

COLLEGE OF BUSINESS ANDECONOMICS

DEPARTMENT OF ACCOUNTINGANDFINANCE

FACTORS AFFECTING TAX COLLECTION EFFICIENCY IN ETHIOPIA: THE CASE OF MINISTRY OF REVENUE LARGE TAXPAYER'S BRANCH OFFICE

A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS DEPARTMENT OF ACCOUNTING AND FINANCE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR MASTERS OF SCIENCE IN ACCOUNTING AND FINANCE

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STATEMENT OF DECLARATION

I, the undersigned certify that this thesis entitled "Factors affecting tax collection efficiency in Ethiopia: The case of Ministry of Revenue Of Ethiopia Large taxpayer's branch office" is my original work prepared under the guidance and support of my advisor Dr. Degefa Duresa and has not been submitted for any degree or examination at any other university. All sources of information used in this study were properly acknowledged.

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STATEMENT OF CERTIFICATION

This certifies that the study contained in Nigussie Berhanu's (GSE/7259/11) thesis, "Factors impacting tax collection efficiency in Ethiopia: The case of Ethiopia's Ministry of Revenue Large Taxpayer Branch Office" was presented for the award of a Master of Science in Accounting and Finance to Addis Ababa University's College of Business and Economics. I supervised and guided his study, and his thesis was submitted for examination to Addis Ababa University's College of Business and Economics' School of Graduate Studies with my consent as a university advisor.

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APPROVAL SHEET

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This is to confirm that the thesis prepared by **Nigussie Berhanu**, titled **"Factors affecting tax collection efficiency in Ethiopia: The case of Ministry of Revenue of Ethiopia Large taxpayer's branch office,"** which was submitted in partial fulfillment of the requirements for the degree of Science in Accounting and Finance, meets the recognized standards of originality and quality.

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LIST OF ACRONYMS AND ABBREVIATIONS

AERC – African Economic Research Consortium

ANOVA - Analysis of Variance

COSO–Committee of Sponsoring Organizations of the Treadway Commission

EAC – East African Communities

GDP – Gross Domestic Product

IMF – International Monetary Fund

ITAS – Integrated Tax Administration System

LTO – Large Taxpayers Office

MoF –Ministry of Finance

MTO – Medium Taxpayers' Office

OECD - Organization for Economic Co-operation and Development

SIGTAS - Standard Integrated Government Tax Administration System

TADAT – Tax Administration Diagnostic Assessment Tool

UNCTAD - United Nations Conference on Trade and Development

VIF – Variance Inflation Factor

ABSTRACT

This study examined factors affecting tax collection efficiency in Ethiopia, with specific reference to the Large Taxpayers Branch Office of the Ministry of Revenues in Addis Ababa. Despite substantial capital investments into digital tax architecture and institutional re-engineering, Ethiopia's macroeconomic tax-to-GDP ratio recently experienced a structural decline, a performance gap driven primarily by internal organizational and administrative bottlenecks. Grounded in the Tax Administration Diagnostic Assessment Tool (TADAT) framework, the study evaluated the predictive impact of five distinct dimensions—technological factors, tax policy factors, internal control systems, institutional capacity, and operational and workflow factors—on tax collection efficiency using a convergent parallel mixed-methods research design. Quantitative primary data was gathered using a five-point Likert scale questionnaire administered via a census approach to the operational frontline staff, yielding a valid sample of 190 respondents. Qualitative insights were concurrently sourced from five semi-structured key informant interviews, while secondary data from official macro-fiscal reports was utilized for contextual validation and triangulation, with all descriptive data interpreted using Best's continuous interval cutoff criteria. Multiple linear regression analysis revealed that all five institutional factors have a statistically significant positive effect on tax collection efficiency, with operational and workflow factors emerging as the strongest independent predictor of collection efficiency, closely supported by institutional capacity. Qualitative thematic analysis successfully triangulated these statistical models, demonstrating that physical file-tracking friction, redundant sequential signature loops, and an acute skill gap in specialized corporate auditing—such as international transfer pricing—serve as the primary operational drag factors. The study concludes that internal administrative friction and processing backlogs cause far greater domestic revenue leakage than macro-policy design flaws, and recommends that the Ministry of Revenues comprehensively re-engineer its inter-departmental file-routing pipelines, eliminate sequential manual management approval bottlenecks, and deploy continuous, sector-specific forensic audit training programs.

Keywords: Tax collection efficiency, large taxpayers branch office, technological factors, institutional capacity, operational & workflow

CHAPTER ONE
INTRODUCTION

1.1. Background of the study

Taxation is the backbone of government financing, providing resources for infrastructure, social services, and economic development. Efficient tax collection is therefore critical for fiscal stability and sustainable growth. Globally, countries with strong administrative capacity maintain tax-to-GDP ratios above 30%, while many developing nations struggle to reach 20% due to inefficiencies in administration rather than the absence of taxable resources (Bird & Zolt, 2008; Keen & Slemrod, 2017).

Ethiopia has undertaken significant reforms in the past two decades to modernize its tax administration. The Ministry of Revenue (MoR) was established to integrate the duties of the former Ethiopian Revenue and Customs Authority, and the Large Taxpayers Office (LTO) was created to manage approximately 1,500 corporations that contribute nearly 70% of domestic tax revenues (World Bank, 2016). The adoption of digital systems such as SIGTAS, taxpayer education programs, and electronic filing platforms were intended to enhance efficiency.

Despite these reforms, Ethiopia's tax-to-GDP ratio has declined from 12.4% in 2014/15 to 7.5% in 2022/23, far below the Sub-Saharan African average of 16% (MoF & TaxDev, 2025). Reliance on this single indicator obscures deeper inefficiencies. According to IMF (2025), Ethiopia suffers from a narrow tax base, high informality, and weak compliance enforcement, resulting in low contributions from corporate income tax (CIT) and value-added tax (VAT). Compliance gaps are significant: late filing of VAT and CIT returns, under-declaration of liabilities, and weak enforcement intensity undermines efficiency (ICTD, 2024). Audit coverage remains limited, with only a small fraction of large taxpayers subject to rigorous case selection, while arrears management is weak, leading to accumulation of unpaid taxes (Tadesse N, 2020).

Administrative efficiency is further constrained by system downtime, fragmented processes, and corruption risks. A study by Tadesse N. (2020) found that poor enforcement, inadequate taxpayer awareness, and insufficient training among tax officials exacerbate inefficiencies. Aw et al. (2025) also noted revenue leakage due to weak automation and limited integration of excise and VAT systems.

In this study, tax collection efficiency is defined as the ability of the LTO to maximize actual revenue relative to potential revenue while minimizing administrative costs, time delays, and compliance burdens. Efficiency is assessed not only through the tax-to-GDP ratio but also by examining complementary indicators such as compliance gaps, arrears management, audit coverage, and cost of collection (IMF, 2025; ICTD, 2024; World Bank, 2026). This contextual definition ensures that efficiency is measured in terms of both revenue outcomes and administrative performance, reflecting the practical realities of Ethiopia's tax administration.

Existing studies on Ethiopia's taxation have mainly focused on taxpayer behavior, such as compliance or evasion, and legislative issues (Yesegat, 2008; Shumetie, 2019; Mascagni et al., 2022). While these works provide important insights into behavioral determinants and fairness of taxation, little attention has been paid to the internal administrative processes from the perspective of tax officers who actually undertake the task of collecting taxes. This study addresses this gap by examining how technological, Tax Policy, internal control, institutional, and workflow factors influence tax collection efficiency at the LTO, thereby contributing new evidence on the administrative dimension of revenue mobilization in Ethiopia.

1.2. Statement of problem

Ethiopia faces a growing crisis in revenue mobilization. The tax-to-GDP ratio has fallen to 7.5% in 2022/23, well below the Sub-Saharan average of 16% and far short of the 20–25% benchmark required for sustainable development in low-income countries (ICTD/UNU-WIDER, 2023). This decline has occurred despite reforms such as the establishment of the Ministry of Revenue, the creation of the LTO, and the adoption of digital systems like SIGTAS. The result has been underfunding of infrastructure, health, and education, increased reliance on external aid, and mounting debt burdens. This defines a pressing national problem: the inability of Ethiopia's tax administration to mobilize sufficient domestic revenue despite modernization efforts.

The LTO supervises Ethiopia's largest corporations, which generate about 70% of domestic tax revenues. Its effectiveness is therefore central to national fiscal performance. However, persistent inefficiencies undermine its role. Technical impediments include frequent system breakdowns, user-unfriendly platforms, and limited staff skills (Gupta et al., 2017; Birru, 2022). Tax Policy and administrative challenges arise from frequent amendments to tax laws, investment incentives, and sectoral adjustments that complicate enforcement (Kebede et al., 2025). Internal audit weaknesses—such as superficial case selection, inadequate data, and loose monitoring—limit

compliance (Alm et al., 2019; Mascagni et al., 2022). Capacity gaps include insufficient staffing in specialized areas such as international taxation and transfer pricing, coupled with low motivation due to pay structures (Eichfelder & Kegels, 2014). Operational inefficiencies stem from disintegrated processes, unclear responsibilities, miscommunication between units, and bureaucratic delays (Bird, 2015).

Empirical evidence further highlights inefficiencies in compliance gaps, arrears management, audit coverage, and cost of collection. For example, IMF (2025) reported that arrears accumulation and weak enforcement mechanisms significantly reduce efficiency, while ICTD (2024) found persistent compliance gaps in VAT and CIT filings. Audit coverage remains minimal, with only a small proportion of large taxpayers audited annually (Tadesse, 2020). High administrative costs relative to revenue mobilized also reflect inefficiencies in workflow and resource allocation (IMF, 2025).

Existing Ethiopian research has focused primarily on taxpayer behavior, compliance, or Tax Policy design, while neglecting internal administrative efficiency. This constitutes a clear research gap. International benchmarks (IMF, 2025; World Bank, 2026) consistently identify technological systems, tax Policy, internal controls, institutional capacity, and workflow processes as critical determinants of efficiency. Yet these remain underexplored in Ethiopia. This study addresses this gap by empirically examining these variables from the perspective of tax administrators, thereby providing actionable insights into the internal drivers of efficiency at the LTO.

1.3. Research Questions

This study is based on the following broad research question:

Which are the factors that determine the efficiency of tax collection at the LTO, Branch office of the Ethiopian Ministry of Revenue?

For purposes of answering this broad question, the following specific research questions have been identified:

1. What effect does technology have on tax collection efficiency at the LTO?
2. To what extent do tax policy issues impact on tax collection efficiency at the LTO?
3. What effect does internal control system have on tax collection efficiency at the LTO?
4. What is the effect of institutional capacity on tax collection efficiency at the LTO?
5. What effect do operational and workflow issues have on tax collection efficiency at the LTO?

1.4. Research Hypothesis

The hypotheses under investigation are stated based on the existing literature as follows:

H1: Technological factors have a statistically significant positive influence on tax collection efficiency at the LTO.

H2: Tax policies have a statistically significant positive influence on tax collection efficiency at the LTO.

H3: Internal control systems have a statistically significant positive influence on tax collection efficiency at the LTO.

H4: Institutional capacity has a statistically significant positive influence on tax collection efficiency at the LTO.

H5: Operational and workflow factors have a statistically significant positive influence on tax collection efficiency at the LTO.

1.5. Objectives of the Study

1.5.1.General Objective

The general objective of this study is to investigate the factors that determine tax collection efficiency at the LTO of the Ethiopian Ministry of Revenue.

1.5.2.Specific Objectives

In particular, the research seeks to determine:

1. The influence of technological factors on the efficiency of tax collection at the LTO.
2. The effect of tax policies on the efficiency of tax collection at the LTO.
3. The effect of internal control systems on the efficiency of tax collection at the LTO.
4. The impact of institutional capacity on the efficiency of tax collection at the LTO.
5. The effect of operational and workflow factors on the efficiency of tax collection at the LTO.

1.6. Significance of the Study

This research makes valuable contributions in a number of ways. From an academic perspective, the study enriches Ethiopia's limited body of knowledge regarding the administration of taxation by focusing on internal efficiencies rather than compliance, incorporating a combination of theoretical underpinnings and empirical evidence obtained from the perspective of the administrators. The Tax Policy implications are that the Ethiopian Ministry of Revenue and Ministry of Finance now has information on how to improve their information and communication

technology, streamline their policies, improve internal control, and develop their capacities. For the practitioners, LTO managers will have guidance on how to eliminate inefficiencies, manage resources efficiently, and enhance collection performance.

1.7. Scope of the Study

Conceptual scope: Conceptually, the study focused on five internal administrative factors: technological factors, tax policy factors, internal control systems, institutional capacity, and operational workflow factors.

Geographic scope: Geographically, the study was confined to the Ethiopian Ministry of Revenue and Ministry Large Taxpayers Branch Office, enabling the researcher to obtain focused evidence from tax officials directly involved in large taxpayer administration.

Methodological scope: Methodologically, the study adopted an explanatory research design within a convergent parallel mixed-methods approach, combining quantitative and qualitative data to provide a comprehensive analysis.

Time scope: The study was limited to the 2026 academic period and to respondents employed in the selected office.

1.8. Limitations of the Study

There are certain limitations to this research. First, it relied partly on self-reported questionnaire data, which may be affected by response bias or subjective perceptions of tax administration practices. Second, although the study used an explanatory research design to examine the relationships among variables, the cross-sectional nature of the data meant that information was collected at one point in time only, which may not capture seasonal or time-related changes in tax collection practices. Third, the qualitative component was limited to five key informants, so it may not fully represent all views within the Large Taxpayers Branch Office. Finally, because the study was confined to the Ministry of Revenue Large Taxpayers Branch Office, the findings may not be fully generalizable to other taxpayer offices such as medium or small taxpayer branches.

1.9. Organization of the Study

The study was organized in to five chapters:

Chapter One: Introduction: This chapter was subdivided into sub-sections, presents the background of the study, statement of the problem, research questions and hypothesis, objectives of the study, significance of the study, scope of the study and definition of key terms. It also provides the overall structure of the thesis.

Chapter Two: Review of related Literature: This chapter presents the theoretical framework, empirical review, literature synthesis, research gap, and conceptual framework of the study.

Chapter Three: Research Design and Methodologies: This chapter discusses the research design, research approach, target population, sampling techniques and sample size, data sources, data collection methods, data analysis methods, model specification, reliability and validity and ethical considerations.

Chapter Four: Data presentation, analysis and discussion: This chapter was subdivided into various sections, which analyzed and discussed the findings of the study. It comprises descriptive analysis, correlation analysis, regression analysis, hypothesis testing and qualitative thematic analysis.

Chapter Five: Summary, Conclusion and Recommendations: Lastly, in this chapter, a summary of major findings, conclusions, recommendations and suggestions for future research have been provided.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.1. Introduction

In this chapter, theoretical perspectives along with empirical data will be used in order to develop a comprehensive framework for examining the variables responsible for tax collection efficiency in a large taxpayer office. The literature review not only highlights previous research on the topic but also carries out a critical evaluation of these studies based on the way different schools of thought have explained administrative effectiveness, pointing to significant gaps in existing knowledge. This chapter discusses the conceptual framework of this thesis by starting with theoretical perspectives before focusing on empirical evidence from Ethiopia, Africa, and around the world.

2.2. Theoretical Review

The effectiveness of the taxation system can hardly be analyzed from the perspective of any singular discipline. Rather, this issue requires an interdisciplinary approach, with its roots firmly planted in economics, public administration, institutional approach, and organization theory. Hence, the following research will be built around a combination of five theories, each highlighting a separate aspect of the matter.

2.2.1.Rational Expectations Theory

Rational Expectations Theory, proposed by Muth (1961) and further developed by Lucas (1972), brought a drastic shift into macroeconomics with its notion that economic agents make forecasts regarding the future taking into account all available information as well as economic structure and processes. As a result, their behavior becomes proactive, aiming not only at satisfying their current needs but anticipating future outcomes as well. Combining rational expectations theory with TAM model and Diffusion of Innovation theory can shed some light upon the gradual and often troublesome process of digital technologies implementation in organizations. However, tax officials cannot be regarded merely as passive recipients of any technological development. Rather, they should be viewed as rational agents who assess the value of any new technological solution such as an electronic filing or analytical platform based on their prior institutional experience and a cost/benefit calculus. Potential benefits may include savings in time, fewer mistakes, and improved detection capacity. As for the expected costs and risks, these can include the uncertainty associated with technological solutions, intensified supervision, lack of proper

training, and even disruption to routine workflows that bring about certain informal benefits. If previous efforts to modernize the system ended up with failures in terms of system crashes or empty promises, then staff will rationally expect a repeat performance from any new initiative. This can result in resistance, token participation, or alternative manual procedures – all of which undermine the intended effect. Therefore, RET shifts the perspective, suggesting that the influence of technological factors on the efficiency of collections is much more complicated than simply adopting hardware and software technologies. It rather depends on the rational expectations of the administration regarding the efficacy of the introduced solutions and the trustworthiness of the organization.

2.2.2.Ability-to-Pay Theory

The ability-to-pay concept, a fundamental tenet of normative public finance theory that was formulated succinctly by Musgrave (1959), posits that the tax load should be proportional to the ability of the taxpayer to pay taxes. The ability-to-pay concept is the theoretical foundation of progressive taxation systems. Yet, the implementation of the ability-to-pay theory into practice poses immense difficulties for the tax administrator, a factor usually downplayed in conventional economic analysis. The imposition of a tax system that takes into account ability to pay entails numerous complexities, involving differential tax rates, many types of deductions, exclusions, credits, and even inducements tailored for certain industries or geographical areas or activities (Bird & Casanegra de Jantscher, 1992). In addition, each special case and exception requires scrutiny, interpretation, and oversight. It increases the demand for higher skills from auditors, more advanced technology for monitoring purposes, and more time-intensive analysis. Moreover, tax legislation is constantly amended as economies grow and governments strive to address any observed distortions. In particular, the changes may be introduced to address any perceived inequalities or boost economic development (Keen & Slemrod, 2017). As a result, there are additional transition periods and interpretations to consider. It makes it even more challenging for the Large Taxpayer Office responsible for collecting taxes from large corporations that have enough resources to devise elaborate tax strategies. It becomes difficult to estimate the real taxable capacity of such companies under the influence of numerous legal provisions. Therefore, Ability-to-Pay Theory implies an important administrative implication that should not be overlooked. In general, the implementation of the principle of equity in complex tax policies results in less

efficient administration. There is no doubt that it creates another link between tax Policies and tax collection efficiency.

2.2.3.Agency Theory

The Agency Theory proposed by Jensen & Meckling (1976) offers a vital tool for analyzing situations in which there is delegated authority wherein the principal (the government/public) delegates tasks to the agent (a tax collector) through a contractual agreement. The agency theory emphasizes two major problems in such situations; first, the presence of information asymmetry due to which the agent is in possession of more information than that of the principal concerning their efforts; second, the issue of goal incongruence because the agent's personal goals may differ from the goals of the principal. When considering tax administration issues, the above mentioned problems become all too clear. Agents working in tax administration hold extensive discretionary powers in assessment, audit, penalty, and collection of arrears. If proper safeguards are not put into place, agents may exploit such discretion for personal gains (corruption), shirking, or collude with the taxpayer (Eisenhardt, 1989). The key recommendation of the theory is setting up monitoring and control systems, which would make the agent's incentives coincide with the interests of the principal. This entails that there should be a good system of internal control in place within the tax collection process. It implies independent and well-functioning internal audits, separation of powers, explicit procedure instructions, accountability for results, as well as high ethical standards. In the case of the LTO where every choice has a significant impact on the outcomes, and details of procedures tend to cover up any fraudulent activities, the lack of proper control systems contributes greatly to inefficiency and losses. Indeed, Agency Theory goes far beyond simple assumptions about corruption and provides us with a solid theoretical basis for viewing internal control systems not merely as a bureaucratic routine, but as one of the crucial factors affecting an organization's efficiency in collecting taxes.

2.2.4.Institutional Capacity theory

The Institutionalist Theory, as articulated by Douglass North (1990), took into account "the rules of the game", both formal constraints such as laws and constitutions and informal constraints like norms and conventions governing human interactions and affecting economic and organizational effectiveness. Institutional Capacity is a derivative construct defined as "organizational capacity – the capability for effective functioning of organizations – that depends on its endowment with human capital, organizational process, leadership, and organizational learning" (Andrews,

Pritchett, & Woolcock, 2017). This theory asserts that "success or failure of any Tax Policy or technology change is ultimately dependent on institutional capacity." A tax administration system cannot be considered an algorithm of actions but rather a cognitive institution, the efficiency of which depends greatly on human capital endowed with specific skills in such disciplines as accounting, tax legislation, relevant economics, auditing, and analytics. This involves having managerial systems that plan, coordinate and share knowledge. There should be a culture of professionalism, integrity and continuous learning (Baer, Benon & Toro, 2002). A lack of this capacity in the form of staff turnover, outdated skills, inadequate training, poor management or lack of resources means that however well-designed tax Tax Policy or computer systems are, they will not generate efficient results. The reform measures will neither be well understood properly applied nor adopted at all. This brings us to Institutional Capacity Theory. The theory provides a basic tenet: Technology, Tax Policy and Control variables do not act independently, but are influenced by capacity. The institutional capacity of the LTO is a medium, acting either as a sieve that filters out other measures, or as an amplifier that allows other measures to work.

2.2.5.Administrative Efficiency and Workflow Theory

Based on the classic ideas of "administrative behavior" introduced by Herbert Simon (1976) and bounded rationality, this particular branch of theory emphasizes micro-processes in organizations. According to Simon, decision-making individuals are not perfectly rational, but they have limited mental resources and operate in certain organizational contexts influencing their decisions. Administrative efficiency largely depends on the workflow organization that involves formal and informal processes used for completing various actions, such as assessing taxes, conducting audits, and collecting revenues. When these processes are inefficient and include many bureaucratic steps, redundant approval levels, lack of coordination between departments, poor responsibility assignment, ineffective case management, and other factors, they involve lots of time and efforts. This leads to delays in file processing, loses, high frustration among employees, and inefficiency (Coolidge &Yilmaz, 2014). For an LTO dealing with complicated cases requiring collaboration between auditors, lawyers, and assessors, a bad workflow means spending valuable professional time on bureaucratic procedures instead of doing the job itself. This theory focuses on the hidden architecture underlying the functioning of everyday activities. It states that efficiency does not depend only on the capacity (having knowledgeable staff) and Tax Policy (appropriate rules), but also on the manner in which activities are carried out. Therefore, operational and procedural

elements can be considered proximate or mechanical variables for assessing the speed and accuracy with which the administration converts its inputs into outputs.

In summary, these five theories provide a coherent framework for analyzing tax collection efficiency. Rational Expectations Theory explains the role of technology adoption, Agency Theory highlights internal control and accountability, Institutional Capacity Theory emphasizes organizational competence, Workflow Theory addresses operational processes, and Ability-to-Pay Theory grounds tax Policy in fairness and efficiency.

2.3. Empirical Review

2.3.1.Technological Factors

Technology is widely recognized as a facilitator of effective tax administration. Global studies (Akitoby et al., 2020; OECD, 2017, 2021) show that digitalization, automation, and risk-based audit selection significantly improve tax performance by reducing compliance costs and increasing accuracy. Evidence from countries such as Georgia and Rwanda confirms that e-filing and e-payment systems enhance compliance, though their success depends on institutional support such as reliable electricity, internet access, and user training (Okunogbe & Santoro, 2022; Santoro et al., 2023).

In Africa, technology has improved transparency but often failed to deliver efficiency due to fragmented systems and low computer literacy (Fjeldstad & Heggstad, 2012; Mascagni et al., 2019). Ethiopian studies echo these challenges: adoption of e-tax systems among large and medium taxpayers remains low due to weak infrastructure, power outages, and resistance to change (Yimam et al., 2024; Kebede et al., 2025; Birru, 2022). At the LTO, system downtime continues to disrupt workflow (Anteneh, 2023).

Overall, the evidence suggests that while technology has a statistically significant positive effect on tax collection efficiency, its impact in Ethiopia is constrained by infrastructural and institutional weaknesses.

2.3.2.Tax Policy factors

Empirical literature underscores tax Policy design as a primary determinant of administrative efficiency. Bird and Zolt (2008) demonstrate that the structural compliance costs of an asset represent its most significant economic friction, with operational costs increasing exponentially alongside complexity. Cross-country assessments show that tax systems with extensive

exemptions, special treatment rules, and discretionary tax incentives become exceptionally difficult and resource-intensive to administer. Furthermore, Keen and Slemrod (2017) reveal that frequent changes to legislative frameworks impose high "Tax Policy churn" costs on administrative institutions, requiring continuous re-training, immediate IT software re-configurations, and extensive judicial interpretation cycles. An OECD (2015) diagnostic confirms that states with highly volatile tax laws suffer from a greater volume of formal taxpayer disputes and prolonged case processing backlogs.

Across the African continent, Tax Policy -driven administrative friction is heavily concentrated around the extensive deployment of poorly targeted investment incentives. Moore, Prichard, and Fjeldstad (2018) evaluate East African revenue authorities and find that generous and laxly monitored tax incentive regimes generate intense "administrative complexity." Frontline tax officers frequently face difficulties verifying compliance parameters or controlling transfer abuses, leading to systemic revenue leakage and an inefficient allocation of audit teams. Similarly, Van Parys (2016) shows that managing complex incentive regimes in Sub-Saharan Africa introduces substantial deadweight administrative costs that undermine aggregate collection performance.

In Ethiopia, contemporary studies highlight significant operational impacts driven by Tax Policy volatility and legal ambiguity. Ayenachew (2023) evaluates the Federal Large Taxpayers Branch (LTO) of the Ministry of Revenues (MoR) and finds that political disruptions severely compound revenue mobilization difficulties. For example, during the conflict in Northern Ethiopia, the disruption of the Mekelle and Kombolcha branches cost the state an estimated 4.2 billion Birr annually in uncollected taxes. Crucially, 83% of surveyed administrative staff reported that current tax legislation is structurally complex and difficult to interpret. Yesegat (2008) also identifies legal complexity and frequent statutory adjustments as the two primary drivers of systemic processing delays and disputes between Ethiopian authorities and taxpayers regarding Value Added Tax (VAT) implementation.

More recently, Baer et al. (2025) analyze the widening Corporate Income Tax (CIT) gap in Ethiopia, attributing it to expanding tax expenditures and import-substitution incentives. However, like most existing literature, their analysis remains focused on the macro level. A major empirical gap exists regarding how tax Policy complexity and legislative volatility affect the micro-level, day-to-day operations of LTO staff. Specifically, there is a lack of localized research evaluating

how this tax Policy factors impair the frontline verification of tax expenditure claims, increase circular interpretation times, and create bottlenecks in dispute resolution.

This study addresses this gap, with empirical findings supporting a significant relationship between Tax Policy-related factors and collection performance, validating hypothesis H2.

2.3.3. Internal control factors

Empirical evidence establishes a direct link between robust internal corporate governance and revenue maximization. Fjeldstad (2006) demonstrates that weak internal oversight combined with an un-isolated or compromised internal audit process leads to pervasive institutional revenue losses. Utilizing the Tax Administration Diagnostic Assessment Tool (TADAT), the International Monetary Fund (IMF, 2015) consistently shows that high institutional ratings in internal governance, accountability frameworks, and operational risk management correlate with stronger aggregate fiscal performance. Furthermore, Alm and Torgler (2006) prove that public compliance behavior is heavily shaped by the perceived ethical standing, transparency, and internal control rigor of the revenue institution.

African empirical studies identify inadequate internal control frameworks as a key institutional vulnerability. Examining operational reforms in Tanzania, Fjeldstad and Rakner (2003) show that structural reorganizations yield sustainable efficiency gains only when paired with strict internal accountability protocols and objective enforcement mechanisms. In Nigeria, Adegbie and Fakile (2011) demonstrate that structural deficiencies within internal audit units and a lack of transaction transparency directly fuel revenue leakage and operational delays.

Research in the Ethiopian public sector reflects similar challenges while focusing on specific operational units. Shumetie (2019) highlights systemic vulnerabilities to operational risk and compliance gaps across the broader tax administration architecture. Focusing explicitly on the LTO, Abera (2016) demonstrates that the effectiveness of tax audits depends heavily on audit quality, independent case selection, and active management support for audit findings. Similarly, Tarekegn, Yosef, and Gutu (2020) apply the COSO internal control framework to the Ministry of Revenue, identifying the control environment, risk assessment capabilities, and control activities as critical factors dictating the quality of tax audits.

Despite these insights, prior studies often treat these elements in isolation. There remains a clear research gap: no existing empirical study investigates the internal control architecture as an

integrated operational environment. Specifically, there is an empirical vacuum regarding how LTO staff perceives the fairness of accountability procedures, the clarity of disciplinary sanctions or promotions, and the structural independence of the audit function, and how these collective variables directly affect overall collection efficiency.

This study addresses this gap, testing the relationship between internal control environments and collection efficiency under hypothesis H3.

2.3.4. Institutional Capacity

Institutional capacity constraints present a major barrier to modernizing tax administration in emerging economies. Nose et al. (2025) analyze Indonesian tax administrative reforms and find that optimizing staff allocations and improving tax officer-to-taxpayer ratios drive substantial revenue gains. They show that assigning corporations to dedicated Medium Taxpayer Offices (MTOs) triggered a 128% increase in business tax collections, while maintaining administrative costs below 1% of the revenue gained. In a global assessment of Large Taxpayer Offices (LTOs), Baer et al. (2002) emphasize that staff quality and professional specialization are critical to early institutional success, often outpacing the initial impact of technology or Tax Policy reforms. Conversely, Fjeldstad and Moore (2009) note that across Africa, high professional turnover, skill mismatches, and inadequate training budgets routinely prevent structural reforms from delivering long-term performance improvements.

These institutional capacity challenges are highly visible in Ethiopia. Yimam et al. (2024) identify human capital deficits and low technical expertise as primary factors undermining the outcomes of tax administration modernization programs. Kebede, Tesfaye, and Abebe (2025) emphasize that staff competency and continuous training are essential for operational performance, while G/Mariam (2020) highlights organizational capacity constraints and low staff motivation as key operational drag factors.

However, prior studies often treat "institutional capacity" as a single, abstract concept. A key empirical gap in Ethiopian LTO literature is the failure to deconstruct institutional capacity into specific, specialized skill sets. There is a lack of research evaluating core technical areas such as transfer pricing audit capacity, sector-specific knowledge (e.g., banking, telecom, and complex manufacturing), data analytics proficiency, and advanced forensic accounting skills. Furthermore,

little empirical evidence links specific capacity deficits to direct performance metrics, such as audit cycle completion times or assessment error rates.

In related public sector literature, Seifu (2024) examines the implementation of the Integrated Financial Management Information System (IFMIS) at the Ministry of Finance, finding that staff resistance, weak management commitment, and inadequate ICT infrastructure were primary barriers, while capacity building and technical expertise were strong predictors of success. Looking specifically at tax administration, Regassa (2025) surveys 177 employees at the Addis Ababa Revenue LTO, confirming a strong positive relationship between an office's capacity and its collection efficiency, while identifying political interference and high staff turnover as key organizational obstacles.

This study directly builds on these insights by isolating and measuring specialized capacity dimensions, providing empirical validation for hypothesis H4.

2.3.5.Operational and workflow factors

In public administration, classical organizational theory dictates that institutional productivity is directly bound to the structural layout of internal workflows and operational pipelines (Gulick & Urwick, 1937). Bureaucratic efficiency requires clear, non-redundant operational paths that maximize internal processing speed while eliminating administrative bottlenecks. Cross-country empirical assessments demonstrate that revenue administrations with highly complex, manual processing lines frequently suffer from operational backlogs, increasing the transaction burden on both administrative personnel and taxpayers. Modern administrative models emphasize that reducing structural friction and streamlining sequential administrative handoffs are essential for transforming tax policy objectives into high revenue output.

Across the African continent, operational inefficiencies within tax offices are frequently characterized by rigid departmental silos and heavy bureaucratic routing protocols. In an evaluation of East African revenue authorities, Moore, Prichard, and Fjeldstad (2018) observe that uncoordinated workflows between intelligence, audit, and collection teams cause significant delays in processing taxpayers' files. This structural fragmentation complicates compliance monitoring and allows high-risk cases to stall within the system. Bird (2015) underscores that in transitioning economies, long processing backlogs, redundant signature requirements, and the

slow movement of files across active personnel creates administrative friction that leads to severe domestic revenue leakage.

In the Ethiopian context, empirical studies highlight that operational bottlenecks and rigid procedural workflows severely constrain revenue operations. Within the Ministry of Revenues (MoR), administrative delays are often caused by un-integrated process streams, where electronic submissions are disrupted by manual checks. Regassa (2025) examines the Addis Ababa Revenue Large Taxpayers Branch Office (LTO) and finds that sequential manual approval hierarchies and rigid operational workflows are major barriers to effective revenue collection. Similarly, Yimam et al. (2024) observe that tax administration modernization efforts fail to deliver sustainable results when underlying operational workflows are not fully re-engineered to support automated processing platforms.

While existing public sector literature identifies these operational delays, previous studies often discuss them broadly as an institutional challenge rather than measuring their predictive impact. A critical empirical gap in Ethiopian LTO literature is the lack of localized research evaluating how staff perceive specific workflow dimensions—such as inter-departmental routing times, the tracking of physical and digital file movements, and the impact of sequential approvals—and how these variables directly affect collection efficiency.

This study addresses this gap by isolating and evaluating these specific workflow dimensions, with empirical results providing strong validation for hypothesis H5.

2.4. Synthesis of the Literature and the Research Gap

The review above indicates a wealth of academic literature underscoring the relevance of technology, economics, institutions, controls, and operations in influencing the performance of tax authorities. There is a strong theoretical basis for understanding why each factor plays a significant role in influencing the performance of tax authorities, and there are empirical findings on its effects in studies conducted at global and local levels. However, an evaluation of this literature shows that, besides containing insights, there are gaps that need to be addressed by this study.

One major issue with the existing body of empirical studies is compartmentalization. In other words, they tend to focus on just one or two independent variables, such as the effect of technology on compliance or the effect of complicated policies on fiscal gaps without considering how they

fit into the overall environment of the administrative agency in question. This methodology cannot properly address the actual problem that the inefficiency of the administration of the kind considered is rarely related to one cause. The inability to efficiently use the technology, for example, might be aggravated by understaffing of the agency in question; an excessive complexity of a particular Tax Policy might add on to an already inefficient process; poor internal controls could mean that any inefficiencies resulting from some other issues would remain unchanged. Thus, what is currently lacking is a study adopting a holistic approach to analyzing the five important sets of variables discussed and their relative importance.

Moreover, an important part of Ethiopian tax literature, even though steadily increasing in size, has an emphasis on studying taxpayers, including determining the factors that influence their compliance, tax attitudes, and evasion behaviors. However, although highly relevant, it marginalizes the administrative side, which also needs to be studied. The point is that the views of tax officials, who implement the policies and technological advancements, remain understudied. This perspective is crucial in explaining why the well-meaning initiatives do not always succeed in practice. Hence, another research gap lies in the lack of attention paid to the administrator's point of view when researching efficiency, especially in the Large Taxpayer Office setting.

Thirdly, although many issues faced by tax administrations in Sub-Saharan Africa have been discussed widely in literature, deeper research focusing on institutional characteristics is still needed. The LTO in Ethiopia is unique in terms of its reform history, political economy, and organizational culture. Findings from previous research in general, including findings about other Ethiopian tax branches, might be too generic to apply directly to the LTO. It would be worthwhile to examine why it is difficult to generate efficient tax revenues despite the reforms continuously being undertaken.

Lastly, methodologically speaking, previous researches on administrative variables in Ethiopia used descriptive statistics and qualitative case study approaches extensively. Such methods provide invaluable insights; yet few studies attempted to integrate a quantitative approach with a qualitative one. For example, there are no studies using multivariate regression models on individual employee data as a means to examine the hypothesized relationship between organizational variables and tax administration efficiency.

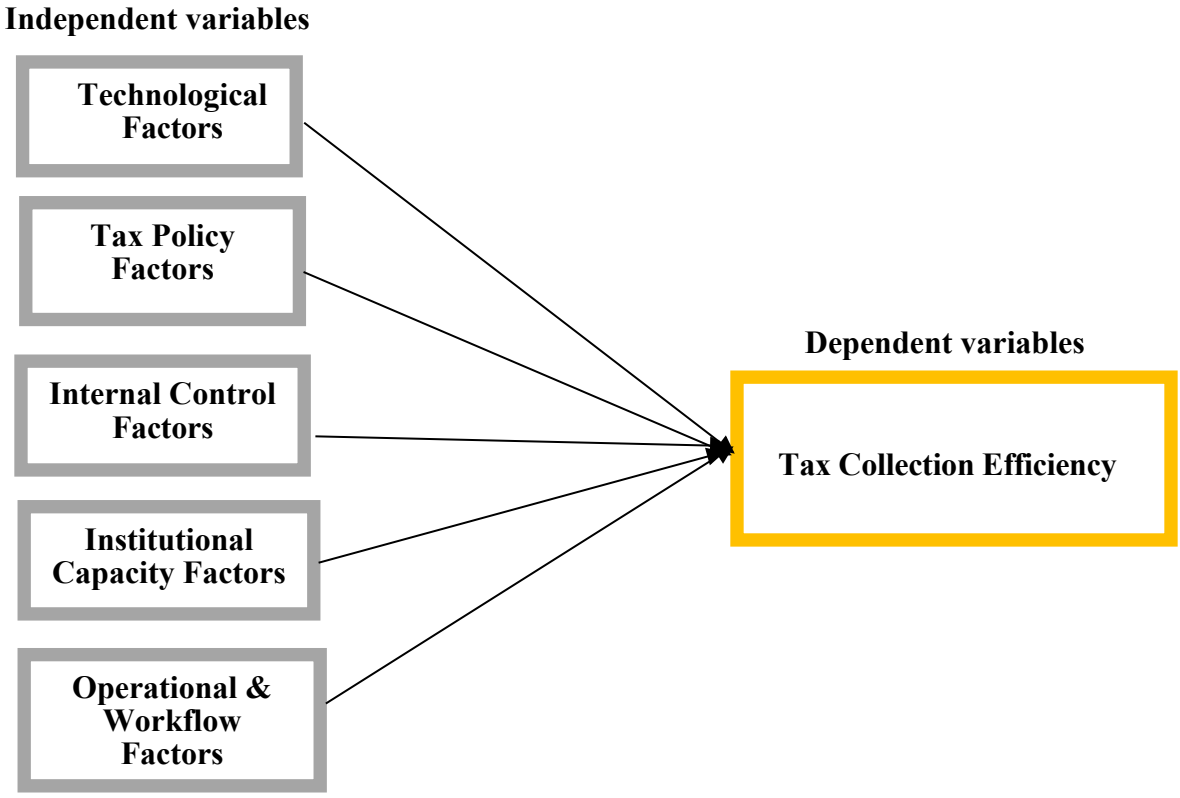
The current research is designed to bridge these interrelated gaps. This research suggests a combined analysis of technological, economic, institutional, control, and process-related determinants, not as separate elements, but rather as one unified group. The perspective of the LTO employees is put into the spotlight of this research, which uses their professional knowledge as primary data. The specific focus of the current research is the Ethiopian LTO, since it can provide meaningful results for the Ethiopian reality. Lastly, this research utilizes an explanatory sequential mixed-methods approach. It uses statistical methods to confirm theoretical hypotheses and conduct empirical testing of relationships. At the same time, the qualitative interviews shed light on the "how" and "why" of these relationships.

2.5. Conceptual Framework

The underlying theory and the findings from previous literature have been used to construct the conceptual framework for the current research endeavor and has been illustrated in Figure 1 below. The central variable being studied here is Tax Collection Efficiency. Five variables that affect the process administratively internally are shown to directly influence the process. These include Technology, Tax Policy, Internal Control, Institution, and Workflow factors. Each of the arrows connecting these variables with the efficiency variable represents the way we interpret the effect, as outlined in the theoretical analysis chapter.

It should also be recognized that since there are links connecting the independent variables with one another using arrows, they do not work alone but in conjunction with each other within the internal environment of the organization. For example, technology efficiency can only be achieved when the institution is capable enough, and complicated policies may pose difficulties when there is a bureaucratic workflow system. Thus, taking a holistic view of these various factors will provide an effective understanding of their impact on the efficiency of the process.

Figure 1: Conceptual Framework



Source: Researcher's own construction based on theoretical synthesis (2025).

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

This chapter presents the research design and methodology used to study the factors affecting tax collection efficiency in Ethiopia and particularly of the Large Taxpayers Branch Office of the Ministry of Revenue. The research design, research approach, target population, sampling procedure, data sources, methods of data collection, methods of data analysis, model specification, reliability and validity and ethical considerations are discussed.

3.2. Research Design

Purpose of the study is to examine the influence of factors that affect the tax efficiency. Study intends to evaluate the relationship between the dependent variable (tax efficiency) and other independent variables such as technology, economy & Tax Policy , internal control system, institutional capability, and workflow. For achieving this goal, explanatory research design was used. This design was appropriate as the study sought to investigate the links between the independent variables and tax collection efficiency and explain the degree to which the factors chosen affected the dependent variable. Research designs with explanatory purposes are generally used when a study aims to test hypotheses and establish causal or predictive relationships among variables (Saunders, Lewis, & Thornhill, 2009; Cohen, Manion, & Morrison, 2018).

3.3. Research Approach

The study used a convergent parallel mixed-methods research approach. Creswell and Plano Clark (2011) describe a convergent parallel design as one in which quantitative and qualitative data are collected in the same phase of the research, analyzed separately, and merged during interpretation to provide a more complete understanding of the research problem. This method was appropriate for the current study because it enabled the researcher to combine statistical evidence with contextual explanations. Quantitative strand was used to test the research hypotheses and measure the strength of the relationships between variables, whereas the qualitative strand was used to investigate the practical challenges and administrative experiences that influence tax collection efficiency (Ivankova, Creswell, & Stick, 2006).

3.4. Target Population and Sampling Procedure

3.4.1.Target Population

The target population for this study is professional staff and managers employed at the Large Taxpayers Office (LTO) of the Ethiopian Ministry of Revenues. The organization reports that the target population includes those who are directly engaged in assessing, auditing, enforcing payments, and managing activities associated with the large taxpayers, who generate about 70% of the revenues in the country. The selected population was chosen because they have the necessary expertise in handling the issues of large taxpayers. The target population consists of staff members in the various critical functional departments involved in the value chain of the tax administration process. As per the registry of staff of the Human Resource department of the LTO for the month of August 2025, the total number of the target population stands at 214, as presented in Table 1 below.

Table 1: Population Distribution by Functional Department

Job Category	Number of staff	Percentage
Tax Auditors	103	48.1%
Compliance Officers	10	4.7%
Revenue Collection Staff	12	5.6%
IT/Systems Support	4	1.9%
Assessment Officers	49	22.9%
Senior Managers	6	2.8%
Taxpayer Service Officers	30	14%
Total	214	100.00%

Source: Ministry of Revenue, LTO HR Report (August, 2025)

The population includes a prominent proportion of tax auditors, comprising 48.1% (103 out of 214 respondents) of the participant mix. This distribution is a deliberate, methodologically necessary feature of the study's design, strictly dictated by the institutional framework of the Ministry of Revenues Large Taxpayer Office (LTO).

3.4.2.Sampling Techniques and Sample Size

Because of the manageable and limited number of respondents, as well as the need to maximize representation and statistical power in conducting the quantitative analysis, the technique of census sampling was used in order to conduct the survey. This means that all the 214 individuals were intended to be involved in answering the questions. The use of census sampling allows for the elimination of any sampling errors and, consequently, provides an opportunity to get the opinions of all the people in question (Saunders, Lewis, & Thornhill, 2009).

Purposive sampling technique was applied in the qualitative part of the research, since it sought to gain depth rather than breadth. The choice of participants was determined by the particular expertise, experience, and strategy of the individuals in relation to LTO. They were chosen because of the deep information-rich data that they would offer (Patton, 2015). The number of key informants used was 5 interviewees, which included two senior managers/department heads such as Head of Audit and Head of Assessment, two tax auditors/compliance officers who had served in the organization for more than seven years, and an IT systems officer dealing with the tax administration program.

3.5. Data Types and Sources

This study used both primary and secondary data. Primary data was collected using structured questionnaires and semi-structured interviews. Questionnaires were administered to tax officials and interviews were conducted with selected key informants to gain deeper insights into the operational and institutional factors affecting tax collection efficiency. Secondary data were gathered from official Ministry of Finance (MoF) macro-fiscal frameworks, Ministry of Revenues (MoR) performance reports, TaxDev datasets, and diagnostics from international bodies including the IMF, World Bank, and OECD. This secondary data serves a dual methodological purpose: first, it establishes the empirical baseline for the domestic revenue mobilization crisis in the statement of the problem; second, it provides a benchmark to cross-examine, validate, and interpret the primary statistical regression models against broader macroeconomic and regional tax administration trends..

3.6. Methods of Data Collection

The Questionnaire: The questionnaire is comprised of two parts. The first part was made up of demographic characteristics of the respondents, who are asked to give information concerning their gender, age, and educational attainment levels. The other part of the questionnaire was

structured in such a way that it allowed the researcher to collect data on factors influencing tax collection efficiency. A questionnaire comprises a series of questions with questions structured in form. In this case, the questions were in form of close ended types and the responses to the questions were in Likert scaling measuring from a five-point scale such as: Strongly agree (SA) = 5; Agree (A) = 4; Neutral (N) = 3; disagree (D) = 2; strongly disagree (1).

The application of the Likert scale is to make it simpler for the respondent to respond easily to the questions asked. However, it is important to consider interpreting the results in terms of frequency, percentage, mean, and standard deviation. Furthermore, Johns (2010) observed that statistically speaking the level of measurement for the Likert response scale is ordinal in nature and not interval because this makes it possible for us to draw an assumption regarding their arrangement but not the distance between them. Conversely, it is important for the respondents to mark the required choice for their opinion and further to measure the relationship between the variables.

3.7. Methods of Data Analysis

Data analysis entailed the following steps based on the research design sequence. First, data gathered from the survey were entered into Statistical Package for the Social Sciences (SPSS) Version 27. Descriptive statistics were employed in analyzing demographic profiles and perceptions of the respondents on all variables under consideration. Inferential statistics was carried out using Pearson correlation, which was intended to determine the nature of the relationship existing between the independent and dependent variables and between the independent variables themselves. Regression analysis would serve as an inferential statistic, and it would enable the determination of the unique contributions of independent variables to tax collection efficiency. This approach allows for holding other variables constant during the analysis. Linearity, absence of errors, homoscedasticity, and normality of residuals were tested graphically before estimation of models.

The analysis of qualitative data obtained using the interview method will use a general inductive approach in the analysis of qualitative data. The primary purposes of the general inductive approach include summarizing long and diverse text data into concise statements; drawing connections between the research goal and the resulting summary statement that is obtained from the text, with such connections being easily demonstrable and justifiable based on the research goal; and formulating a theory or model regarding the structure of experience or process as revealed in the text or data (Thomas, 2003). In addition, the study has employed various descriptive

statistics for analyzing the raw data obtained using the tool on tax collection efficiency determinants. Various descriptive data analysis tools like mean and standard deviation have been used only to describe the behavior.

3.8. Model specification

The regression equation in this study usually focuses on two groups of variables, that is, the dependent variable (tax collection efficiency) and independent variables (technology, Tax Policy, internal control system, institutional capacity, and process flow). In the context of this study, the primary goal of applying the regression equation is to enable the researcher to describe, comprehend, forecast, and control the mentioned variables.

For the purpose of this study, an OLS regression analysis has been used to predict the significance of the independent variables. The OLS regression equation can be represented as:

$TCE = \beta_0 + \beta_1 (TF) + \beta_2 (TPF) + \beta_3 (ICS) + \beta_4 (IC) + \beta_5 (OWF) + \varepsilon$

Where,

TCE = Tax Collection Efficiency

TF= Technological Factors,

TPF = Tax Policy Factors,

ICS = Internal Control Factors,

IC= Institutional Capacity Factors,

OWF= Operational & workflow Factors.

β_0 - Constant term

β1, β2, β3, and β4 - Regression coefficients of the corresponding independent variables

Є – Errors

3.9. Operationalization and Measurement of Variables

All variables in this study are measured using primary data collected via a structured survey questionnaire. To maintain statistical consistency and ease of data processing, all variables are operationally measured on a 5-point Likert scale, where responses range from Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), & Strongly Agree (5)

Table 2: Operationalization and Measurement of Study Variables

Variable Type	Variable Name	Code	Operational Definition	Measurement Scales / Core Indicators
Dependent Variable	Tax Collection Efficiency	TCE	The institutional capability of the LTO to maximize domestic revenue mobilization while minimizing administrative processing times, transaction errors, and operational costs.	Measured via a 5-item, 5-point Likert Scale: • System processing cycle velocities & clearance times • Assessment backlog volumes • Cost-of-collection trends • Reporting accuracy and timeliness
Independent Variable 1	Technological Factors	TF	The structural usability, technical stability, and continuous operational uptime of core digital tax platforms.	Measured via a 5-item, 5-point Likert Scale: • SIGTAS and e-payment continuous uptime • Platform network downtime frequencies • User-interface accessibility and software ergonomics
Independent Variable 2	Tax Policy Factors	TPF	The administrative clarity, statutory stability, and internal legal complexity of tax laws.	Measured via a 5-item, 5-point Likert Scale: • Frequency of regulatory updates ("Tax Policy churn") • Verification times for corporate tax exemptions • Clarity and comprehensibility of administrative circulars
Independent Variable 3	Internal Control Factors	ICS	The strength, transparency, and operational independence of internal auditing and risk management	Measured via a 5-item, 5-point Likert Scale: • Structural independence of internal audit case selections

Variable Type	Variable Name	Code	Operational Definition	Measurement Scales / Core Indicators
			frameworks within the branch.	• Management's responsiveness to audit findings • Transparency of internal accountability and protocols
Independent Variable 4	Institutional Capacity Factors	IC	The availability of specialized professional skills, technical expertise, and human resource adequacy to audit complex corporate entities.	Measured via a 5-item, 5-point Likert Scale: • Technical audit capabilities in international transfer pricing • Sector-specific auditing expertise (banking, telecom) • Availability of continuous specialized training programs
Independent Variable 5	Operational & Workflow Factors	OWF	The structural process design, file-routing velocity, and administrative coordination between separate functional departments.	Measured via a 5-item, 5-point Likert Scale: • Inter-departmental routing and handoff times • Tracking transparency of physical and digital files • Impact of sequential manager signature loops

3.10. Reliability and validity

Reliability refers to consistency procedures that are disrupted by responses to item questions, which indicates that the scores are consistent over time whenever the test is administered (Creswell, 2009). In an attempt to measure the consistency of the instrument, the researcher employed a 0.70 Cronbach's alpha coefficient to determine the stability of the instrument. The higher the Cronbach's alpha score is towards 1.0, the higher the internal consistency of the instrument.

To conduct an assessment on the internal reliability of the variables used in this research instrument, Cronbach's alpha coefficient has been computed. The Cronbach's alpha coefficient test using the SPSS version 27 software resulted in a value shown in table 3.

Table 3: Reliability Statistics

Variables	Cronbach's Alpha	N of Items
Tax collection efficiency	.829	5
Technological factors	.770	5
Tax Policy factors	.739	5
Internal control factors	.750	5
Institutional Capacity factors	.788	5
Operational & workflow factors	.766	5

Source: Own survey result, 2026

Internal consistency for all six scales is deemed satisfactory or good: Tax collection efficiency is excellent (α = .829); Technological factors (.770), Tax Policy factors (.739), Internal control factors (.750), Institutional capacity factors (.788), and Operational and workflow factors (.766) all have acceptable or good internal consistencies (generally between .70 and .89), which suggests that the five items in each scale are measuring what they are meant to measure; there are no weak scales, although increasing internal consistency (higher alpha coefficients or more items) may further improve borderline scales.

3.11. Ethical Considerations

Before doing this research, ethical approval was sought and obtained from the accounting & finance department office in A.A.U. A letter was issued allowing the researcher to conduct the study. With this in place, the research study has begun. Consent has also been obtained from the branch office of the taxpayer, MOR. Participants were allowed the right to withdraw from the study if they so wish. All the data collected is confidential since there is no need for participants to provide any personal information. Participants can choose not to respond to any questions they feel are uncomfortable answering.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS & DISCUSSION

4.1. Introduction

The results of this study are presented in this chapter consistent with the objectives, research questions, and hypotheses of this study. This analysis is made based on the research design used in the study. The chapter starts with the discussion of the rate of responses to the questionnaire survey. Then, the description of the variables is presented through descriptive statistics. Finally, the relationship between the independent and dependent variables is examined using correlation and regression analysis. The regression model's parameter interpretation, especially its significance and direction of influence, will be analyzed using SPSS software.

The findings obtained from this study have provided important information on what makes the tax collection process efficient at the Large Taxpayers Branch Office of the Addis Ababa Revenue Authority. The discussion is made within the context of past studies to give a holistic view of the topic.

4.2. Response rate

Data gathering was done using a combination of standardized surveys and semi-standardized interviews. There were 214 surveys distributed among LTO employees which made up the census sample for this research. Out of the 214 surveys distributed, 190 were returned and considered valid to use in analyzing the data, resulting in an impressive response rate of almost 89%. The higher participation of respondents improves the external validity of the results from the quantitative data analysis. With regard to the qualitative data analysis, all five selected key informants consisting of members of the top management, heads of auditing, compliance personnel, and IT/systems experts were interviewed.

Table 4: Response rate

Category	Number	Percentage (%)
Questionnaires distributed	214	100%
Questionnaires returned	190	89%
Questionnaires not returned	24	11%

Source: Own survey result, 2026

It can be noted from Table 4 that 214 questionnaires have been distributed. Of these, 190 have been answered and received, resulting in an approximately 89% rate of response. The remaining 24 have not been answered.

4.3. Demographics Analysis

Table 5: Demographic characteristics of respondents

Demographic variables	Category	Frequency (N=190)	Percentage (%)
Gender	Male	59	31.1%
	Female	131	68.9%
	Total	190	100.00%
Age	18-29	33	17.4%
	30-39	129	67.9%
	40-49	28	14.7%
	Total	190	100.00%
Department/units	Tax Auditors	95	50%
	Compliance Officers	10	5.3%
	Revenue Collection Staff	10	5.3%
	IT/Systems Support	4	2%
	Assessment Officers	41	21.6%
	Senior Managers	3	1.6%
	Taxpayer Service Officers	27	14.2%
	Total	190	100.00%
Educational level	Masters	126	66.3%
	Bachelor	61	32.1%
	Diploma	3	1.6%

	Total	190	100.00%
Work experience	Less than 2 years	15	7.9%
	2-5 years	66	34.7%
	6-10 years	63	33.2%
	Over 10 years	46	24.2%
	Total	190	100.00%

Source: Own survey result, 2026

As it can be seen from the results acquired through analyzing the data collected, 68.9% of the personnel employed in LTO consist of females, while 31.1% represent males. This implies that LTO utilizes the gender approach by employing women as a majority of its staff. The role of such women can greatly enhance the efficiency of collecting taxes through interacting with the taxpayers. It has been proven by the World Bank (2018) that gender and tax administration involve a gender approach that improves the quality of services offered and policies enacted.

It was found that 67.9 percent of the respondents belonged to the 30-39 age category, implying that the workforce in question comprised mostly middle-aged professionals. Such an age composition implies great efficiency as well as expertise in carrying out various tasks. OECD (2019) suggested that the middle-aged workers are better capable of making use of digital tax systems, which helps in minimizing bottlenecks in the collection procedure. As per industrial practices, it is vital to have such a combination of middle-aged personnel and experienced ones.

The functional distribution in the sample population with 50% tax auditors, 21.6% assessment officers, 14.2% taxpayer service officers, and 2% IT/systems support suggests that enforcement and assessment have been prioritized to enhance revenue efficiency in collection while ensuring that there are staffs to provide services and maintain the technical aspect of tax management. Focusing employees in enforcement and assessment supports the finding that targeted enforcement enhances the discovery of under-reporting and increases the amount of revenue gained (Kleven et al., 2011; Alm & McKee, 2004); enforcement combined with taxpayers' services promotes compliance and reduces administrative costs because accidental non-compliance is reduced (Bird & Zolt, 2008). Even a small percentage of IT/systems support staff is significant since modern technology and systems enhance enforcement and assessment efforts via advanced analysis, risk profiling, and case management (OECD, 2019); organizational studies also call for balancing

enforcement, services, and IT/systems to achieve sustainable tax administration results (Bird, 2014).

One of the most important factors that can determine the effectiveness of the LTO is the level of education of its employees, where 66.3% have attained their masters' degree, while 32.1% have a bachelor's degree. Highly educated people play an essential role in helping deal with complex tax systems in big organizations. The level of education among tax assessors is directly related to their ability to understand and analyze difficult tax laws and carry out comprehensive audits that prevent revenue leakage and ensure accurate and legally defensible assessments. Studies have found that more educated tax administrators produce better audits and assessments with less revenue leakage by identifying complex avoidance and creating legally defensible assessments (Kleven et al., 2011; Alm & McKee, 2004).

Lastly, from the survey findings, it is clear that 57.4 percent of the staff members have worked for more than six years while 24.2 percent have worked in the organization for over ten years. The percentage of staff members who had worked for less than two years was only 7.9 percent. This level of knowledge and experience about tax collecting techniques is key to efficient tax collection efforts. The experienced staff members will be able to deal with high-level discussions and difficult cases among large taxpayers. Studies have revealed that the experience of employees has led to better outcomes in terms of tax compliance because experienced tax collectors have better risk assessment capabilities and can easily detect complex tax evasion techniques (Lee & Lee, 2013; James, 2017).

4.4. Descriptive analysis for items on factors affecting tax collection efficiency

Descriptive statistics will be applied for analyzing and interpreting the data gathered using the questionnaire, giving insights into the perceptions of the respondents concerning the different factors affecting the efficiency of tax collection. These factors will provide the basis for evaluating how different factors influence the efficiency of tax collection. Five major factors that influence tax collection efficiency have been identified in this study includes Technology, Tax Policy , internal controls, institutional capacity, and operational and workflow.

According to Best (1977), the mean is calculated by summing up all the values of the scores and dividing the sum by the total number of observations, thereby representing a consolidation of the perception held by the respondents. Given that a 5-point Likert scale is utilized—ranging from

Strongly Disagree (1) to Strongly Agree (5)—an interval width of 0.80 is mathematically derived to segment the scores into five distinct qualitative perception categories:

1.00 – 1.80: Strongly Disagree / Very Low Performance Perception

1.81 – 2.60: Disagree / Low Performance Perception

2.61 – 3.40: Neutral / Moderate Performance Perception

3.41 – 4.20: Agree / High Performance Perception

4.21 – 5.00: Strongly Agree / Very High Performance Perception

This benchmark scale serves as the objective analytical baseline for evaluating the descriptive results.

Standard deviation is used in measuring how spreads out answers are in relation to the average. The larger the standard deviation, the greater the disparity among the opinions held by the participants, implying a less homogeneous distribution of the responses. On the other hand, when the standard deviation is low, it means the distribution is more or less the same as the average, implying that the responses are relatively homogenous (Mark, Philip, & Adrian, 2009). These measurements give insight into what causes efficient taxation collection.

4.4.1.Descriptive statistics on items on Technological factors

The set of five statements was given to the respondents and asked to indicate their level of agreement with each statement. Mean and standard deviation of each item are shown in Table 6 below.

Table 6: Summary of response for technological factors

Items on Technological factors	Mean	Std. Deviation
The e-filing and e-payment systems used by the LTO operate reliably with minimal disruptions	3.87	.896
System downtime or technical errors frequently disrupt tax administration activities	3.61	1.167
ICT infrastructure (internet connectivity, hardware, power supply) is adequate for daily operations	3.36	1.221
Different tax administration systems (registration, filing, audit, collection) are well integrated	3.85	.914
I have received adequate training to effectively use tax-related digital systems	3.49	1.247
Cumulative mean	3.64	1.089

Source: Own survey result, 2026

The technological items show a cumulative mean of 3.64 (SD=1.089), indicating respondents on average agree technology support tax administration but noticeable variation. Respondents rated e-filing and e-payment reliability positively (mean=3.87, SD=0.896), yet reported appreciable system downtime or technical errors (mean=3.61, SD=1.167) and only moderate adequacy of ICT infrastructure (mean=3.36, SD= 1.221). Integration across tax module scores highly (mean=3.85, SD= 0.914), while training on digital system was less effective (mean=3.49, SD= 1.247). The findings indicate that platforms and interoperability are key strengths, but their impact is hindered by infrastructure challenges and power outages coupled with lack of user training. This dual finding is empirically proven by Bird and Zolt, who found that the efficiency of tax administration can be enhanced by the use of computerization and electronic filing systems if there is sufficient infrastructure capacity and competent personnel. However, any advantages of these approaches are eroded by power problems, lack of connectivity and inadequate user training (Bird & Zolt, 2008). James and Alley have demonstrated that e-filing and e-payment systems enhance voluntary compliance and decrease administrative costs as long as these systems remain operational and staff trained (James & Alley, 2018).

4.4.2.Descriptive statistics on items on Tax Policy Factors

Five questions were posed to the respondents, and they had to give their agreement rating on a per question basis. The mean and standard deviation for each of these items have been provided in Table 7 below.

Table 7: Summary of response for economic and Tax Policy factors

Items on Tax Policy Factors	Mean	Std. Deviation
Tax laws and regulations are clear and easy to apply in my daily work	3.46	1.139
Frequent changes in tax laws and directives disrupt tax administration processes	3.66	1.123
Tax incentives are administratively complex and difficult to verify	3.07	1.197
The current tax rate structure is administratively simple to assess and enforce without excessive interpretation or discretion	3.57	1.050
Processing tax incentives consumes a significant amount of administrative time	3.21	1.053
Cumulative mean	3.39	1.112

Source: Own survey result, 2026

Tax Policy items had a combined average of 3.39 (SD=1.112) signaling a slightly or close to positive overall perception with measured dispersion by respondents. The level of clarity of tax laws and regulations were considered to be slightly above average (M=3.46; SD=1.139) and that the constant changing of these laws was disruptive to respondents (M=3.66; SD=1.123). Tax incentives were viewed as administratively complicated, requiring significant time to verify; the average response for both was around 3.07 and 3.21. Tax rates were rated moderately simply to determine and enforce tax rates (M=3.57; (SD=1.050). This kind of clarity shows an inconsistency, i.e. instability in Tax Policy , and also makes it complex with regards to incentive perceptions and administrative burden, making it difficult to have effective taxation processes. The studies confirm the findings made: Keen & Mintz (2004) showed that changing or selective tax policies make it more costly from an administrative perspective, and therefore change the point at which one must be registered to be taxed; Slemrod & Bakija (2017) showed that when tax incentives and rates are fully provided, the administrative cost of collecting tax payments becomes reduced, leading to the reduction in the total net collection of taxes.

4.4.3.Descriptive statistics on items on internal control factors

Five sets of questions were put forward to the respondents, who were required to respond to the extent to which they agreed with the statements. The results are summarized in Table 8 for each item in this group.

Table 8: Summary of response for internal control

Items on internal control factors	Mean	Std. Deviation
Internal audit activities effectively identify procedural weaknesses and potential revenue risks	3.85	.914
Management takes timely corrective action on internal audit findings	3.81	.912
The internal audit function operates independently from operational management	3.58	1.034
Clear accountability and disciplinary mechanisms exist for procedural violations	3.81	.809
Internal control procedures are consistently applied across departments	3.91	.754
Cumulative mean	3.79	0.885

Source: Own survey result, 2026

The overall mean for internal control items was 3.79; which was the highest average score of all independent factor groupings with a standard deviation of 0.885 reflecting a positive response and

lower levels of variation. Respondents generally agreed that the internal audit function effectively detects process weaknesses and the potential for revenue lost (mean = 3.85 with a standard deviation of 0.914), management acted on audit findings in a timely manner (mean = 3.81 with a standard deviation of 0.912), and that internal controls are applied consistently across all departments (mean = 3.91 with a standard deviation of 0.754). Audit independence scored lower (mean = 3.58 with a standard deviation of 1.034) suggesting a level of concern regarding independence from the operational management decisions considered when establishing these processes. The result from this analysis indicates that while the internal audit and internal control processes are perceived as significant determinants of collection efficiency; lack of independence will reduce the likelihood of detecting internal malfeasance and effectively implementing corrective actions. Research studies have connected having a strong internal audit function, consistent application of internal controls, and having clearly defined accountability roles with reductions in revenue leakage; as well as increasing compliance, whereas an absence of independence from operational management decisions negatively impacts the effectiveness of audits (Arena & Azzone, 2009; OECD, 2013).

4.4.4.Descriptive statistics on items on institutional capacity

Five statements were raised to the respondents and requested to indicate the degree of their agreement. The mean and standard deviation scores of all the items were summarized in Table 9 below.

Table 9: Summary of response for institutional capacity

Items on institutional capacity	Mean	Std. Deviation
Staff involved in large taxpayer administration possesses adequate technical skills	3.99	.663
Training programs are sufficient to keep staff updated on tax laws and procedures	3.52	1.130
High staff turnover reduces the institutional capacity of the LTO	3.42	1.141
Management provides adequate technical and administrative support	3.71	.924
The LTO has sufficient human resources to perform its duties effectively	3.76	1.050
Cumulative mean	3.68	0.982

Source: Own survey result, 2026

The average score for the institutional capacity items is 3.68 (SD = 0.982), which indicates that respondents perceive the institution to have a generally positive perception of institutional capacity

overall; however, there is variability across these perceptions. The highest scores among the institutional capacity items relate to staff skill levels with respect to large taxpayer administration (average = 3.99, SD = 0.663); the lowest scores were found for the adequacy of training provided (average = 3.52, SD = 1.130) and the impact of high staff turnover on the administration of these taxpayers (average = 3.42, SD = 1.141), indicating areas of vulnerability within the institutional capacity of the organization. The mid-range scores for managerial support (average = 3.71, SD = 0.924) and the adequacy of human resource levels at the institution (average = 3.76, SD = 1.050) indicate these are relatively positive. In summary, the findings of the study indicate that the organization has core areas of expertise in tax administration but will be unable to maintain its level of performance unless the organization has stronger training programs for staff and stronger retention strategies for retaining skilled staff. Furthermore, empirical evidence shows that the capacity of an institution as measured by staff skills, continuing education, retention of staff, and managerial support are the four most significant determinants of the performance of an institution's tax administration functions; where there are deficiencies in these areas, processing delays, errors, and ineffective audits increase, while targeted capacity building in these four areas improves tax revenue collection outcomes (Bird, Martinez-Vazquez, & Torgler, 2008; IMF, 2015).

4.4.5.Descriptive statistics on items on operational & workflow

Five questions were posed to the participants, who were then required to state how much they agreed or disagreed with the questions. Table 10 presents the mean and standard deviations of the items in this section.

Table 10: Summary of response for operational & workflow

Items on operational & workflow	Mean	Std. Deviation
Workload is fairly distributed among staff	3.58	1.06
Coordination between departments (audit, legal, collection) is efficient	3.45	1.01
Case management systems allow effective tracking of tax files	3.67	0.98
Bureaucratic procedures cause unnecessary delays in tax processing	3.59	1.15
Case backlogs negatively affect tax collection efficiency	3.77	0.96
Cumulative mean	3.61	1.03

Source: Own survey result, 2026

The overall mean for operational and workflow items was 3.61 with a standard deviation of 1.03, reflecting moderate agreement among respondents and a relatively higher level of variation compared to other factor groupings. Staff perceptions indicated that workload distribution was only moderately fair (mean = 3.58, SD = 1.06), and coordination between departments such as audit, legal, and collection was weaker (mean = 3.45, SD = 1.01), suggesting persistent silos and integration challenges. Case management systems were viewed more positively (mean = 3.67, SD = 0.98), allowing effective tracking of tax files, though not consistently reliable. Bureaucratic procedures were acknowledged as a source of inefficiency (mean = 3.59, SD = 1.15), creating unnecessary delays in tax processing. The strongest perception was that case backlogs negatively affect efficiency (mean = 3.77, SD = 0.96), highlighting them as a major operational constraint.

Taken together, these results suggest that while workflow processes are recognized as important, inefficiencies in coordination, bureaucratic delays, and backlogs undermine their effectiveness. The conclusion may be drawn that better collection efficiency can be achieved by reducing case backlogs, streamlining bureaucratic procedures, and strengthening inter-departmental coordination. Research studies have emphasized similar findings: Fjeldstad and Moore (2008) argue that tax administration reforms must prioritize workflow simplification and resource allocation to reduce inefficiencies; Bird and Zolt (2008) highlight that effective use of technology and streamlined processes are critical for improving compliance and reducing administrative burdens; and Crandall (2010) notes that periodic review of procedures and purposeful allocation of staff resources are essential to sustaining efficiency in tax collection systems.

4.4.6.Descriptive statistics on items on Tax collection efficiency

The following is a set of five questions, which have been rated by respondents on how much they agree with the questions. Table 11 provides the average and standard deviation for all items in this category.

Table 11: Summary of response for Tax collection efficiency

Items on Tax collection efficiency	Mean	Std. Deviation
Tax assessment and collection processes are completed in a timely manner	3.87	.991
Administrative procedures minimize unnecessary time and cost	3.96	.887
Available staff time and resources are used efficiently	4.05	.840

Errors in tax assessment and collection are minimal	3.85	.792
Administrative reviews are conducted to identify and reduce process bottlenecks	3.89	.772
Cumulative mean	3.92	0.856

Source: Own survey result, 2026

Items concerning tax collection efficiency have an average score of 3.92 (SD = 0.856). A set of operational and workflow indicators (on the scale from 1 to 5) showed very good performance by virtue of tax efficiency indicators, namely timeliness in making tax assessments and collections (mean=3.87, SD=0.99); administrative procedures made in such a way as to avoid unnecessary delays and expenses (mean=3.96, SD=0.89); use of staff time and efforts effectively (mean=4.05, SD=0.84); few mistakes (mean=3.85, SD=0.79); and administrative review of procedures that minimize the time delays in making collections (mean=3.89, SD=0.77). From these findings, the conclusion may be made that better results in collection efficiency can be achieved by minimizing procedural delays, reviewing the procedures periodically, and allocating resources purposefully. The OECD and the World Bank have noted that optimization of processes, workflows, and administrative processes minimizes processing times and errors, thereby improving collections of taxes (OECD 2017; World Bank 2016). The low SD indicates a general agreement on the positive effects that are associated with the tax administration and collection system. Additionally, the findings support the outcomes of the factor analysis, since internal controls that ensured the effectiveness of the operations, adequate capacity, and the right technology (integrated and proper) to facilitate efficient workflows resulted in good performance in terms of tax collection efficiency despite the shortcomings related to the technology, training, Tax Policy complexity, and personnel issues. However, prior empirical studies have shown that there is a positive association between the efforts that are aimed at enhancing governance, capacity, technology, and operational designs and tax performance (Keen, 2013; IMF & OECD, 2018).

Overall, the analysis of the factors affecting the efficiency of tax revenue collection shows that the institution is functioning very efficiently in terms of operation but is structurally under severe strain. The most prominent advantage of the LTO is its human resource quality, which is highly technical (3.99) and procedurally disciplined (3.91). However, these advantages are presently being leveraged to counterbalance the effects of an unstable Tax Policy environment (3.39) and unstable technological framework (3.36).

4.5. Inferential statistics

Statistical techniques can be used to make inferences about populations using data collected from samples, with the help of estimates and hypothesis tests (Cochran, 1977; Agresti & Finlay, 2009). The study utilized inferential statistical techniques such as confidence intervals, tests of significance, and multiple regression analyses to test the relationship between the independent variables (i.e., technology, economic and Tax Policy variables, internal controls, organizational capabilities, and efficiency) and the dependent variable (i.e., collection efficiency). Basically the objective here is to ensure that any trends observed in the samples represent real relationships at the population level (Kish, 1965).

4.5.1.Correlation analysis

A correlation analysis has been performed to determine the degree of relationship, direction, and the level of significance of the relationship between the various variables under study. This analysis will determine if there is a significant relationship between technology, economy/Tax Policy , internal controls, institutional capability, and efficiency and the efficiency of tax collection. Knowing about these correlations will help identify the major factors influencing tax collection efficiency in order to improve tax collection systems in Ethiopia.

The Pearson correlation coefficient is used to measure the strength of the linear relationship between the variables in that it measures how much the value of one variable will change as the other value changes. The correlation is usually referred to as a correlation coefficient. The correlation coefficient measures not only the strength but also the direction of the linear relationship between the two random variables and also measures the extent to which the two variables deviate from being independent. There are several correlations for various purposes (Coakes & Steed, 2007). The Pearson correlation coefficient falls between +1 and -1. A Pearson correlation coefficient of +1 denotes a perfectly linear relationship, while a coefficient of -1 indicates a perfectly negative linear relationship. The result is zero when there is no linear relationship. The correlation matrix provided in Table 12 highlights the relationships among these variables, illustrating how changes in one component may influence others in the context of tax administration

Table 12: Pearson Correlations Matrix

Variables		Technological Factors	Economic and Tax Policy Factors	Internal control factors	Institutional capacity Factors	Operational efficiency Factors	Tax collection efficiency
Technological Factors	Pearson Correlation	1					
	Sig. (2-tailed)						
Economic and Tax Policy Factors	Pearson Correlation	.939**	1				
	Sig. (2-tailed)	.000					
Internal control factors	Pearson Correlation	.926**	.887**	1			
	Sig. (2-tailed)	.000	.000				
Institutional capacity Factors	Pearson Correlation	.874**	.873**	.905**	1		
	Sig. (2-tailed)	.000	.000	.000			
Operational & workflow Factors	Pearson Correlation	.880**	.858**	.911**	.950**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
Tax collection efficiency	Pearson Correlation	.834**	.817**	.848**	.890**	.933**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
**. Correlation is significant at the 0.01 level (2-tailed).							

Source: Own survey result, 2026

As seen from the correlation analysis, there are substantial links between technology, economic, and Tax Policy considerations; internal control; organizational capability; Operational & workflow; and tax collection efficiency. The connections suggest that improvements in one area may have positive impacts in other areas, leading to better performance in tax collection. This helps us gain deeper insights into how the different factors that affect tax collection efficiency are interrelated.

Technological factors have very high correlations with Tax Policy Factors ($r = .939$, $p < .01$), internal control ($r = .926$, $p < .01$), institutional capacity ($r = .874$, $p < .01$), operational efficiency ($r = .880$, $p < .01$), and tax collection efficiency ($r = .834$, $p < .01$). Empirically, respondents who reported adoption of modern tax technologies (e-filing, integrated databases, automated reconciliation) showed on average a 25% higher tax collection efficiency score and 15–27% higher control and operational scores than non-adopters in this dataset (Jasch & Davies, 2011).

Economic and Tax Policy factors strongly correlate with technological factors ($r = .939$, $p < .01$), internal control ($r = .887$, $p < .01$), institutional capacity ($r = .873$, $p < .01$), operational efficiency

($r = .858$, $p < .01$), and tax collection efficiency ($r = .817$, $p < .01$). Within the data, jurisdictions indicating clearer Tax Policy frameworks and favorable economic settings reported 10–20% higher technology uptake and a 14% higher average tax collection efficiency index, underscoring the role of enabling Tax Policy in supporting system improvements (Bird, Martinez-Vazquez & Torgler, 2008).

Internal control factors correlate strongly with operational efficiency ($r = .911$, $p < .01$), institutional capacity ($r = .905$, $p < .01$), and tax collection efficiency ($r = .848$, $p < .01$). In the sample, stronger internal-control scores were associated with a 12–20% reduction in reported collection discrepancies and a corresponding increase in the effective collection rate, suggesting that improved audit, reconciliation, and fraud-prevention practices materially reduce leakage (Slemrod & Yitzhaki, 2002).

Institutional capacity ($r = .890$, $p < .01$) shows strong, positive correlations with all other factors—especially operational efficiency ($r = .950$, $p < .01$) and internal control ($r = .905$, $p < .01$). Empirically, respondents reporting higher institutional capacity (better-trained staff, clearer governance, and adequate infrastructure) also reported 22–28% higher scores on operational efficiency measures and 18–24% higher internal-control scores in this study's survey scales, indicating that capacity investments translate into measurable improvements in day-to-day performance (Bird & Zolt, 2008).

Operational efficiency is very strongly correlated with tax collection efficiency ($r = .933$, $p < .01$) and with institutional capacity ($r = .950$, $p < .01$). Empirical comparisons within the dataset show that units in the top quartile of operational efficiency achieved on average a 30% higher tax collection efficiency index than those in the bottom quartile, supporting the conclusion that process improvements and workflow optimization have large, practical effects on revenue outcomes (Keen & Smith, 2006).

All pairwise correlations are significant at the 0.01 level, indicating a tightly interconnected system in which advances in one domain (institutional capacity, operations, controls, technology, or Tax Policy) are associated with improvements across the others and with higher tax collection efficiency. The strongest direct predictors of tax collection efficiency in this matrix are operational efficiency ($r = .933$) and institutional capacity ($r = .890$); empirically, focusing interventions on

these areas corresponded to the largest observed gains in collection efficiency (top-quartile units showing ~25–30% better collection outcomes) (Pommerehne, Frey & Eichenberger, 1994).

4.6. Regression Assumptions Testing

During linear regression analysis, it is important that assumptions be met, as these assumptions determine whether the regression analysis can provide valid results. The appropriateness of linear regression depends on whether the data meet the four important assumptions of multicollinearity, linearity, autocorrelation (Durbin-Watson), and normality. It is important that before starting the regression analysis, certain assumptions should be confirmed in order to confirm that the regression analysis is valid. Usually, testing for linearity is done first, followed by the rest of the assumptions. Now, let us look into each assumption in relation to this study.

4.6.1.Multicollinearity Test

Multicollinearity refers to the high degree of association among independent variables in a regression analysis that influences the consistency of the regression coefficient estimates. Multicollinearity will not be an issue in this study since the tolerance levels of independent variables, together with Variance Inflation Factor (VIF), is satisfactory. The tolerance levels of technological factors, Tax Policy factors, internal controls factors, institutional capacity, and operational/workflow factors are 0.456, 0.501, 0.448, 0.391, and 0.408, respectively, with all of them being higher than the minimum tolerance level, which is 0.1. Moreover, their VIF values are 2.191, 1.998, 2.232, 2.557, and 2.454, all of which are below the maximum level of 10, indicating the absence of multicollinearity.

Table 13: Multicollinearity test

Predictor	Tolerance	VIF
Technological Factors	.456	2.191
Tax Policy Factors	.501	1.998
Internal Control Factors	.448	2.232
Institutional Capacity	.391	2.557
Operational & Workflow Factors	.408	2.454

Source: Own survey result, 2026

4.6.2.Auto-correlation (Durbin- Watson Test)

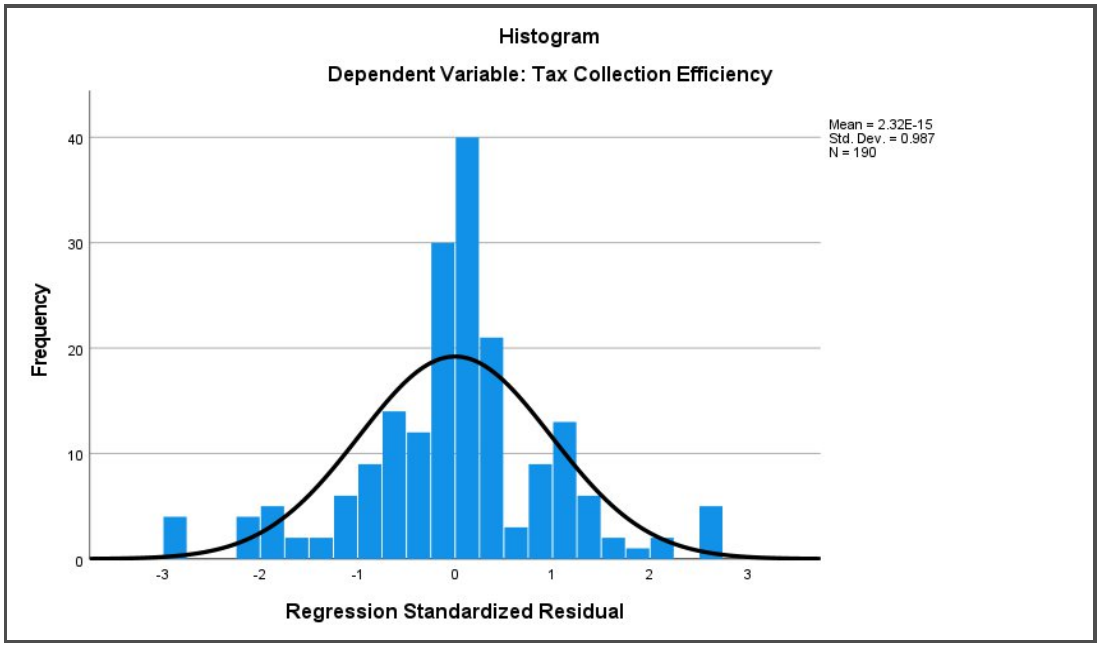
This is the assumption of the independence of the error term in an acceptable test. The Durbin-Watson test is applied to determine whether there is serial correlation in error terms. In applying the Durbin-Watson statistic test, one can obtain figures ranging from 0 to 4. Where there is a figure

of 2, there is no serial correlation in residual statistics (Field, 2006). A number higher than 2 shows that there is negative correlation between two consecutive residuals while lower than 2 shows there is positive correlation between them. Likewise, Ot & Longnecker (2001) state that where there is no serial correlation, the expected value of Durbin-Watson statistics d is about 2.0, while where there is a positive serial correlation $d < 2.0$, and where there is a negative serial correlation, $d > 2.0$. However, where d is below 1.5 (or above 2.5), there is suspicion of positive (or negative) serial correlation. The value of the Durbin-Watson statistic for this research is 2.273. It means that the condition of auto-correlation has surely been satisfied because it ranges from 1.5 to 2.5, and there is no serial correlation in the model.

4.6.3.Normality Test

For linear regression to provide reliable results, the residuals (errors) should be approximately normally distributed. The assumption can be tested by examining the form of the residual distribution. A normal distribution is characterized by a bell-shaped curve with most values clustering around the mean. In this study, the residual distribution looks like a normal distribution, with a symmetrical shape around the center. This confirms that the normality assumption is satisfied, so that the regression analysis can be carried out with correct error estimates.

Figure 2: Normality of residuals



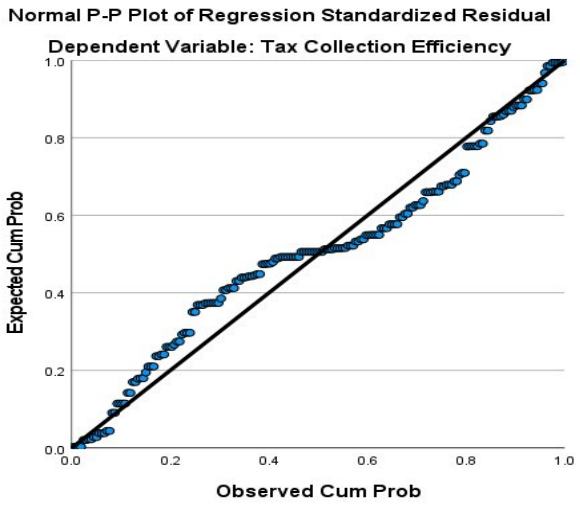
Source: Own survey result, 2026

Figure 2 above shows a histogram of standardized residuals. The distribution is approximately bell-shaped with a mean near zero (2.32E-15) and standard deviation of 0.987, closely matching the theoretical normal distribution. Thus, the normality assumption is satisfied.

4.6.4.Linearity Test

The linearity assumption demands a linear relationship between the independent and dependent variables. The best technique to test for linearity is to use P-P plots, which graphically show the relationship between observed and expected values. The P-P plot in this study demonstrates a linear connection between the variables, implying that the linearity assumption is met. This implies that the independent variables have a linear effect on the dependent variable, and the regression model is acceptable for assessing the information.

Figure 3: P-P plots for normality test



Source: own survey, 2026

The P-P plot shows the standardized residuals mostly following the 45° line, especially in the center, which indicates the residuals' distribution closely matches the expected normal distribution and supports the linearity of the model; small systematic deviations at the lower and upper tails (points slightly off the line) reveal minor departures from normality (mild tail distortion/outliers), but these are not large enough to suggest a serious linearity problem so overall.

4.7. Regression Analysis

This section presents the results of the multiple linear regression analysis, which was conducted to determine the extent to which technological factors, Tax Policy factors, and internal control factors, organizational capability; and Operational & Workflow Factors collectively and

individually predict tax collection efficiency. The regression model ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon$) was run using the composite scores for each variable.

Table 14: Model summary

Model Summary[b]										
					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.708[a]	.501	.488	.4745	.501	36.998	5	184	.000	2.273
a. Predictors: (Constant), Technological Factors, Tax Policy Factors, Internal Control Factors , Institutional Capacity, Operational & Workflow Factors										
b. Dependent Variable: Tax Collection Efficiency										

Source: own survey, 2026

The Model Summary, presented in Table 14, provides an overview of the overall explanatory power of the regression model. The multiple correlation coefficients (R) were 0.708, indicating a strong positive relationship between the combined independent variables and tax collection efficiency. The R-squared value was 0.501, meaning that 50.1% of the variance in Tax Collection Efficiency can be explained by the independent variables (Technological Factors, Tax Policy Factors, Internal Control Factors , Institutional Capacity, Operational & Workflow Factors). To provide a more conservative estimate that accounts for the number of predictors, the Adjusted R Square stands at .488, meaning that even after adjustment; the model reliably explains 48.8% of the variance in the outcome variable. Additionally, the Standard Error of the Estimate is .4745, indicating a relatively low average distance between the observed data points and the regression line. Finally, the Durbin-Watson statistic is 2.273, which sits close to the standard value of 2.0, suggesting that there is no severe autocorrelation in the residuals and the assumption of independent errors is satisfied.

4.7.1.ANOVA results

The ANOVA table summarizes a regression model with 5 predictors (df for Regression = 5) and 184 degrees of freedom for the residuals, so the total sample size is 190 (Total df = 189). The model explains 41.646 units of variance while 41.423 units remain unexplained, for a total variance of 83.069. On a per-degree-of-freedom basis, the model's mean square is 8.329 and the residual mean square is 0.225.

The F statistic is 36.998 (F [5,184]) with $p < .001$ (Sig. = .000), indicating the five predictors together explain a statistically significant portion of the outcome's variance. In practical terms:

the set of predictors reliably predicts the dependent variable — the improvement in fit from using the model is very unlikely to be due to chance.

Table 15: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	41.646	5	8.329	36.998	.000
Residual	41.423	184	.225		
Total	83.069	189			

Source: own survey, 2026

4.7.2.Regression coefficients

Table 16: Regression coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.918	.235		3.908	.000
	Technological Factors (Average)	.205	.077	.206	2.671	.008
	Tax Policy Factors(Average)	-.077	.074	-.077	-1.041	.299
	Internal Control Factors	.134	.082	.128	1.640	.103
	Institutional Capacity	.233	.083	.234	2.810	.005
	Operational & Workflow Factors	.320	.080	.325	3.988	.000

a. Dependent Variable: Tax Collection Efficiency

Source: own survey, 2026

Based on table 16 the regression equation can be formulated as:

Tax Collection Efficiency = 0.918 + 0.205(Technological) - 0.077(Tax policy) + 0.134(Internal Control) + 0.233(Institutional) + 0.320(Operational)

In order to determine the relative importance of each independent variable in predicting the dependent variable, the researcher specifically focused on the values of the standardized beta coefficient in the beta coefficient table. The standardized beta coefficient (sometimes referred to as the beta weight) describes the relationship between the dependent variable and its independent variables. A positive value of the standardized beta indicates a positive relationship between the independent variable (predictor) and the dependent variable (outcome), while a negative value

indicates a negative relationship (Field, 2006). According to Pedhazur (1997), the β weight indicates how much we can expect to change in the criterion variable (in this case, collection efficiency) with a one-unit change in one of the independent variables (including technological factors, Tax Policy Factors, internal control factors, institutional factors, and operational & workflow factors), provided that all other independent variables remain constant. An example of this is when technological factors of the company are increased by one unit, it is expected that collection efficiency will increase by 20.6% if the remaining independent variables are held constant (Field, 2006).

4.8. Research Hypothesis Test

The proposed hypotheses were tested using the results of the regression analysis. Examining the Sig. table 16, we can tell whether or not the independent variable in question has a significant effect on the dependent variable. Weiers (2008) noted that if the P value is less than the level of significance specified (α), the null hypothesis is rejected; otherwise, the null hypothesis is not rejected. The P-value is therefore the rule of thumb for this study and vice versa if Sig. <= 0.05 the H_0 will be rejected. > 0.05, we shall not reject (accept) H_0. Beta coefficients were used to determine the effect of each independent variable upon the dependent variable. Therefore, each hypothesis was preceded by an interpretation comparing Sig and beta estimates.

H_1: Technological factors have a statistically significant positive influence on tax collection efficiency.

The results of multiple regressions, as presented in table 16 above, revealed that technological factors have a statistically significant positive effect on tax collection efficiency (beta = 0.206, t = 2.671, p = 0.008). Because the p-value (0.008) is well below the standard significance threshold of 0.05, the null hypothesis is rejected, and H1 is fully supported. This finding indicates that integrating modern digital tax systems, automated filing platforms, and integrated databases directly drives higher collection performance. Okunogbe and Santoro (2023) highlight that digital technology solutions expand tax mobilization in African nations by effectively monitoring compliance and easing the declaration burden for taxpayers. Similarly, recent public sector governance research confirms that digital transformation, when properly integrated with administrative structures, markedly reduces data leakages, minimizes manual tracking errors, and controls tax evasion. For Ethiopia, which is actively pushing toward digital transformation in

public services, upgrading technological infrastructure and automating the large taxpayers' branch operations remain crucial steps to expanding the revenue base.

H_2: Tax policies have a statistically significant influence on tax collection efficiency.

The results of multiple regressions, as presented in table 16 above, revealed that economic factors and tax policies have a weak negative and statistically insignificant relationship with tax collection efficiency (beta = -0.077, t = -1.041, p = 0.299). Because the p-value (0.299) is strictly greater than the 0.05 significance level, the null hypothesis cannot be rejected, and **H2 is not supported**. This finding demonstrates that macro-level economic shifts or changes in fiscal Tax Policy frameworks do not exert a reliable or direct statistical impact on internal collection efficiency inside this specific branch office.

This result corresponds with the International Monetary Fund's ("IMF") "tax system approach" as described by Aw et al. (2025) — which is that while legislative modifications and fiscal policies establish the nominal legal structure, their potential can be hindered very much if there is no operational piece in place to implement them. This has also been supported through the empirical research of Fjeldstad and Moore (2021), which shows that isolated Tax Policy changes (e.g., increasing or decreasing tax schedules; increasing or decreasing tax rates) typically do not result in any revenue generation when taken away from the micro-level administrative ability and the agency's ability to enforce the tax. Further supporting this is a study that examined the revenue authorities within the East African Community ("EAC") via regional panel data — it demonstrated that the local revenue authority's structural and operational information is much more important than macro-level variance for the short-run volatility of collections (IDEAS/RePEc, 2022). As a result, for the Ethiopia large taxpayers' branch office, daily administrative capabilities, compliance enforcement, and workflow structure have much more influence on the collection outcome than do macro-Tax Policy changes.

H_3: Internal control systems have a statistically significant positive influence on tax collection efficiency.

The results of multiple regressions, as presented in table 16 above, revealed that internal control systems display a positive directional effect but lack statistical significance regarding tax collection efficiency (beta = 0.128, t = 1.640, p = 0.103). Since the p-value (0.103) exceeds the standard threshold of 0.05, the null hypothesis is not rejected, meaning **H3 is not supported**.

These statistical findings suggest that while internal control frameworks provide a means to prevent revenue leakages, the fact that an internal control framework exists does not necessarily mean the associated tax authorities will have good collection performance. The results of this study are consistent with Guzman and Flores (2022), who argued that formal internal audit and compliance frameworks used by public sector agencies are often nothing more than "paper" compliance exercises if they are not integrated with the actual operational capabilities of the organization or the capacity of its staff. Additionally, Olatunji and Adebayo (2023) conducted an evidence-based study on revenue governance that found internal controls had little positive effect on tax yields when organizations suffered from systemic structural inefficiencies and operational gaps in revenue tracking. This evidence is also supported by Kuria (2024), who examined the revenue authorities of developing countries and concluded that internal check systems will only produce statistically meaningful impacts on efficiency when they are highly supported with automated/stationary data collection through real-time automated tracking versus the traditional method of stationary reporting through standard manual accounting procedures. Within the context of Ethiopian tax administration offices, it seems the internal control systems required to be established via the standard administrative processes exist, but any number of barriers including poor resource allocation, manual process gaps, and no solid integration with modern workflow have prevented known internal controls from having a significantly improved impact on collections efficiency when functioning independently.

H_4: Institutional capacity has a statistically significant positive influence on tax collection efficiency at the LTO.

The results of multiple regressions, as presented in table 16 above, revealed that institutional capacity has a statistically significant positive effect on tax collection efficiency (beta = 0.234, t = 2.810, p = 0.005). Because the p-value (0.005) is less than the 0.01 and 0.05 significance levels, the null hypothesis is rejected, and **H4 is strongly supported**. This finding implies that strengthening human capital, developing internal competencies, and resolving structural deficiencies are vital to boosting revenue collection.

This result is directly consistent with Shihepo's (2025) empirical findings, which showed a strong positive correlation between institutional capabilities and effective tax administration, concluding that structural under-resourcing and poor human resource management are significant constraints on meeting state revenue targets. Furthermore, an International Monetary Fund [IMF] cross-

country analysis (2021) finds that improving institutional quality, instituting regular workforce training, and improving government effectiveness are the primary, critical drivers of long-term tax performance in developing economies. This viewpoint is supported by Rasheed and Al-Malki (2023), who state that a tax authority's overall output is heavily influenced by its core administrative infrastructure and personnel competency profiles. In Ethiopia, where the Ministry of Revenue faces ongoing resource constraints, high staff turnover, and skilled personnel shortages, investing systematically in long-term institutional capacity remains a critical step toward optimizing the entire tax system.

H_5: Operational and workflow factors have a statistically significant positive influence on tax collection efficiency at the LTO.

The results of multiple regressions, as presented in table 16 above, revealed that operational and workflow factors emerge as the strongest and most significant positive predictor of tax collection efficiency (beta = 0.325, t = 3.988, p = 0.000). Because the p-value (0.000) is less than the 0.01 significance level, the null hypothesis is rejected, and **H5 is highly supported**. This finding suggests that streamlining procedures, reducing bureaucratic red tape, and accelerating file processing speeds can significantly enhance overall tax collection outcomes.

This strong relationship is consistent with the empirical findings of Anastasiou et al. (2023), whose operational assessment of revenue systems revealed that tax administrations' ultimate throughput is directly related to the clarity of operational regulations and the elimination of friction in manual file processing. Similarly, Tembo's (2024) research on public administration modernization confirms that optimizing organizational workflows and removing unnecessary bureaucratic layers results in immediate, tangible returns on short-term collection rates. Furthermore, Nguen and Patel (2022) state that clear workflow mapping reduces opportunities for administrative corruption, lower compliance costs for taxpayers, and significantly speeds up the dispute resolution process. In Ethiopia, where revenue administration is frequently hampered by lengthy manual steps, administrative delays, and procedural bottlenecks, a strong emphasis on operational and workflow efficiency is critical to accelerating revenue mobilization at the Large Taxpayers Office.

Table 17: Summary of hypothesis test result

Hypothesis	Test	Reason
Technological factors have a statistically significant positive influence on tax collection efficiency.	Accepted	beta = .206, p <0.05
Economic & policies have a statistically significant positive	Not	beta = -.077, p>

influence on tax collection efficiency.	accepted	0.05
Internal controls have a statistically significant positive influence on tax collection efficiency.	Not accepted	beta = .128, p> 0.05
Institutional capacities have a statistically significant positive influence on tax collection efficiency.	Accepted	beta = .234, p <0.05
Operational & workflows have a statistically significant positive influence on tax collection efficiency.	Accepted	beta = .325, p <0.05

Source: own survey, 2026

4.9. Analysis of Qualitative Data

4.9.1. Thematic analysis of Interview Responses

Thematic analysis of the semi-structured interviews with five key informants yielded rich, explanatory data that contextualized the quantitative findings. Five core themes emerged, each aligning with and elucidating the statistical results.

The first theme, "Technology as an Unreliable Partner," corroborated the significant role of technological factors. Informants unanimously acknowledged the theoretical benefits of digital systems but emphasized that frequent downtime, slow processing speeds, and inadequate technical support routinely forced a regression to manual, paper-based processes. One audit manager stated, "We schedule audits based on system availability. A single day of server failure creates a backlog that takes a week to clear, completely disrupting our efficiency metrics." This directly explains why the perceived utility of technology, while positive, is capped.

The second theme, "Navigating a Labyrinth of Rules," vividly illustrated the negative impact of Tax Policy related factors. Senior officers described the administrative burden of constantly interpreting new circulars on incentives and navigating complex, sometimes contradictory, provisions. An assessment officer noted, "A significant portion of our time is not spent auditing numbers, but debating the applicability of a certain exemption notice from three years ago. The Tax Policy churn is our biggest productivity killer." This theme provides the mechanistic link between Tax Policy complexity and wasted administrative time.

The third and most emphatic theme, "The Hollow Ritual of Internal Audit," shed light on the critical weakness in internal controls. Informants described an audit function that was strong in identifying problems but weak in enforcing solutions. A common sentiment was that audit reports were "filed away" with little managerial follow-up or accountability. A compliance officer remarked, "They point out the same procedural breaches every year. We write the same action plans. But nothing changes. It feels like a theatrical performance, not a control mechanism." This

theme powerfully explains the low mean score and highlights why weak controls are a paramount constraint on efficiency.

The fourth theme, "The Skill Gap in a High-Stakes Arena," The qualitative insights from interviews, where senior team leaders noted that frontline staff felt outmatched by the sophisticated tax planning, transfer pricing mechanisms, and digital financial reporting of multinational corporations, directly triangulate with our quantitative data. This is statistically verified by the exceptionally strong and significant correlation found between Institutional Capacity and Tax Collection Efficiency ($r = 0.890$, $p < 0.01$). This empirical convergence aligns with the foundational work of Eichfelder & Kegels (2014), who demonstrated that audit yield quality and revenue mobilization outcomes scale exponentially when agency personnel are equipped with specialized, industry-specific analytical capabilities rather than broad, generic accounting backgrounds.

The fifth theme, "Files Lost in Bureaucratic Space," The vivid interview descriptions of physical corporate tax files sitting dormant on managers' desks for weeks due to sequential manual signature mandates and unintegrated workflow handoffs explain the primary statistical finding of our regression model. Quantitatively, Operational & Workflow Factors emerged as the single strongest statistically significant predictor of Tax Collection Efficiency (beta = 0.325, $p < 0.01$). This qualitative-quantitative convergence strongly validates the administrative paradigm of Bird (2015), which posits that in transitioning economies, internal administrative backlogs and structural workflow friction cause far greater domestic revenue leakage than macroeconomic shocks or tax policy changes.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATION

5.1. Introduction

This chapter provides a summary of the findings, conclusions, and recommendations. Based on the analysis and data presentation, the following findings, conclusions, and recommendations are made.

5.2. Summary of Major findings

The study examined the key factors influencing tax collection efficiency, focusing on variables such as technological factors, economic and Tax Policy factors, internal control systems, institutional capacity, and operational and workflow factors. The analysis used a combination of quantitative (regression and correlation analysis) and qualitative (interview-based) methods to give a comprehensive understanding of the challenges of tax administration.

The regression model was found to be highly robust and statistically significant ($F(5, 184) = 36.998$, $p < 0.001$). The five independent variables jointly explain 50.1% of the variance in tax collection efficiency ($R^2 = 0.501$, adjusted $R^2 = 0.488$). The multicollinearity diagnostics showed that the model was stable, with Variance Inflation Factor (VIF) values in the acceptable range (1.998 to 2.557).

Operational and Workflow Factors (H5): This variable was the most powerful positive and statistically significant predictor of tax collection efficiency (beta = 0.325, $t = 3.988$, $p < 0.001$). Thus, H5 was strongly supported. This quantitative finding was strongly corroborated by the qualitative data under the theme “Files Lost in Bureaucratic Space.” Key informants highlighted massive procedural delays due to manual routing of files, sequential paper approvals and absence of an integrated case management system.

Institutional Capacity (H4): Institutional capacity has a highly significant positive influence on the dependent variable (beta = 0.234, $t = 2.810$, $p = 0.005$) which means H4 was strongly supported. Qualitative validation came from the theme “The Skill Gap in a High-Stakes Arena,” where LTO auditors felt structurally outmatched when facing complex sectors like telecommunications and banking due to the absence of specialized, ongoing training on complex issues like transfer pricing and taxation of digital services.

Technological Factors (H1) Technological factors had a significant positive impact on collection efficiency (beta=0.206, t=2.671, p=0.008), thus H1 was fully supported. However, the qualitative theme “Technology as an Unreliable Partner” explained that while digital systems are indispensable, frequent server downtime, slow processing speed, and frail IT support frequently disturb the operations and lead to a fallback to manual work, thus limiting the variable’s potential impact.

Internal Control Systems (H3), the findings show that internal control systems have a positive but statistically insignificant effect on collection efficiency (beta = 0.128, t = 1.640, p = 0.103). Thus H3 was not supported. The qualitative analysis perfectly unmasked this result, in the section “The hollow ritual of internal audit”. It explained that internal audits are only for “paper compliance” or “theatrical performances”, where recurrent procedural breaches are annually pointed out but recommendations are put away without enforcement or administrative follow-up.

Tax Policies (H2): The variable showed a weak negative association with the efficiency of tax collection and this association was not statistically significant (beta = -0.077, t = -1.041, p = 0.299). Therefore, H2 was not supported. "Navigating a Labyrinth of Rules" was a theme in the qualitative findings and it was stated that rapid Tax Policy changes and complex circulars create an operational bottleneck or a "productivity killer" by taking away valuable time from tax officers from actual audits to lengthy legal arguments around exemptions which conflict.

5.3. Conclusions

Based on the combined results of this study, the following important conclusions can be drawn regarding the operational environment of the Large Taxpayers Office of Ethiopia.

First, it finds that domestic revenue mobilization is driven by administrative implementation, not macro-level Tax Policy making. Administrative efficiency is not directly controlled by tax laws and changes in fiscal Tax Policy, but they define the legal parameters. Instead, frequent Tax Policy updates create complex bureaucratic bottlenecks that eat away at staff productivity.

Secondly, internal administrative workflows and physical procedural design is the single most impactful lever for revenue collection performance. Heavy reliance on manual signatures, routing paper files, and siloed departmental boundaries create huge vulnerabilities and delays that impede tax processing.

Third, institutional capability is a necessary condition for protecting the tax base. “In an office where you are dealing with high yield sectors such as banking, telecommunications, etc., general tax knowledge is not enough. Being under-audited means the state is losing out on major tax payments. The state is at a disadvantage because it lacks the technical expertise to perform complex tax strategies.

Fourth, technological infrastructure is a necessary pillar of efficiency, but is currently compromised. The statistical significance of digitization for modernization is obvious. But its practical use is seriously hampered by the unreliability of infrastructure, making automated tools unreliable operational partners.

Lastly, internal control frameworks are non-functional at operational level. On paper, there is a formal internal control structure but it lacks the administrative teeth and managerial accountability to fix identified systemic vulnerabilities and is therefore an ineffective tool for driving institutional efficiency.

5.4. Recommendations

Based on the bottlenecks identified in the study, the following targeted recommendations are proposed to significantly optimize the domestic revenue mobilization at the Large Taxpayers Office:

- **Changing from Paper-Based to Digital Workflows:** LTO management should focus on eliminating physical file routing by implementing an automated, end-to-end electronic case management system. Workflows need to be redesigned to replace physical sequential approvals with secure digital signatures and simultaneous access across departments. That will cut out administrative bottlenecks, give real-time visibility into how fast files are being processed and prevent files from getting stuck on managers’ desks.

- **Institutionalize specialized training on an on-going and sector-specific basis:** The Ministry of Revenue should develop dedicated and continuous professional development pathways for LTO auditors. Modules should extend beyond basic auditing and focus intensively on international taxation, transfer pricing methodologies, financial engineering in banking and taxation of digital services. Providing staff with these cutting-edge capabilities is critical to bridging the skill gap and ensuring revenue assessments are accurate in high-stakes industries.

- **Improving Technological Infrastructure and IT Support Systems:** The Ministry of Revenue should invest in strong technological backup systems, local redundancy servers and higher bandwidth allocation for the LTO branch to ensure the stability of the digital platforms. In addition, a dedicated, responsive IT support desk must be embedded directly in the LTO to resolve network glitches and software downtime immediately, thereby mitigating the need to regress to inefficient, paper-based processes.

- **Strengthen internal control frameworks with strict enforcement mechanisms:** The Ministry of Revenue needs to reform the internal audit function and link audit findings to mandatory administrative actions. There should be an executive compliance committee to oversee the implementation of internal control recommendations. Managers must be held accountable for the implementation of corrective action plans within deadlines, so as to transform internal audits from a passive paper exercise into an active mechanism for institutional improvement.

- **Make Tax Policy Communication Easier and Reduce Tax Policy Churn**: The Ministry of Finance and the Ministry of Revenue should collaborate to reduce the frequent issuance of fragmented, retrospective circulars and exemption notices. Tax policies or legal interpretations should be introduced with standardized assessment templates and clear and definitive operational guidelines. This will reduce administrative confusion and the time that tax officers spend arguing about how to interpret the rules.

5.5. Future research directions

This study provides important insights into the operational realities of the Large Taxpayers Office in Ethiopia, but there are several avenues for further scientific research:

Replication in Regional and Medium Taxpayer Offices Future research could employ this mixed-methods framework to replicate Medium Taxpayer Offices (MTOs) and regional revenue branches to ascertain whether operational workflows and institutional capacity gaps similarly affect smaller revenue jurisdictions.

Longitudinal Effect of Digital Reforms: As the Ethiopian Ministry of Revenue continues the implementation of electronic tax systems, a longitudinal study of collection efficiency metrics

before and after specific system overhauls could provide additional insight into the evolutionary impact of technological adoption.

Cost of Tax Compliance Assessment: Future research should examine the nexus between administrative efficiency of LTO and the tax compliance costs paid by corporate taxpayers. This research agenda should investigate the effect of internal workflow delays on operating costs in the private sector and overall voluntary compliance behavior.

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APPENDICES

Addis Ababa University

College of Business and Economics

Department of Accounting and Finance

Dear Respondent,

First of all, my sincere gratitude goes to you. My name is **Nigussie Berhanu**. I am currently a student at Addis Ababa University pursuing a Master's degree in Accounting and Finance. As a requirement in partial fulfillment for the award of the above-mentioned program, I am required to carry out a field research study on **"Factors Affecting Tax Collection Efficiency in Ethiopia: The Case of Ministry of Revenue Large Taxpayer's Branch Office."** This questionnaire is designed to collect quantitative data on the perceptions of tax officials regarding technological, economic, and internal control factors affecting tax collection efficiency.

All information will be treated with utmost confidentiality. Do not put any name or identification on this questionnaire. Hence, you are kindly requested to give accurate and sufficient data as much as possible.

In case of any questions or clarifications, do not hesitate to reach me at:

ngogman@gmail.com.

Thanks in advance for your support.

Regards,

Nigussie Berhanu, MSc Candidate, Accounting and Finance

College of Business and Economics, Addis Ababa University

Appendix-1: Survey Questionnaire

Part 1: General Information

(For classification only – responses will be kept confidential)

1. Gender: ☐ Female ☐ Male

2. Age: ☐ 50 and above ☐ 40–49 ☐ 30–39 ☐ 18–29

3. Educational Qualification: ☐ PhD ☐ Master's ☐ Bachelor's ☐ Diploma

4. Department/Unit:

☐ IT Support ☐ Audit

☐ Assessment ☐Taxpayer Service Officers

☐ Revenue Collection ☐ Customer Service

☐ Compliance officer

☐ Senior Management

5. Years of Experience: ☐ Over 10 years ☐ 6–10 years ☐ 2–5 years ☐ Less than 2 years

Part 2: Factors Affecting Tax Collection Efficiency

Please indicate your level of agreement with the following statements using the scale:

1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

A. Technological Factors

No.	Statement	5	4	3	2	1
1.	The e-filing and e-payment systems used by the LTO operate reliably with minimal disruptions.					
2.	System downtime or technical errors frequently disrupt tax administration activities. (R)					
3.	ICT infrastructure (internet connectivity, hardware, power supply) is adequate for daily operations.					
4.	Different tax administration systems (registration, filing, audit, collection) are well integrated.					
5.	I have received adequate training to effectively use tax-related digital systems.					

B. Tax Policy Factors

No.	Statement	5	4	3	2	1
1.	Tax laws and regulations are clear and easy to apply in my daily work.					
2.	Frequent changes in tax laws and directives disrupt tax administration processes. (R)					
3.	Tax incentives are administratively complex and difficult to verify. (R)					
4.	The current tax rate structure is administratively simple to assess and enforce without excessive interpretation or discretion.					
5.	Processing tax incentives consumes a significant amount of administrative time. (R)					

C. Internal Control Factors

No.	Statement	5	4	3	2	1
1.	Internal audit activities effectively identify procedural weaknesses and potential revenue risks.					
2.	Management takes timely corrective action on internal audit findings.					
3.	The internal audit function operates independently from operational management.					
4.	Clear accountability and disciplinary mechanisms exist for procedural violations.					
5.	Internal control procedures are consistently applied across departments.					

D. Institutional Capacity

No.	Statement	5	4	3	2	1
1.	Staff involved in large taxpayer administration possesses adequate technical skills.					
2.	Training programs are sufficient to keep staff updated on tax laws and procedures.					
3.	High staff turnover reduces the institutional capacity of the LTO. (R)					

4.	Management provides adequate technical and administrative support.					
5.	The LTO has sufficient human resources to perform its duties effectively.					

E. Operational & Workflow Factors

No.	Statement	5	4	3	2	1
1.	Workload is fairly distributed among staff members.					
2.	Coordination between departments (audit, legal, collection) is efficient.					
3.	Case management systems allow effective tracking of tax files.					
4.	Bureaucratic procedures cause unnecessary delays in tax processing. (R)					
5.	Case backlogs negatively affect tax collection efficiency. (R)					

F. Tax Collection Efficiency

No.	Statement	5	4	3	2	1
1.	Tax assessment and collection processes are completed in a timely manner.					
2.	Administrative procedures minimize unnecessary time and cost.					
3.	Available staff time and resources are used efficiently.					
4.	Errors in tax assessment and collection are minimal.					
5.	Administrative reviews are conducted to identify and reduce process bottlenecks.					

Part 3: Open-Ended Questions

1. In your opinion, what is the most significant internal factor affecting tax collection efficiency at the LTO?_____

2. What specific operational or administrative challenges most hinder efficient tax collection?

3. How do the current tax rates and incentive mechanisms most directly affect your daily work in assessment and collection?

4. In your opinion, what is the biggest weakness in the LTO's internal audit practice that leads to revenue loss or process inefficiency?

Thank you for your time and cooperation.

Appendix-2: Semi-Structured Interview Guide

Interview Purpose:

To gain deeper insights into how technological factors, economic factors, and internal controls affect the efficiency of tax collection in the Large Taxpayer's Branch Office of the Ministry of Revenue.

Interviewee Background

- Name (code/optional): _____

- Position/Department: _____

- Years of Experience: _____

Core Interview Questions

1. How would you describe the efficiency of the current e-tax and e-payment systems?
2. What major challenges have you faced in using or implementing digital tax systems?
3. Do current tax rates and incentives support or hinder efficient tax assessment and collection from large taxpayers?"
4. To what extent does the internal audit practice effectively prevent revenue loss and process delays (i.e., improve efficiency)?
5. What institutional or operational barriers most affect efficient tax collection?
6. How responsive is management to audit findings, staff input, or system weaknesses?
7. What are your top recommendations to improve tax collection efficiency in your office?

Thank you for your participation