for all correlations. The correlation coefficients most of the relationships falling within the moderate range. The positive correlations suggest that as Revenue Collection Efficiency increases, all the other independent variables tend to increase as well, reflecting a consistent, positive monotonic relationship across these variables. According to Dancey and Reidy (2017), these results highlight meaningful, statistically significant associations, which are unlikely to be due to random chance, and the relatively large sample size further strengthens the validity of the findings.

4.7 Ordinal Logistic Regression

As stated earlier for data that is not normally distributed and comes from Likert scale items, ordinal logistic regression (also referred to as proportional odds regression) is typically the preferred approach. This regression technique is specifically tailored for ordinal dependent variables, like responses from a Likert scale, where the outcome variable has a logical order but the gaps between the categories are not considered equal (Field, 2013). This method enables the exploration of the relationship between the ordinal outcome and one or more independent variables, without making assumptions about normal distribution or uniform

intervals between the categories of the Likert scale. In this section the researcher conduct an Ordinal Logistic Regression between the study dependent variable which is Enhancing Revenue Collection Efficiency and other predicting/independent variables (Risk Assessment and Management, Internal Control Evaluation, Operational Auditing, Compliance and Ethics, and Continuous Monitoring and Auditing) using SPSS and the results were discussed here under.

Table 4.6 Model Fitting Information

Model Fitting Information				
Model	-2 Log Likelihood	Chi-Square	Df	Sig.
Intercept Only	1006.216			
Final	740.453	265.763	5	.000

Link function: Logit.

Source: Own survey December 2024

The Model Fitting Information table shows a Chi-Square value of 265.763 along with a p-value of 0.000 ($p < 0.05$). The reduction in the -2 Log Likelihood from 1006.216 to 740.453 indicates that the final model fits the data much better than the model that only includes the intercept. This enhanced fit could be attributed to the addition of relevant variables that more effectively account for the outcome, which is consistent with established standards in model evaluation (Hosmer et al., 2013).

Table 4.7 Omnibus Test

Omnibus Test^a		
Likelihood Ratio Chi-Square	Df	Sig.
265.763	5	.000

Dependent Variable: ERCE

Model: (Threshold), RAM, ICE, OA, COET, CMA

a. Compares the fitted model against the thresholds-only model.

Source: Own survey December 2024

The Omnibus Test verifies the overall significance of the final model. As demonstrated in the table, the Likelihood Ratio Chi-Square statistic of 265.763, with 5 degrees of freedom and a p-value of .000, suggests that the final model is extremely significant, as the predictors (Model: (Threshold), RAM, ICE, OA, COET and CMA) together provide a significantly better fit to the data. The result highlights the relevance of the predictors incorporated in the final model,

indicating that they play a significant role in accounting for the differences observed in the outcome variable. The findings imply that the predictors within the model are substantial and warrant their inclusion, thereby improving the model's predictive capabilities (Menard, 2010).

Table 4.8 Goodness-of-Fit

Goodness of Fit^a

	Value	df	Value/df	Sig.
Deviance	740.453	1039	.713	1.000
Scaled Deviance	740.453	1039		
Pearson Chi-Square	2266.752	1039	2.182	.000
Scaled Pearson Chi-Square	2266.752	1039		
Log Likelihood ^b	-370.227			
Akaike's Information Criterion (AIC)	762.453			
Finite Sample Corrected AIC (AICC)	763.477			
Bayesian Information Criterion (BIC)	802.036			
Consistent AIC (CAIC)	813.036			

Dependent Variable: ERCE

Model: (Threshold), RAM, ICE, OA, COET, CMA

a. Information criteria are in smaller-is-better form.

b. The full log likelihood function is displayed and used in computing information criteria.

Source: Own survey December 2024

Table 4.8 shows Goodness of fit tests that check how well the model matches the observed data. The Pearson Chi-Square statistic (2266.752) has a p-value of 0.000 suggesting the model is poor fit. On the other hand, the Deviance Chi-Square statistic (740.453) has a p-value of 1.000 hinting that this model fits the data well, based on this test. Hosmer et al. (2013) say that the Deviance statistic in ordinal regression uses the likelihood ratio test and compares the model's fit to a saturated model (which fits the data). A Deviance statistic with a p-value of 1.000 means the model fits the data extremely well because the fitted model and the saturated model are very similar. The Deviance test is more trustworthy and researchers often prefer it to evaluate a model's fit (Agresti 2018). So, a high p-value means the observed data and the fitted model aren't significantly different.

Table 4.9 Pseudo R-Square

Pseudo R-Square	
Cox and Snell	.626
Nagelkerke	.642
McFadden	.264

Link function: Logit.

Source: Own survey December 2024

As the table above shows pseudo R-squared values offer a way to assess how well the model explains the variance in the Enhancing Revenue Collection Efficiency. Similar to the adjusted R-squared in linear regression, the Nagelkerke pseudo R-squared adjust to the limitations of the Cox and Snell measure. It stands a bit higher at 0.642 pointing to a somewhat better fit. This suggests the predictor variables account for about 64.2% of the variance in the dependent variable (Enhancing Revenue Collection Efficiency). On the other hand, the remaining 35.8% of variability is explained by the variables not included in the model. This implies that while the model shows a decent level of fit, it might be worth looking into more variables or interactions to boost its ability to explain the outcome (Hosmer & Lemeshow 2013).

Table 4.10 Test of Parallel Lines

Test of Parallel Lines^a				
Model	-2 Log Likelihood	Chi-Square	Df	Sig.
Null Hypothesis	740.453			
General	726.594 ^b	13.860 ^c	25	.964

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. Link function: Logit.

b. The log-likelihood value cannot be further increased after maximum number of step-halving.

c. The Chi-Square statistic is computed based on the log-likelihood value of the last iteration of the general model. Validity of the test is uncertain.

Source: Own survey December 2024

The result above indicates a significance value ($p = 0.847$) suggesting that the proportional odds or parallel lines assumption, the most important assumption in ordinal regression is not

violated. As the p-value is much higher than the usual significance threshold of 0.05, it suggests that the parallel lines assumption holds true in this study. As explained by Agresti (2018), the link between the predictors and the outcome variable stays the same across the outcome's levels supporting the use of an ordinal regression model with parallel lines for this study.

Table 4.11 Parameter Estimates

Parameter Estimates											
Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test			Exp(B)	95% Wald Confidence Interval for Exp(B)		
			Lower	Upper	Wald Chi-Square	df	Sig.		Lower	Upper	
Threshold	[ERCE=2.67]	11.694	.9880	9.758	13.630	140.102	1	.000	119845.033	17284.962	830943.799
	[ERCE=3.00]	12.844	1.0247	10.836	14.852	157.107	1	.000	378486.289	50794.372	2820231.133
	[ERCE=3.33]	14.302	1.0810	12.183	16.421	175.054	1	.000	1626409.293	195487.447	13531340.378
	[ERCE=3.67]	16.401	1.1777	14.093	18.709	193.942	1	.000	13270277.738	1319527.296	133457088.566
	[ERCE=4.00]	17.441	1.2220	15.046	19.837	203.701	1	.000	37557070.470	3423677.838	411993653.889
	[ERCE=4.33]	18.898	1.3107	16.329	21.467	207.879	1	.000	161237202.217	12352466.434	2104635176.862
RAM	.806	.2788	.259	1.352	8.353	1	.004	2.238	1.296	3.865	
ICE	.843	.2527	.348	1.339	11.131	1	.001	2.324	1.416	3.813	
OA	.925	.3166	.304	1.545	8.529	1	.003	2.521	1.355	4.690	
COET	.900	.2572	.396	1.404	12.235	1	.000	2.459	1.485	4.071	
CMA (Scale)	1.407	.2223	.971	1.843	40.048	1	.000	4.084	2.641	6.314	

Dependent Variable: ERCE

Model: (Threshold), RAM, ICE, OA, COET, CMA

a. Fixed at the displayed value.

Source: Own survey December 2024

Table 4.11 provides Parameter Estimates results for all the predictors in this study. The first independent variable is Risk Assessment and Management with a coefficient of 0.806 and a significance value of 0.004, demonstrates a statistically significant positive relationship with the Enhancing Revenue Collection Efficiency that implying that for everyone unit in Risk Assessment and Management there is a predicted increase of .806 in the log odds being in higher level of Enhancing Revenue Collection Efficiency. The odds ratio of Risk Assessment and Management indicates that the odds of being in higher level on Enhancing Revenue Collection Efficiency increase by factor of 2.238 for one unit increase in Risk Assessment and Management.

Similarly, Internal Control Evaluation shows a coefficient of 0.833, which is statistically significant with a (p= 0.001) which infers a unit increase in Internal Control Evaluation results in an increase of 0.843 of being in higher level of Enhancing Revenue Collection Efficiency. The associated odds ratio of 2.324 suggests that an increase of one unit in Internal Control Evaluation is linked to a factor of 2.324 increase in the odds of the event occurring or being in higher level on Enhancing Revenue Collection Efficiency.

Since all the remaining predictors are statistically significant and has a positive relationship with the Enhancing Revenue Collection Efficiency the same interpretation is given to all. More important here is that Continuous monitoring and auditing shows a coefficient of 1.407 with a ($p=.000$) and odds ratio of ($\text{Exp}(B)=4.084$) making it perhaps the most significant predictor in this model in that the highest variation in Enhancing Revenue Collection Efficiency is caused by Continuous Monitoring and Auditing.

Table 4.12 Summary of Hypothesis and Results

Hypothesis	Parameter Estimates B Output	Odds Ratio	Results
H_{a1} Risk Assessment and Management has a positive relationship with Enhancing Revenue Collection Efficiency.	(B=.806, $p<0.01$)	(Exp(B) = 2.238)	Accept
H_{a2} There is a positive relationship between Internal Control Evaluation and Enhancing Revenue Collection Efficiency.	(B=.843, $p<0.01$)	(Exp(B) = 2.324)	Accept
H_{a3} Operational Auditing on Information & Communication has a positive relationship with Enhancing Revenue Collection Efficiency.	(B=.925, $p<0.01$)	(Exp(B) = 2.521)	Accept
H_{a4} Compliance and Ethics has a positive relationship with Enhancing Revenue Collection Efficiency.	(B=.900, $p<0.01$)	(Exp(B) = 2.459)	Accept
H_{a5} There is a positive relationship between Continuous Monitoring & Auditing; and Enhancing Revenue Collection Efficiency.	(B=1.407, $p<0.01$)	(Exp(B) = 4.084)	Accept

4.8 Results and Discussions

In line with the main objective of the study which was examining the Effect of internal audit function on enhancing revenue collection efficiency at Addis Ababa City Government Revenue Bureau; associated hypothesis formulated and the attribute of data collected, an ordinary regression analysis were conducted. In examining each of the internal audit function as shown in Parameter Estimates (Table 4.11), all of the explanatory variables has a positive and significant effect on enhancing revenue collection efficiency. Consequently, as shown in the above table all formulated hypothesis were accepted.

The empirical literature review section of this study underscores a significant alignment with the findings of Viljoen and Barac (2015), who posited that organizations endowed with a robust internal audit function are better equipped at managing risks with greater efficiency. Specifically, the presence of a well-structured internal audit function enables organizations to systematically identify, assess, and mitigate potential risks, thereby minimizing the likelihood of costly errors and operational disruptions. Furthermore, such a function enhances the organization's overall risk management framework, contributing to a more resilient and sustainable operational environment.

Again in support of this study, the study conducted by Kikonyogo (2017) at the Kampala Capital City Authority further substantiates the critical role of internal audit functions. Kikonyogo's research revealed a statistically significant and positive relationship between key components of internal control such as, control activities, control environment, monitoring and the efficiency of revenue collection. This suggests that organizations with well-implemented internal control mechanisms are better positioned to optimize their revenue streams, thereby improving financial stability and performance.

Similarly, the work of Bett (2014) lends additional support to the premise that a strong internal audit function is instrumental in enhancing improved financial performance. Bett's study identified a positive correlation between the existence of a comprehensive internal audit functions and improved financial performance. This implies that organizations that prioritize and invest in their internal audit capabilities are more likely to achieve superior financial results, as these functions contribute to greater transparency, accountability, and operational efficiency.

Study made by Muchoki, (2020) has also maintain the findings of this study in that it concluded “internal control systems (control environment, risk assessment, control activities, information communication and monitoring) have a combined positive and significant effect on the level of revenue collection. Moreover, alike this study a local study entitled “An Empirical Analysis on Effects of Internal Control System on Tax Revenue Audit Performance; Evidence from Ethiopian Ministry of Revenue South and Southwestern Districts" which conducted by Tarekegn, Yosef & Gutu (2020) assert that a strong internal control system positively affects the performance of tax revenue audits.

To sum up the above studies reinforce the assertion that a well-established internal audit function is not merely a compliance requirement but a strategic asset that significantly strengthens an organization's ability to manage risks, optimize operations, and enhance financial performance. The convergence of these findings across diverse contexts and geographies underscores the universal relevance and importance of internal audit function in contemporary organizational management.

Chapter Five

5. Summary of Major Finding, Conclusion, Recommendation and Direction for Future Research

5.1 Introduction

This the final section of this study recap the entire parts in a brief way. The chapter contains an outline & summary of major finding, conclusion, recommendation, and ends up with direction for future researches.

5.2 Summary of Major Finding

The main emphasis of this study was examining the Effect of internal audit function on enhancing revenue collection efficiency at Addis Ababa City Government Revenue Bureau. In doing so, the study considered some variables measured as alternative to Risk Assessment and Management, Internal Control Evaluation, Operational Auditing, Compliance and Ethics, and Continuous Monitoring and Auditing. Three theories explaining the link between internal audit function and efficient revenue collection are used in a theoretical analysis of this study. These include Agency Theory, the Resource-Based View Theory, and the Stakeholder Theory.

In conducting this study primary data, which was collected through structured questionnaire from a sample of respondents were used. The analysis was conducted by employing a statistical tool - SPSS version 23 (Statistical Package for Social Science). To analyze data a quantitative approach and a combination of explanatory and descriptive research design was employed. In doing descriptive analysis a combined mean, standard deviation and coefficient of variance (CV) values were used. Once test of instrument soundness checked; respondent demographic attribute and a descriptive statistic on variable analyzed, a tests for distribution of data was conducted. The result for tests of distribution of data revealed that data were not normally distributed. For this reason the researcher preferred to employ a Spearman's rho correlation and ordinal regression analysis.

A Spearman's rho correlation results implies all correlations between dependent variable (Enhancing Revenue Collection Efficiency) and the other independent variables are positive and statistically significant at the 0.01 level, as indicated by the p-values of ($p < 0.01$) for all

correlations. The correlation coefficients most of the relationships falling within the moderate range. The positive correlations suggest that as Revenue Collection Efficiency increases, all the other independent variables tend to increase as well, reflecting a consistent, positive monotonic relationship across these variables.

The Model Fitting Information shows a Sig of 0.000 ($p < 0.05$) indicates that the final model fits the data much better than the model that only includes the intercept. On the other hand, based on the Deviance Chi-Square statistic result (p-value of 1.000) this model fits the data well. Further, the Nagelkerke pseudo R-squared points 0.642 which suggests the predictor variables collectively account for about 64.2% of the variance in the dependent variable (Enhancing Revenue Collection Efficiency). On the other hand, the remaining 35.8% of variability is explained by the variables not included in the model.

Finally, the Parameter Estimates output of ordinal regression analysis indicates the internal audit function (all of the explanatory variables that are Risk Assessment and Management, Internal Control Evaluation, Operational Auditing, Compliance and Ethics, and Continuous Monitoring and Auditing) has a combined positive and significant effect on enhancing revenue collection efficiency. Therefore, all formulated hypothesis were accepted.

5.3 Conclusion

This study focused on investigating how does internal audit function affect revenue collection efficiency enhancement at Addis Ababa City Government Revenue Bureau. In doing so, the study highlights that internal audit function is an integral part of organizations, which provide an independent and objective assurance on the effectiveness of risk management, internal control, Monitoring, and governance processes. Further, this study overviews various studies have been conducted aiming to understand the Effect internal audit function has on organizations revenue generation efficiency. Therefore, the objectives of this study was successful and based on the results of the study the researcher have made conclusion.

The output from the parameter estimates reveal predictors, are significant, suggesting that the parameters tested are highly statistically significant. Consequently, this study found and concluded that internal audit function has a strong and positive Effect s on enhancement of revenue collection efficiency. More specifically, the results indicate that internal audit

function, including Risk assessment and management, internal control evaluation, operational auditing, compliance and ethics, and continuous monitoring and auditing, exert a significant role in enhancing the organization revenue collection efficiency. Particularly, Continuous monitoring and auditing shows a highest coefficient of 1.407 with a (Sig=.000) and odds ratio of (Exp(B)=4.084) making it the highly significant predictor and most relevant for enhancement of Enhancing Revenue Collection Efficiency within the organization.

In general this study signify positive Effect of internal audit function on enhancing operational efficiency in that through vigorous involvement in risk management, internal control evaluation, compliance, and continuous monitoring and auditing it contribute to improved organizational performance, reduced risks and high operational efficiency in revenue generating activity of Addis Ababa City Government Revenue Bureau.

5.4 Recommendation

Internal audit function plays a crucial role in ensuring the integrity, reliability, and efficiency of an organization's operations. Furthermore, as we noted in literature internal audit enhancing governance, strengthening risk management, and ensuring compliance. Similarly, it is an indispensable component of modern organizations which contributing to their success, risk management, and enhancing the efficiency tax collection. In line with this and based on the implication revealed by the study's finding the researcher suggest the subsequent recommendations.

5.3.1 Theoretical Contribution

The fact that internal audit has a significant role in operational efficiency in the organizations activities such as ensuring there is a clearly defined and appropriate objectives for the organization and relevant risks that affect the achievement of the organizational goals are identified and analyzed. With this regard this study align with agency and resource-based view theories in that based on the finding Addis Ababa City Government Revenue Bureau shall reduce agency cost and identifying process inefficiencies through conducting risk assessments and also monitoring and controlling. Though the results of this study show the organizations is n a good track the strength of the effect exerted by finding is not satisfactory or moderate

requiring additional work on Adherence to professional standards and independence further to enhance the contributions of the internal audit function on revenue collection efficiency.

5.3.2 Practical Implications

The study also forward some practical implications for Addis Ababa City Government Revenue Bureau that will elevate the contribution internal audit in enhancing revenue collection efficiency.

- ☛ The organization shall focus on developing robust risk management frameworks in that internal audit department shall execute systematic risk assessments that evaluate the likelihood and impact of various risks that are related to the organizations main objective which is revenue collection. Assessing risk is vital for identifying potential resource misappropriation or fraud. Therefore, in order to allocate resources in effective manner risk management and prioritizing high risk area is crucial.
- ☛ Addis Ababa City Government Revenue Bureau shall consider strengthening the implementation of vigorous internal control and evaluation system for maintaining and enhancing their efficiency in supporting revenue collection.
- ☛ Internal audit function shall embrace mechanism that enhance compliance and monitoring within tax administration. This may include comprehensive audit of revenue collection process and placing follow up actions that will ensure noncompliance activities are mitigated and tax policies, procedures, and practices are implemented.

Furthermore, Addis Ababa City Government Revenue Bureau shall work on periodic evaluations of the efficiency of internal control personnel in carrying out the duties assigned. On top of this a regular workshops, training programs, and awareness campaigns which confirm that they have the necessary skills and knowledge for escalating understanding of the internal audit staff is vital. Additionally, integration of technology into internal audit processes that will equip them with the skills to use audit software and analytical tools effectively. Finally, it is imperative for Addis Ababa City Government Revenue Bureau to recognize the significance of the internal audit function and allocate sufficient resources to strengthen its capability, thereby promoting service quality, risk management; fraud reduction; resource optimization; ensuring continuous monitoring and control, and compliance in the tax administration system so as to enhance revenue collection efficiency.

5.5. Direction for Future Research

In terms of time horizon this study tends to be cross-sectional, providing limited insights into the long-term effects of internal audit function on enhancing revenue collection efficiency. Therefore, to gain a comprehensive understanding of the Effect of the internal audit function in improving revenue collection efficiency, longitudinal studies are needed to assess the Effect of internal audit activities over time. On the other hand, collected data were self-reported in essence structured questionnaire that was adapted from previous studies were provided to respondents and used for analysis which could possibly present method bias. Additionally, this study shows 35.8% of variability in the dependent variable is explained by the variables not included in the model. Consequently, it is recommended for future researchers should further assesses other factors which is not considered in internal audit function that has significant to enhancing revenue collection efficiency.

References

- Adams, M. B. (1994). *Agency theory and the internal audit*. *Managerial auditing journal*, 9(8), 8-12.
- Agresti, A. (2010). *Analysis of Ordinal Categorical Data* (2nd ed.). Wiley.
- Agresti, A. (2018). *Statistical Methods for the Social Sciences* (5th ed.). Pearson.
- Ahmed, A., & Mohammed, A. (2020). *The Role of Internal Audit in Enhancing Tax Compliance in Ethiopia*. *International Journal of Innovation, Creativity, and Change*, 11(3), 322-337.
- Akisik, O., & Gal, G. (2017). *The impact of corporate social responsibility and internal controls on stakeholders' view of the firm and financial performance*. *Sustainability Accounting, Management and Policy Journal*, 8(3), 246-280.
- Alemayehu, M. (2019). *The Role of Internal Audit in Risk Management: A Study on Commercial Bank of Ethiopia*. *International Journal of Economics, Commerce and Management*, 7(5), 129-140.
- Alemu, Y. (2010, June). *The Role of Internal Auditing To Promote Good Governance and Performance Improvement In Public Sector (A Case Study In Ministry Of Defense)*. 5-7. Retrieved 2024
- Alqudah, H., Amran, N. A., Hassan, H., Lutfi, A., Alessa, N., & Almaiah, M. A. (2023). *Examining the critical factors of internal audit effectiveness from internal auditors' perspective: Moderating role of extrinsic rewards*. Heliyon.
- Asare, T. (2009). *Internal auditing in the public sector: Promoting good governance and performance improvement*. *International Journal on Governmental Financial Management*, 9(1), 15-28.
- Assefa, G., Tsegaye, G., & Getachew, W. (2020). *Role of Internal Audit in Enhancing Good Governance in Federal Government Institutions: The Case of Ethiopian Revenue and Customs Authority*. *Journal of Finance and Accounting*, 8(3), 122-133.

- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Bett, C. C. (2014). *The relationship between effectiveness of internal audit function and financial performance of companies listed in Nairobi Securities Exchange* (Doctoral dissertation, University of Nairobi).
- Braithwaite, J. (2004). *The origins of internal auditing*. *Journal of Business and Public Affairs*, 1(2), 1-20.
- Brown, A., Johnson, M., & Thompson, S. (2022). *Strengthening governance and control: The role of internal audit*. *Journal of Business Ethics*, 157(3), 771-789.
- Brown, T. A. (2015). *Confirmatory factor analysis for applied research*. Guilford publications.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.).
- Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2013). *Internal Control - Integrated Framework*. Retrieved from http://www.coso.org/Documents/990025P_Executive_Summary_final_may20_e.pdf
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Damme, L., Misrahi, T., & Orel, S. (2008). *Taxation policy in developing countries: What is the IMF's involvement*. DV406 Consultancy Project.
- Dancey, C. P., & Reidy, J. (2017). *Statistics without maths for psychology* (7th ed.). Pearson Education.
- Deloitte. (2020). *Internal Audit 2025: The future of risk and control*. Retrieved from <https://www2.deloitte.com/global/en/pages/risk/articles/internal-audit-2025.html>
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). *Comparison of convenience sampling and purposive sampling*. *American journal of theoretical and applied statistics*, 5(1), 1-4.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). Sage Publications.

- Field, A. P. (2018). *Discovering statistics using IBM SPSS* (5th ed.). Sage Publications, Inc..
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.
- Frost, J. (2020). *Spearman's rank correlation: Definition, formula, and examples*. Statistics By Jim. <https://statisticsbyjim.com/basics/spearmans-correlation/>
- Garcia, R., Park, C., Lee, J., & Thompson, L. (2023). *The impact of interdisciplinary collaboration on operational efficiency*. *Journal of Operations Management*, 65(1), 21-38.
- Gebre, E. (2017). *The impact of technology on internal auditing*. *International Journal of Business and Management*, 5(9), 70-79.
- Gebre, T., Zemene, T., & Molla, A. (2018). *The Role of Internal Audit in Enhancing Risk Management in Ethiopian Public Sector: The Case of Ministry of Finance and Economic Cooperation*. *Journal of Finance and Accounting*, 6(5), 283-291.
- Gebrehiwot, S., Geremew, H., & Kahsay, G. (2018). *The Role of Internal Audit in Promoting Good Governance in Public Sector: The Case of Ethiopian Revenues and Customs Authority*. *International Journal of Public Administration and Management Research*, 6(2), 1-22.
- Harrison, L., & Johnson, T. (2019). *Investing in internal audit capabilities: Evidence from financial performance*. *International Journal of Auditing*, 23(1), 85-102.
- Hay, D., Knechel, W. R., & Wong, N. (2012). *Audit fees: A meta-analysis of the effect of supply and demand attributes*. *Auditing: A Journal of Practice & Theory*, 31(2), 117-160.
- Hosmer Jr, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression*. John Wiley & Sons.
- Ibrahim, M. (2017). *Internal control and public sector revenue generation in nigeria: an empirical analysis*. *International Journal of Scientific Research in Social Science & Management Studies*, 2(1), 35-48. Retrieved from <http://internationalpolicybrief.org/images/2017/SEPTJOURNALS/IJSRSSMS/ARTICLE4.pdf>

- IIA. (2018). *Definition of Internal Auditing*. Retrieved from <https://global.theiia.org/standards-guidance/Public%20Documents/IPPF%20Translations/Definition%20of%20Internal%20Auditing%20-%20English.pdf>
- IIA. (n.d.). *The Institute of Internal Auditors*. Retrieved from <https://global.theiia.org/Pages/about-us.aspx>
- Institute of Internal Auditors (IIA). (2018). *International Professional Practices Framework (IPPF)*. Retrieved from <https://global.theiia.org/standards-guidance/mandatory-guidance/Pages/International-Professional-Practices-Framework.aspx>
- Institute of Internal Auditors (IIA). (2020). *About the International Professional Practices Framework (IPPF)*. Retrieved from <https://global.theiia.org/standards-guidance/mandatory-guidance/Pages/About-the-International-Professional-Practices-Framework.aspx>
- Jensen, M. C., & Meckling, W. H. (1976). *Theory of the firm: Managerial behavior, agency costs and ownership structure*. *Journal of Financial Economics*, 3(4), 305-360.
- Johnson, R., & Brown, K. (2019). *Internal audit and financial performance: A meta-analysis*. *Journal of Accounting and Economics*, 68(2), 1-20.
- Jones, D., & Thompson, G. (2018). *Enhancing governance through internal audit: An exploration of the perceptions of internal auditors*. *Accounting, Auditing & Accountability Journal*, 31(5), 1483-1504.
- Jung, Y., & Cho, M. K. (2022). *Impacts of reporting lines and joint reviews on internal audit effectiveness*. *Managerial Auditing Journal*, 37(4), 486-518.
- Kamara, A. K. (2023). *The study on effectiveness of internal audit on the performance of the public sector in Sierra Leone: a case study of the National Social Security Insurance Trust*. *Open Access Library Journal*, 10(8), 1-30.
- Kikonyogo, H. (2017). *Effect of Internal Controls on Revenue Collection: A Case of Kampala Capital City Authority* (Doctoral dissertation, Uganda Management Institute).

- Kinfu, J. (2006). *Accountancy in the revolutionary process of Ethiopia*. *Ethiopian Journal of Accounting and Finance*, 1(1), 5-16.
- Lee, H., & Smith, J. (2021). *Internal audit and process efficiency: An empirical study*. *Journal of Business Finance & Accounting*, 48(1-2), 113-140.
- Mahadeen, B., Al-Dmour, R. H., Obeidat, B. Y., & Tarhini, A. (2016). Examining the effect of the Organization's Internal Control System on Organizational Effectiveness: A Jordanian empirical study. *International Journal of Business Administration*, 7(6), 22-41.
- Menard, S. W. (2010). *Logistic regression: From introductory to advanced concepts and applications*. Sage.
- Molla, A., Tesfaye, W., & Melaku, Y. (2019). *The Role of Internal Audit in Ensuring Good Governance in Ethiopia: The Case of Ethiopian Electric Utility*. *International Journal of Economics, Commerce, and Management*, 7(9), 191-201.
- Muchoki, M. (2020). *Effect of internal control systems on efficient revenue collection at the National Transport and Safety Authority* (Doctoral dissertation, UoN).
- Netshifhefhe, K. H. O. D. A. N. I., Netshifhefhe, M. V., Mupa, M. N., & Murapa, K. A. (2024). *Integrating Internal Auditing and Legal Compliance: A Strategic Approach to Risk Management*. *IRE Journals*, 8(4), 446-465.
- Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. Routledge.
- Park, S., & Lee, J. (2017). *Collaboration between internal audit and other functions: Its determinants and performance implications*. *International Journal of Auditing*, 21(3), 248-264.
- Pickett, K. H. (2017). *Internal audit as a source of governance*. *Journal of Business Ethics*, 143(1), 21-40. doi:10.1007/s10551-015-2800-6

- Pizzini, M., Lin, S., & Ziegenfuss, D. E. (2015). *The impact of internal audit function quality and contribution on audit delay*. *Auditing: A Journal of Practice & Theory*, 34(1), 25-58.
- Ramlall, I. (2016). *The role of internal auditors in the corporate governance process*. *Journal of Governance and Regulation*, 5(2), 7-15.
- Rani, R., & Sharma, R. K. (2012). *Ethical Consideration in Research*. *International Journal of Nursing Education*, 4(1).
- Razali, N. M., & Wah, Y. B. (2011). *Power comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors, Anderson-Darling, and Cramer-von Mises tests*. *Journal of Statistical Modeling and Analytics*, 2(1), 21-33.
- Robinson, R., & White, G. (2019). *The strategic role of internal audit: An empirical examination of factors associated with internal audit effectiveness*. *Accounting, Organizations and Society*, 74(1), 1-17.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students*. Pearson education.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Sigilai, D. K. (2017). *Assessment of internal control systems effects on revenue collection at Nakuru Level Five Hospital* (Doctoral dissertation, COHRED-JKUAT).
- Tadesse, A. A., & Alemu, M. (2017). *The Role of Internal Audit in Promoting Accountability: The Case of Ethiopian Airlines*. *International Journal of Accounting and Taxation*, 5(1), 1-11.
- Tarekegn, G. K., Yosef, B., & Gutu, E. G. (2020). *An Empirical Analysis on Effects of Internal Control System on Tax Revenue Audit Performance; Evidence from Ethiopian Ministry of Revenue South and Southwestern Districts*. *International Journal of Finance & Managerial Accounting*, 5(18), 13-20.

- Taylor, M. (2020). *Internal audit as a strategic partner: An empirical examination of factors influencing internal audit involvement in strategic initiatives*. *Journal of Accounting and Public Policy*, 39(6), 106857.
- Thompson, S., Brown, A., & Johnson, M. (2021). *Enhancing internal audit capabilities: The role of technology adoption*. *International Journal of Auditing*, 25(2), 269-286.
- Viljoen, P. C., & Barac, K. (2015). *Managing risk: what should internal audit do?*. *Southern African Journal of Accountability and Auditing Research*, 17(2), 5-17.
- Worku, A., Kebede, D., & Tesfaye, B. (2020). *The Role of Internal Audit in Enhancing Good Governance in Ethiopian Public Sector: A Case Study on Ministry of Revenues*. *International Journal of Economics, Commerce, and Management*, 8(11), 319-330.

Appendix

Appendix 1: Questionnaire



College of Business & Economics

Dear Respondent,

I am Msc Accounting and Auditing student at the Addis Ababa University. Currently, I am doing research on the **“the Effect of internal audit function on enhancing revenue collection efficiency at Addis Ababa City Government Revenue Bureau.”** For the purpose of the research and to supplement the data, the researchers seek to gather relevant information from Respondent using self-administered questionnaire. Participation in this research is completely voluntary. I would promise that all information you provide would be strictly confidential.

Thank you very much for your time and cooperation in advance!

Mintesinot Mulugeta

Instruction:

- ☛ No need to write your name
- ☛ Mark “√” in the cell/box to the point that well express your idea/agreement/

Part I: Respondent’s Demographic Characteristics

- Gender: 1) Male 2) Female
- What is your age bracket? 1) 18-30 2) 31-45 3) Above 45
- Your highest level of Educational Qualification? 1) Degree
2) Degree 3) MA Degree 4) PhD 5) Other_____
- What is your position currently? 1) Director 2) Branch Manager
3) Work process administrator
4) Team coordinator 5) worker
- Years of service in your current organization?
1) Below 2 years 2) 2-5years 3)6-9 Years
4) 10-14 years 5) Above 15years

3. Questions Related to Operational Auditing

No	Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		5	4	3	2	1
1	Management ensures that reliable and relevant information is communicated at all levels of the firm.					
2	The management ensures that all employees understand and are up to date on performance, development, risks and the function of managerial control.					
3	Communication helps to evaluate how well guidelines and policies of the organization are working and being implemented.					
4	The reporting system on organizational structures spells out all the responsibilities of each section/unit in the organization.					
5	There is effective reporting of revenue targets to be achieved in a particular year.					

4. Questions Related to Compliance and Ethics

No	Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		5	4	3	2	1
1	The management has put in place policies, procedures and mechanisms that ensure the directives given are properly carried out.					
2	The guidelines, policies and procedures are properly documented to help determine how the control activities are to be executed.					
3	The management uses incentives and rewards as well as threats and punishments.					
4	Proper and close supervision is done to mostly junior staff at Addis Ababa City Government Revenue Bureau.					
5	Periodic independent reconciliations of revenue collection is done on a regular basis.					

5. Questions Related to Continuous Monitoring and Auditing

No	Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		5	4	3	2	1
1	The targets set on revenue collection are always monitored to assess the quality and the effectiveness of the system.					
2	Monitoring is done on a continuous basis.					
3	Key opportunities to increase revenue collection and the risks of revenue diversion are identified.					
4	Monitoring has helped assess if internal controls are adequately designed, appropriately executed and whether the entire process is successful.					
5	Periodic evaluations of the efficiency of internal control personnel in carrying out the duty's assigned.					

6. Questions Related to Enhancing Revenue Collection Efficiency

No	Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		5	4	3	2	1
1	Addis Ababa City Government Revenue Bureau sets realistic and attainable collection targets.					
2	Addis Ababa City Government Revenue Bureau carries out proper planning through budgeting to increase revenue collection efficiency.					
3	Addis Ababa City Government Revenue Bureau meets the collection targets efficiently.					

Thank You!

Appendix 2: SPSS Outputs

Appendix 2.1: Reliability Statistics

Reliability Statistics

Cronbach's Alpha	N of Items
.884	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RAM	15.9494	6.558	.719	.861
ICE	16.0035	6.916	.638	.874
OA	15.9575	6.556	.755	.855
COET	15.9983	6.276	.742	.857
CMA	15.9753	6.936	.577	.884
ERCE	15.4556	6.649	.761	.855

Appendix 2.2: Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
RAM	270	2.00	4.60	3.1185	.64654	.313	.148	-.616	.295
ICE	270	2.00	4.20	3.0644	.61493	.255	.148	-.970	.295
OA	270	2.00	4.60	3.1104	.62379	-.027	.148	-1.128	.295
COET	270	1.80	4.60	3.0696	.69809	.246	.148	-.676	.295
CMA	270	1.80	4.60	3.0926	.65545	.315	.148	-.520	.295
ERCE	270	2.67	4.67	3.6123	.59906	.142	.148	-.758	.295
Valid N (listwise)	270								

Descriptive Statistics

Risk Assessment and Management	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
The management has defined appropriate objectives for the organization.	270	3.06	.804	.188	.148	-.558	.295
Relevant risks that affect the achievement of the organizational goals are identified and analyzed.	270	3.14	.839	.292	.148	-.360	.295
The bureau staffs are adequately involved in risks management process.	270	3.10	.825	.125	.148	-.684	.295
Management has put in place mechanisms for mitigation of critical risks that may result from fraud.	270	3.23	.790	.070	.148	-.339	.295
The organization has procedures to analyses and distinguish the pertinent risks that may influence the capacity to accomplish its significant targets.	270	3.05	.816	.152	.148	-.325	.295
Valid N (listwise)	270						

Descriptive Statistics

Internal Control Evaluation	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
There are formalized policies and procedures for all major operations of the agency.	270	3.06	.916	.313	.148	-.569	.295
The bureau has good Accounting and Financial Management System in place.	270	2.97	.956	.265	.148	-.574	.295
The bureau officers are taught about the nature of fraud and the system for responding meaningfully when control deficiencies are pointed out.	270	3.09	.936	.095	.148	-.407	.295
Organizational structure put in place does adequately reflect chain of command.	270	3.16	.917	.145	.148	-.520	.295
The roles and responsibilities are delegated and follow up is done to get feedback on results of performance of all tasks delegated.	270	3.04	.914	.243	.148	-.488	.295
Valid N (listwise)	270						

Descriptive Statistics

Operational Auditing	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Management ensures that reliable and relevant information is communicated at all levels of the firm.	270	3.01	.845	.233	.148	-.812	.295
The management ensures that all employees understand and are up to date on performance, development, risks and the function of managerial control.	270	3.06	1.020	.043	.148	-.818	.295
Communication helps to evaluate how well guidelines and policies of the organization are working and being implemented.	270	3.23	1.050	-.012	.148	-.775	.295
The reporting system on organizational structures spells out all the responsibilities of each section/unit in the organization.	270	3.10	.961	.178	.148	-.717	.295
There is effective reporting of revenue targets to be achieved in a particular year.	270	3.14	.950	.161	.148	-.594	.295
Valid N (listwise)	270						

Descriptive Statistics

Compliance and Ethics	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
The management has put in place policies, procedures and mechanisms that ensure the directives given are properly carried out.	270	3.01	.994	.168	.148	-.605	.295
The guidelines, policies and procedures are properly documented to help determine how the control activities are to be executed.	270	3.07	1.083	.036	.148	-.737	.295
The management uses incentives and rewards as well as threats and punishments.	270	3.15	1.031	.089	.148	-.739	.295
Proper and close supervision is done to mostly junior staff at Addis Ababa City Government Revenue Bureau.	270	3.02	1.040	.043	.148	-.611	.295
Periodic independent reconciliations of revenue collection is done on a regular basis.	270	3.10	1.026	.144	.148	-.733	.295
Valid N (listwise)	270						

Descriptive Statistics

Continuous Monitoring and Auditing	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
The targets set on revenue collection are always monitored to assess the quality and the effectiveness of the system.	270	2.97	.946	.185	.148	-.452	.295
Monitoring is done on a continuous basis.	270	3.17	1.060	-.100	.148	-.784	.295
Key opportunities to increase revenue collection and the risks of revenue diversion are identified.	270	3.17	1.167	-.053	.148	-.840	.295
Monitoring has helped assess if internal controls are adequately designed, appropriately executed and whether the entire process is successful.	270	3.08	.967	.067	.148	-.688	.295
Periodic evaluations of the efficiency of internal control personnel in carrying out the duty's assigned.	270	3.07	.982	.119	.148	-.517	.295
Valid N (listwise)	270						

Descriptive Statistics

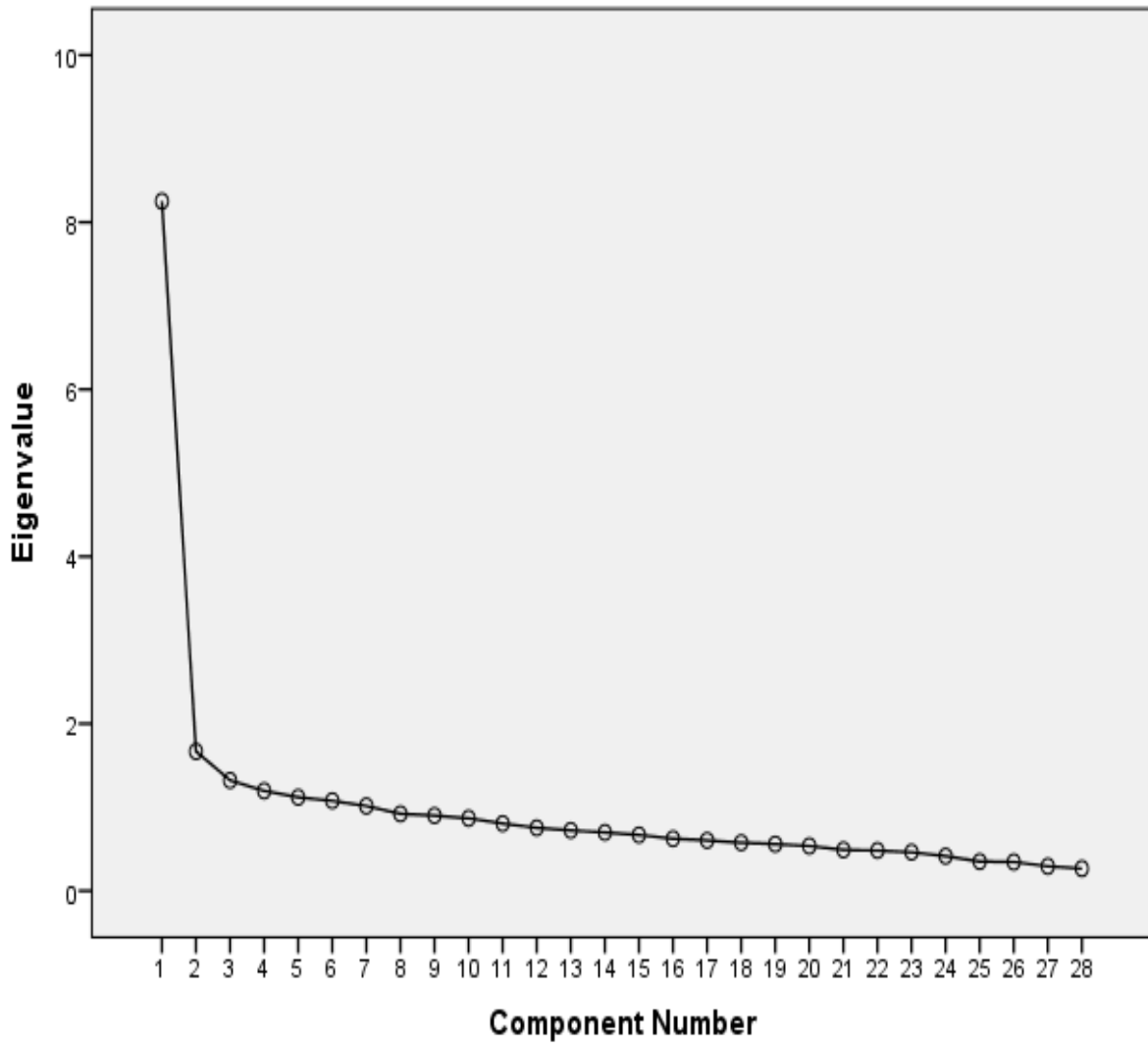
Enhancing Revenue Collection Efficiency	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Addis Ababa City Government Revenue Bureau sets realistic and attainable collection targets.	270	3.53	1.019	-.081	.148	-1.101	.295
Addis Ababa City Government Revenue Bureau carries out proper planning through budgeting to increase revenue collection efficiency.	270	3.72	1.085	-.389	.148	-.793	.295
Addis Ababa City Government Revenue Bureau meets the collection targets efficiently.	270	3.59	.993	-.157	.148	-.913	.295
Valid N (listwise)	270						

Appendix 2.3: KMO and Bartlett's Test with Scree Plot

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.905	
Bartlett's Test of Sphericity	Approx. Chi-Square	2356.324
	Df	378
	Sig.	.000

Scree Plot



Appendix 2.4: Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
RAM	270	100.0%	0	0.0%	270	100.0%
ICE	270	100.0%	0	0.0%	270	100.0%
OA	270	100.0%	0	0.0%	270	100.0%
COET	270	100.0%	0	0.0%	270	100.0%
CMA	270	100.0%	0	0.0%	270	100.0%
ERCE	270	100.0%	0	0.0%	270	100.0%

Appendix 2.5: Descriptives

		Statistic	Std. Error	
RAM	Mean	3.1185	.03935	
	95% Confidence Interval for Mean	Lower Bound	3.0411	
		Upper Bound	3.1960	
	5% Trimmed Mean	3.0979		
	Median	3.2000		
	Variance	.418		
	Std. Deviation	.64654		
	Minimum	2.00		
	Maximum	4.60		
	Range	2.60		
	Interquartile Range	1.00		
	Skewness	.313	.148	
Kurtosis	-.616	.295		
ICE	Mean	3.0644	.03742	
	95% Confidence Interval for Mean	Lower Bound	2.9908	
		Upper Bound	3.1381	
	5% Trimmed Mean	3.0543		
	Median	3.0000		
	Variance	.378		
	Std. Deviation	.61493		
	Minimum	2.00		

Descriptives

		Statistic	Std. Error
	Maximum	4.20	
	Range	2.20	
	Interquartile Range	1.20	
	Skewness	.255	.148
	Kurtosis	-.970	.295
OA	Mean	3.1104	.03796
	95% Confidence Interval for Mean		
	Lower Bound	3.0356	
	Upper Bound	3.1851	
	5% Trimmed Mean	3.1074	
	Median	3.2000	
	Variance	.389	
	Std. Deviation	.62379	
	Minimum	2.00	
	Maximum	4.60	
	Range	2.60	
	Interquartile Range	1.20	
	Skewness	-.027	.148
	Kurtosis	-1.128	.295
COET	Mean	3.0696	.04248
	95% Confidence Interval for Mean		
	Lower Bound	2.9860	
	Upper Bound	3.1533	
	5% Trimmed Mean	3.0551	
	Median	3.0000	
	Variance	.487	
	Std. Deviation	.69809	
	Minimum	1.80	
	Maximum	4.60	
	Range	2.80	
	Interquartile Range	1.00	
	Skewness	.246	.148
	Kurtosis	-.676	.295
CMA	Mean	3.0926	.03989
	95% Confidence Interval for Mean		
	Lower Bound	3.0141	
	Upper Bound	3.1711	
	5% Trimmed Mean	3.0724	

Descriptives

		Statistic	Std. Error
	Median	3.0000	
	Variance	.430	
	Std. Deviation	.65545	
	Minimum	1.80	
	Maximum	4.60	
	Range	2.80	
	Interquartile Range	1.00	
	Skewness	.315	.148
	Kurtosis	-.520	.295
ERCE	Mean	3.6123	.03646
	95% Confidence Interval for Mean		
	Lower Bound	3.5406	
	Upper Bound	3.6841	
	5% Trimmed Mean	3.6063	
	Median	3.6667	
	Variance	.359	
	Std. Deviation	.59906	
	Minimum	2.67	
	Maximum	4.67	
	Range	2.00	
	Interquartile Range	.67	
	Skewness	.142	.148
	Kurtosis	-.758	.295

Appendix 2.6: Tests of Normality

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
RAM	.111	270	.000	.963	270	.000
ICE	.134	270	.000	.944	270	.000
OA	.136	270	.000	.933	270	.000
COET	.106	270	.000	.964	270	.000
CMA	.141	270	.000	.966	270	.000
ERCE	.156	270	.000	.932	270	.000

a. Lilliefors Significance Correction

Appendix 2.7: Correlations

Correlations

			RAM	ICE	OA	COET	CMA	ERCE
Spearman's rho	RAM	Correlation Coefficient	1.000	.534**	.689**	.599**	.343**	.586**
		Sig. (2-tailed)	.	.000	.000	.000	.000	.000
		N	270	270	270	270	270	270
	ICE	Correlation Coefficient	.534**	1.000	.522**	.514**	.334**	.545**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000
		N	270	270	270	270	270	270
	OA	Correlation Coefficient	.689**	.522**	1.000	.663**	.485**	.645**
		Sig. (2-tailed)	.000	.000	.	.000	.000	.000
		N	270	270	270	270	270	270
	COET	Correlation Coefficient	.599**	.514**	.663**	1.000	.417**	.573**
		Sig. (2-tailed)	.000	.000	.000	.	.000	.000
		N	270	270	270	270	270	270
	CMA	Correlation Coefficient	.343**	.334**	.485**	.417**	1.000	.549**
		Sig. (2-tailed)	.000	.000	.000	.000	.	.000
		N	270	270	270	270	270	270
	ERCE	Correlation Coefficient	.586**	.545**	.645**	.573**	.549**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.
		N	270	270	270	270	270	270

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

Appendix 2.8: Parameter Estimates

Parameter Estimates

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test			Exp(B)	95% Wald Confidence Interval for Exp(B)	
			Lower	Upper	Wald Chi-Square	df	Sig.		Lower	Upper
Threshold [ERCE=2.67]	11.694	.9880	9.758	13.630	140.102	1	.000	119845.033	17284.962	830943.799
[ERCE=3.00]	12.844	1.0247	10.836	14.852	157.107	1	.000	378486.289	50794.372	2820231.133
[ERCE=3.33]	14.302	1.0810	12.183	16.421	175.054	1	.000	1626409.293	195487.447	13531340.378
[ERCE=3.67]	16.401	1.1777	14.093	18.709	193.942	1	.000	13270277.738	1319527.296	133457088.566
[ERCE=4.00]	17.441	1.2220	15.046	19.837	203.701	1	.000	37557070.470	3423677.838	411993653.889
[ERCE=4.33]	18.898	1.3107	16.329	21.467	207.879	1	.000	161237202.217	12352466.434	2104635176.862
RAM	.806	.2788	.259	1.352	8.353	1	.004	2.238	1.296	3.865
ICE	.843	.2527	.348	1.339	11.131	1	.001	2.324	1.416	3.813
OA	.925	.3166	.304	1.545	8.529	1	.003	2.521	1.355	4.690
COET	.900	.2572	.396	1.404	12.235	1	.000	2.459	1.485	4.071
CMA	1.407	.2223	.971	1.843	40.048	1	.000	4.084	2.641	6.314
(Scale)	1 ^a									

Dependent Variable: ERCE

Model: (Threshold), RAM, ICE, OA, COET, CMA

a. Fixed at the displayed value.