ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT MANAGEMENT (PADM)

# STRATEGIES FOR INCREASING ETHIOPIA'S TAX-TO-GDP RATIO EQUITABLY

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS IN DEVELOPMENT MANAGEMENT (MADM)

BY: BROOK LEULSEGED

ADVISOR: ADEM KEDIR (PhD)

**June 2025**

**ADDIS ABABA, ETHIOPIA**

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# Statement of Declaration

I declare that this work entitled "Strategies for Increasing Ethiopia's Tax-to-GDP Ratio Equitably," submitted in as a requirement for the M.A. Degree in Development Management (MADM) at Addis Ababa University, is my own work and has not been presented for recognition or award of any other diploma, degree, or similar title at this or any other institution.

| Declared by | Confirmed by Advisor |
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I hereby certify that the thesis entitled, “Strategies for Increasing Ethiopia’s Tax-to-GDP Ratio Equitably” is the original work of Brook Leulseged, conducted under my supervision. To the best of my knowledge, the research presented herein has not been submitted, either in whole or in part, for the award of any degree or diploma at this or any other institution by this candidate or any other individual.

Advisor: Adem Kedir (PhD) _____

Date: _____

**ADDIS ABABA UNIVERSITY**

**COLLEGE OF BUSINESS AND ECONOMICS**

**DEPARTMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT MANAGEMENT (PADM)**

A Thesis Submitted to the Department of Public Administration and Development Management College of Business and Economics. In Partial Fulfillment of the Requirements for the Degree of Master of Arts (M.A.) in Development Management (MADM)

BY

Brook Leulseged

Approved by the Board of Examiners

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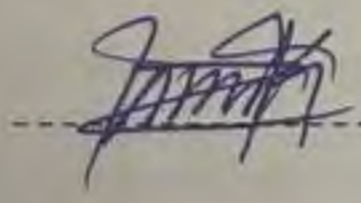
| Advisor |  | 26-06-25 |
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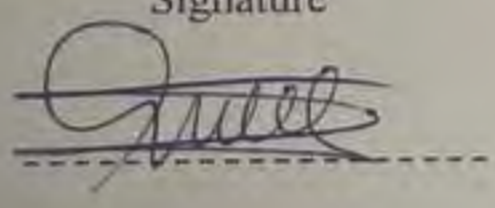
| Internal Examiner |  | June 2025 |
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# Abstract

*Despite sustained economic growth, Ethiopia's tax-to-GDP ratio fell sharply from 12.7% in 2013 to 6.2% in 2024, exposing critical fiscal vulnerabilities. This study explores the disconnect between GDP growth and tax performance, with a focus on sectoral composition. The study aims to assess how growth in the industry and service sectors has influenced Ethiopia's tax-to-GDP ratio, while identifying key tax instruments behind the decline and proposing reform strategies. Using 24 years of national accounts data, the study applies Isometric Log-Ratio (ILR) transformation to manage GDP's compositional constraints. It also analyzes tax instruments—VAT, trade taxes, and business income tax—vis a vis GDP growth. Industry growth, particularly in construction, shows a negative association with tax performance (–1.49; p = 0.090), likely due to informality and tax-exempt public projects. Service sector expansion shows a modest positive effect (+4.94; p = 0.064), reflecting greater formalization. VAT contributed the largest revenue loss (–2.43 points), followed by trade taxes (–1.05) and business income tax (–0.72). Inflation above 30% has distorted compliance and expanded the VAT base artificially, creating a threshold inflation trap. The study recommends reducing exemptions, expanding e-invoicing, and tightening customs audits as quick wins, alongside equity-focused measures like simplifying presumptive taxes and enabling mobile SME registration. It also urges restructuring the Medium-Term Revenue Strategy around VAT reform, trade enforcement, and informal sector inclusion. Future research should double down on the subcomponents of the industrial sector vis-a-vis GDP growth rate.*

***Keywords**:* tax-to-GDP ratio, sectoral growth, VAT, informality, public finance, fiscal policy, Ethiopia, ILR transformation, inflation trap, tax reform

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# Abbreviations

| | |
|---|---|
| AfCFTA | African Continental Free Trade Area |
| AfDB | African Development Bank |
| AGOA | African Growth and Opportunity Act |
| AUC | African Union Commission |
| CIT | Corporate Income Tax |
| CRM | Compliance Risk Management |
| CSA | Central Statistical Agency |
| DV | Dependent Variable |
| EC | Ethiopian Calendar |
| ECF | Extended Credit Facility |
| ERCA | Ethiopian Revenue and Customs Authority |
| ETR | Electronic Tax Register |
| FX | Foreign Exchange |
| GDP | Gross Domestic Product |
| ILR | Isometric Log-Ratio |
| IMF | International Monetary Fund |
| ILO | International Labour Organization |
| IT | Information Technology |
| IV | Independent Variable |
| LIC | Low-Income Country |
| LTO | Large Taxpayer Office |
| MoF | Ministry of Finance |
| MoFEC | Ministry of Finance and Economic Cooperation |
| MoPED | Ministry of Planning and Economic Development |
| MoR | Ministry of Revenue |
| MTO | Medium Taxpayer Office |
| MTRS | Medium-Term Revenue Strategy |
| NGO | Non-Governmental Organization |
| NBE | National Bank of Ethiopia |
| NMTRS | National Medium-Term Revenue Strategy |
| OECD | Organisation for Economic Co-operation and Development |
| OLS | Ordinary Least Squares |
| R | R Programming Language |
| SDGs | Sustainable Development Goals |
| SME | Small and Medium-sized Enterprise |
| SMS | Short Message Service |
| TADAT | Tax Administration Diagnostic Assessment Tool |

# Chapter One

# Introduction

## 1.1 Background of the Study

Globally, the tax-to-GDP ratio is widely used as a measure of a country's fiscal capacity and development trajectory. A higher tax ratio often correlates with stronger institutional capacity and better public service provision, while low tax ratios are commonly found in low-income countries, where informality, weak administration, and regressive tax structures prevail (OECD, 2023). In Sub-Saharan Africa, the average tax-to-GDP ratio stands at 16.5%, far below the OECD average of over 34%—highlighting a significant regional gap in domestic resource mobilization (OECD/AUC/ATAF, 2024).

At the country level, Ethiopia’s tax-to-GDP ratio has persistently underperformed compared to both global and regional benchmarks. It declined by nearly 50% between 2013 and 2023, standing at just 6.2% in 2023 (IMF, 2024), well below the Sub-Saharan average. This shortfall has critical implications for fiscal sustainability and Ethiopia's capacity to finance essential public services and development goals. As outlined in the country’s Ten-Year Development Plan (2021–2030), increasing domestic revenue is central to addressing widespread poverty, unemployment, and infrastructure deficits (MoPED, 2021). Yet, low revenue levels hinder progress toward these objectives.

Locally, the challenges are even more pronounced. Ethiopia’s tax system remains structurally imbalanced and socially inequitable. It relies heavily on indirect taxes such as VAT, excise taxes, and import duties, which together contributed over 62.3% of total revenue in recent years (Ministry of Finance, 2017). While easier to administer, these taxes are regressive, disproportionately affecting low-income households that spend a larger share of their income on consumption (Thomas, 2020). The burden of taxation thus falls unfairly on the poor, compounding economic inequality and undermining social equity.

Compounding this is the dominance of the informal economy, which accounts for over 85.2% of employment in Ethiopia (ILO, 2024). Most informal actors operate outside the tax net, leading to a narrow tax base. As a result, the burden of taxation falls disproportionately on formal sector businesses and salaried workers. Limited enforcement capacity and outdated administrative systems further exacerbate revenue leakage and erode public trust in the system (Pellerin & Söderström, 2022). When citizens perceive the tax system as unfair—where the wealthy and well-connected evade taxes—it discourages compliance, creating a vicious cycle of low trust, low compliance, and low revenue.

These structural issues have direct consequences at the local level. Underenforcement and poor targeting of redistributive mechanisms have left rural communities and marginalized populations particularly underserved. The inability to finance education, healthcare, and infrastructure services limits social mobility and reinforces existing disparities.

Recognizing these constraints, the Ethiopian government has committed—under the IMF-supported Extended Credit Facility program—to increase the tax-to-GDP ratio by approximately 4 percentage points by 2028, reaching a target of 10.2%. The bulk of this increase is expected to result from tax policy reforms, complemented by gradual improvements in tax administration (IMF, 2024). However, without reforms that tackle informality, regressivity, and institutional inefficiency, these goals may remain elusive. Ethiopia's low tax-to-GDP ratio is not merely a technical or fiscal issue—it reflects deeper structural problems that hinder inclusive development. Addressing these problems requires rethinking the country's tax architecture to enhance equity, broaden the tax base, and rebuild trust between citizens and the state (Hirvonen, Mascagni, & Roelen, 2018).

Ethiopia's persistently low tax-to-GDP ratio is symptomatic of broader structural weaknesses that span global, national, and local levels. While global debates emphasize the importance of domestic resource mobilization for sustainable development, Ethiopia's experience reveals the complex interplay between institutional inefficiency, an overreliance on regressive taxes, and widespread informality. These dynamics not only undermine revenue generation but also deepen existing socio-economic inequalities, especially at the local level where public service delivery remains constrained. The challenge, therefore, is not simply one of increasing tax revenue, but of reconfiguring the tax system to be more equitable, inclusive, and capable of fostering trust and

compliance. This thesis situates the problem within this broader context and aims to explore policy pathways that can make Ethiopia's fiscal regime more just and development-oriented.

## 1.2 Problem Statement

Despite efforts to improve revenue collection, Ethiopia's tax system disproportionately burdens low-income populations due to reliance on indirect taxes - accounting for over 62.3% of total revenue in recent years (Ministry of Finance, 2017). Despite growing recognition that certain sectors may drive GDP growth yet remain undertaxed, there is an absence of rigorous, sector-specific analyses that would pinpoint the precise sources and leading causes of Ethiopia's decreasing tax-to-GDP ratio.

Despite growing recognition that certain sectors contribute significantly to GDP growth while remaining largely undertaxed, the literature remains thin on rigorous, sector-specific analyses that can pinpoint the exact drivers behind Ethiopia's declining tax-to-GDP ratio. While existing studies often highlight macroeconomic and institutional barriers to revenue collection, they fall short of providing disaggregated, empirical evidence to identify which sectors or industries generate substantial economic output yet contribute minimally to tax revenues. Moreover, although administrative and policy reforms are commonly proposed to enhance compliance, there is a lack of cross-sectoral analysis to inform strategic prioritization. This gap limits the ability of policymakers to identify "low-hanging fruits"—high-growth sectors where targeted, resource-efficient interventions could yield immediate and meaningful improvements in domestic revenue mobilization.

With an aim to improve tax-to-GDP ratio, the Ethiopian government is rolling out a suite of revenue mobilization reforms as outlined in the draft National Medium-Term Revenue Strategy (NMTRS). These proposed reforms—encompassing VAT, excise taxes, corporate taxes, presumptive income taxes, and property taxes—have sparked considerable debate about their underlying priorities (IMF, 2024). This research seeks to contribute to the ongoing debate by providing an empirical synthesis that identifies the key factors constraining the tax-to-GDP ratio and proposes sustainable and equitable strategies to address them.

## 1.3 Research Questions

1. What are the determining factors constraining Ethiopia's tax-to-GDP ratio?

2. What reforms can Ethiopia implement to increase its tax-to-GDP ratio effectively?
3. What strategies can enhance equitable informal sector taxation?

## 1.4 Objectives

**General Objective:**

This research aims to determine equitable pathways for raising Ethiopia's tax-to-GDP ratio.

**Specific Objectives:**

1. To identify the leading causes constraining Ethiopia's tax-to-GDP ratio.
2. To propose actionable reforms to Ethiopia's tax system aimed at increasing the tax-to-GDP ratio.
3. To develop equitable strategies for broadening the tax base in Ethiopia's informal sector.

## 1.5 Significance of the Study

This study will benefit the following:

- **Policymakers and tax administrators** – by informing equitable revenue-generation strategies that strengthen Ethiopia's fiscal capacity without exacerbating economic inequality.
- **Key stakeholders in fiscal policy** – including government agencies, development partners, and civil society organizations, who can use the findings to support evidence-based tax reform and inclusive growth.

## 1.6 Delimitations of the Study

This study focuses on Ethiopia's national tax performance over the period 1994 to 2024, highlighting sectoral trends. By examining how different sectors of the economy have contributed to—or fallen short in—generating tax revenue, the research identifies the structural factors constraining the country's tax-to-GDP ratio. It also analyzes the composition of tax revenue, assessing the relative performance of instruments such as VAT, trade taxes, business income tax,

and payroll taxes for the recent period associated with decline. Even if the study provides critical insights at the macro level, it faces limitations in establishing causality due to the influence of shifting policy frameworks and external economic shocks. Additionally, mediating factors—such as institutional, political, and social dynamics—fall outside the scope of this analysis

## 1.7 Organization of the Study

This study is structured into five sections that collectively propose strategies to curb the persistently low tax-to-GDP ratio. Chapter one frames the problem within Ethiopia's broader socioeconomic context, outlining the research objectives and emphasizing the dual need for effective revenue mobilization and fair taxation. Chapter two synthesizes both classical and contemporary theories—such as the benefit principle and equity-efficiency trade-offs—alongside global empirical evidence, situating Ethiopia's experience within broader debates on taxation and inclusive development. Chapter three details the research design, including data sources, sampling techniques, and the mixed methods approach adopted, while addressing ethical considerations to ensure research integrity. Chapter four analyze Ethiopia's current tax policies, highlight sector-specific shortcomings—especially in relation to the informal economy—and evaluate the implications for equity and fiscal sustainability. Finally, Chapter five distills key insights and proposes targeted reforms.

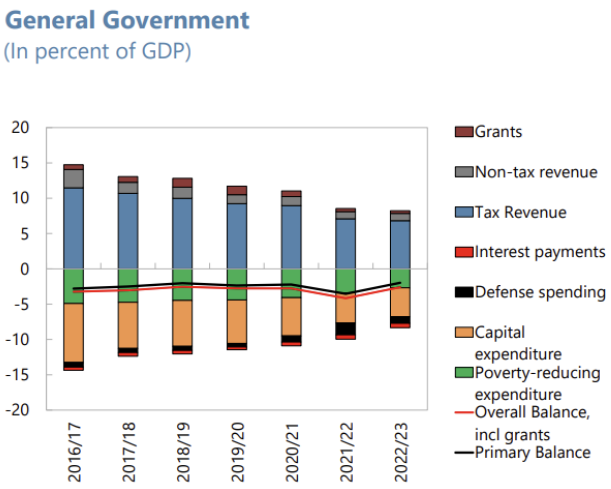
# Chapter Two

# Literature Review

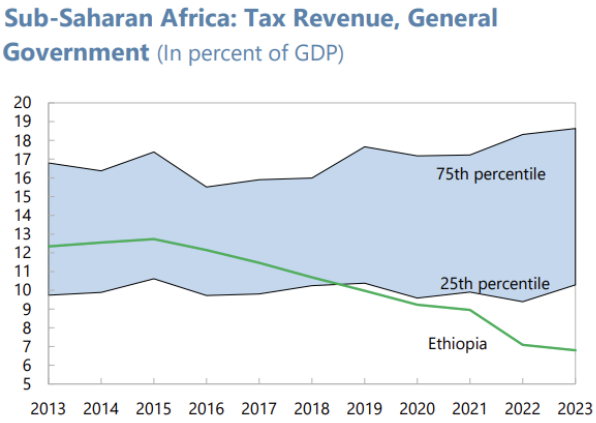
## Introduction

Ethiopia is facing persistent headwinds in generating adequate domestic revenue to support its development agenda. (IMF, 2019). Despite notable growth in sectors such as infrastructure and services, its tax-to-GDP ratio has consistently lagged behind regional and global benchmarks (IMF, 2024).

*Figure 1: Tax Developments in Ethiopia*



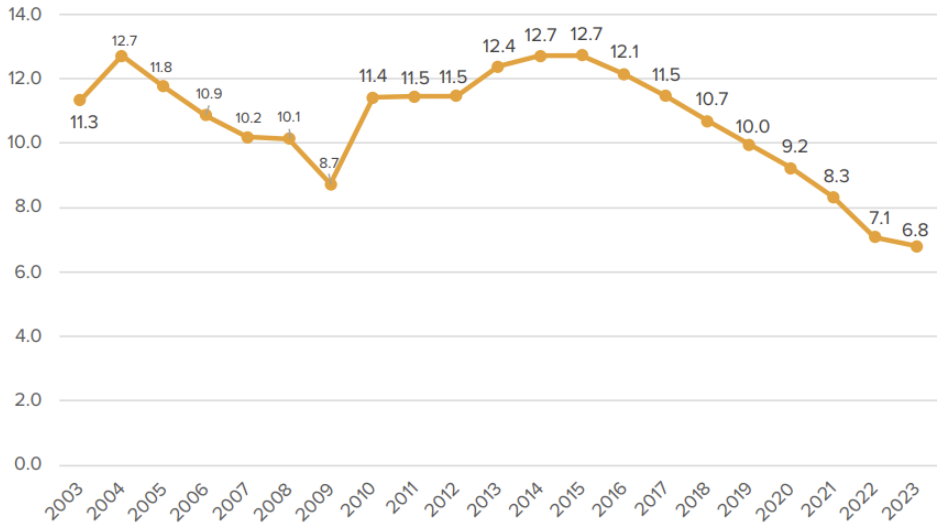

Sources: Ministry of Finance and IMF staff calculations




Sources: World Economic Outlook and IMF staff calculations

For instance, while the Sub-Saharan ratio hovers around 15–17%, Ethiopia's ratio stood at 6.8 in 2023 (UNDP, 2024). This low level of revenue mobilization constrains the state's ability to invest adequately in public services and social goods.

*Figure 2: Ethiopia Tax to GDP Ratio (UNDP, 2024 based on MoF data)*




Improving the tax-to-GDP ratio is therefore central to the country's goal of achieving equitable and sustainable economic development (MOPED, 2021). Recognizing these critical challenges, the state has undertaken tax administration and policy reforms. However, ongoing issues—such as weak institutional capacity, complex tax legislation, and a large informal sector—have hindered revenue collection (IMF, 2019). These factors underscore the importance of examining both the constraints to the ratio and potential strategies to address them.

By exploring the primary factors that constrain Ethiopia's tax base, proposing targeted reforms, and developing inclusive approaches to taxing the informal sector, the study aims to bolster the body of knowledge on taxation in developing countries. Moreover, it builds on the premise that that domestic resource mobilization is a cornerstone of development financing (United Nations, 2015).

**Purpose**

This literature review consolidates existing scholarly and policy-based research on taxation, with a focus on developing-country contexts and Ethiopia in particular. It aims to identify what has been studied regarding constraints to tax revenue, successful reform experiences, and methods to enhance equity in taxation, especially concerning the informal sector.

**Scope**

This literature review appraises a broad range of sources to explore the role of taxation in promoting economic development and equity. It draws on global perspectives to contextualize taxation's significance worldwide, regional insights from Sub-Saharan Africa to highlight shared challenges and lessons learned, and country-specific analyses of Ethiopia's fiscal environment—including journal articles, working papers, and policy reports from key government entities such as the Ministry of Finance, as well as multilateral banks such as

the World Bank, and the International Monetary Fund. Emphasizing works published within the last 10–15 years ensures coverage of contemporary debates and policy shifts, while seminal older studies (e.g., Smith, 1776; Musgrave, 1959) are referenced for foundational theory.

Following this scope, the literature review begins with Section 2.1, which outlines major theoretical traditions in taxation—from classical and normative theories to public choice, behavioral economics, and structural views on informality. Section 2.2 distills the conceptual foundations that frame the tax-to-GDP ratio in developing contexts. Section 2.3 presents empirical findings on constraints to tax performance, while Section 2.4 evaluates reform strategies adopted globally, including those targeting the informal sector. Section 2.5 identifies gaps in existing literature, particularly concerning Ethiopia, and Section 2.6 introduces the logical and conceptual framework guiding the present study.

## 2.1. Theoretical Review

A comprehensive understanding of taxation in developing countries requires engaging with multiple theoretical frameworks that explain the purposes, dynamics, and distortions of taxation systems. These theories help to contextualize not just how much revenue is collected, but who is taxed, how they are taxed, and why certain reforms succeed or fail.

### 2.1.1 Classical and Normative Theories of Taxation

The earliest theoretical articulation of taxation as a state function comes from Adam Smith's (1776) *The Wealth of Nations*, where he outlined four foundational principles of good taxation: equity, requiring taxes to be proportionate to one's ability to pay; certainty, mandating clear and

predictable tax obligations; convenience, ensuring tax collection is practical and minimally burdensome; and efficiency, stipulating that taxes should not distort economic decisions unnecessarily. These classical canons established the normative goals of tax systems and continue to inform public finance debates today. However, while Smith's model was largely centered on the early industrial state, its logic remains applicable—particularly regarding fairness and efficiency—in countries where tax systems are still being institutionalized. Building on this, Richard Musgrave's (1959) *Theory of Public Finance* deepened the analysis of the role of government in economic life by identifying three primary functions of public finance: allocation, which ensures efficient provision of public goods and corrects market failures; distribution, which reduces income inequality through progressive taxation and transfers; and stabilization, which maintains macroeconomic stability through counter-cyclical fiscal policies. These functions provide a theoretical justification for the existence and design of taxation, especially in developing contexts where market failures and inequality are prevalent.

### 2.1.2 The Fiscal Social Contract

In developing countries, taxation plays a state-building role beyond its fiscal dimension. The fiscal social contract theory—promoted by Braütigam, Fjeldstad, and Moore (2008)—posits that taxation can forge mutual accountability between citizens and the state. When citizens are taxed, they are more likely to demand efficient governance, transparency, and service delivery. Conversely, when governments rely on external aid or natural resources, they may become less responsive to their populations, weakening democratic accountability. This framework is especially relevant in Sub-Saharan Africa, where tax compliance is often low and mistrust in government institutions high. The fiscal social contract underlines the idea that legitimacy is co-produced: the state's capacity to tax is conditional on its ability to provide public goods and be accountable to taxpayers.

### 2.1.3 Public Choice Theory and the Political Economy of Taxation

Whereas the fiscal contract theory assumes alignment between the state and citizens, public choice theory introduces a more skeptical lens. Developed by James Buchanan and Gordon Tullock (1962), this theory argues that public officials pursue self-interest—whether political survival,

patronage, or rent-seeking—within bureaucratic and legislative processes. In taxation, public choice theory highlights how political incentives often lead to preferential treatment for politically connected elites, inefficient exemptions and tax holidays, and weak enforcement against high-income or politically powerful actors. This lens is particularly useful for understanding why tax reforms often fail in developing countries—not due to technical flaws, but because they threaten entrenched interests. As Tanzi and Zee (2000) point out, tax systems frequently reflect political compromise more than economic rationality.

### 2.1.4 Theories of Tax Equity and Redistribution

Welfare economics provides the theoretical foundation for evaluating fairness in taxation through two core concepts. Vertical equity requires that individuals with higher incomes contribute more via progressive taxation, while horizontal equity mandates that those with similar capacities pay similar amounts. Bird and Zolt (2005) argue that applying these principles in low- and middle-income countries is complicated by weak data, informal labor markets, and political constraints. However, they stress that taxation remains a vital tool for redistribution, especially where expenditure systems (e.g., social protection) are underdeveloped. Moreover, progressive taxation may enhance legitimacy in settings dominated by regressive indirect taxes like VAT, which disproportionately burden the poor and undermine vertical equity and social justice.

### 2.1.5 Structural and Legalist Theories on Informality and Taxation

Classical tax theories assume a formal, wage-based economy, but developing countries often feature dual economies with large informal sectors, necessitating alternative explanations. Dualist theory (ILO, 1972) sees informality as a survivalist domain where workers engage in petty trade due to absent formal opportunities. Structuralist theory (Castells & Portes, 1989) views it as a functional component of capitalist economies, where formal firms subcontract informally to reduce costs. Legalist theory (de Soto, 1989; Chen, 2012) posits that excessive regulation and high compliance costs push entrepreneurs outside the formal system. Each perspective informs approaches to informal sector taxation—whether through simplified procedures, lower costs, or formalized value chains—suggesting governments should prioritize trust-building and tailored regimes over coercive enforcement to expand the tax net.

### 2.1.6 Behavioral Economics and Tax Compliance

Behavioral economics enriches traditional tax theory by emphasizing non-monetary compliance motivations. According to Luttmer and Singhal (2014) and Torgler (2007), taxpayer behavior is influenced by trust in government, perceptions of fairness and reciprocity, peer behavior and social norms, and the visibility of public goods funded by taxes. This suggests improving compliance requires not just penalties or audits, but cultivating voluntary compliance through transparency, public awareness campaigns, and civic education—as evidenced in contexts like Ethiopia, where low taxpayer morale impedes reform.

### 2.1.7 Taxation as a Tool for State Transformation

Finally, scholars view taxation as a transformative tool shaping state capabilities, institutional quality, and citizen engagement over time. Moore (2008) argues that building tax systems stimulates institution-building and democratization, especially in fragile states. This aligns with developmental state theory, positioning taxation as a driver of structural transformation that encourages formality, improves data systems, and strengthens state-citizen linkages beyond mere revenue generation.

## 2.2. Conceptual Foundations

**Macroeconomic Factors**

Macroeconomic structures and the level of development significantly influences the tax-to-GDP ratios in many low-income countries. Where agriculture dominates, as in Ethiopia, effective tax collection proves difficult because a large proportion of economic activity takes place in smallholder or subsistence operations (Dome et al, 2022). Industrialization levels also matter: governments in predominantly agrarian or early-stage industrial economies often struggle to generate robust tax revenues, even when overall GDP is growing (AfDB, 2021).

Moreover, per capita income levels and employment rates shape the practical tax base, since widespread poverty and high underemployment leave fewer households and businesses able to contribute significant tax revenues (Tanzi & Zee, 2000). These macro-level realities not only affect potential revenue but also inform the types of policies and administrative strategies that might boost compliance and expand the tax net.

**Institutional and Governance Factors**

Institutional weaknesses, bureaucratic inefficiencies, and corruption collectively constrain tax-to-GDP ratios in much of the developing world (Bahl & Bird). Resource-strapped revenue authorities often lack qualified personnel, modern infrastructure, and effective systems for registering taxpayers and detecting evasion (AfDB/OECD/UNDP, 2017). Administrative corruption can further undermine revenue collection by allowing officials to collude with taxpayers in exchanging bribes for reduced assessments (Tanzi & Zee, 2000).

Political interference exacerbates these issues, especially where politically influential groups secure undue exemptions or face minimal scrutiny (Buchanan & Tullock, 1962). Additionally, legal frameworks may be excessively complex, creating loopholes and confusion that lower compliance rates (Bird & Zolt, 2005). In some settings, laws that look strong on paper remain unenforced due to weak judicial systems or fragmented data-sharing, enabling tax evaders to operate without consequences (Braütigam, Fjeldstad, & Moore, 2008).

**Social and Behavioral Factors**

Even when macroeconomic and institutional factors are adequately addressed, social and behavioral considerations can hinder revenue mobilization. Scholars emphasize the role of taxpayer morale, which is shaped by public perceptions of government honesty, transparency, and service delivery (Levi, 1988; Torgler, 2007). Where citizens doubt the benefits of taxation or believe the system is unfairly administered, voluntary compliance tends to drop (Prichard, 2015). Historical legacies and cultural norms also play a role, as populations accustomed to minimal state engagement may not see the value in entering formal tax regimes (Joshi & Ayee, 2008). The informal sector presents further challenges, since small-scale entrepreneurs or traders may prioritize survival strategies over interactions with a tax authority they perceive as remote or

burdensome (Chen, 2012). In many instances, these attitudes become self-reinforcing, as a culture of informality normalizes tax evasion and deepens distrust.

Ethiopia exemplifies the confluence of these constraints. While the country has experienced notable GDP growth over the past decade, it remains predominantly agrarian, and much of its workforce operates outside formal employment structures (ILO, 2024). Tax laws and administration have undergone reforms, including the adoption of digital platforms, yet the revenue authority continues to face capacity gaps (IMF, 2019). Concerns persist about corruption, especially at decentralized levels, which undermines the integrity of tax enforcement (Fjeldstad, 2004). Social and behavioral barriers further compound these issues, with many Ethiopians expressing skepticism about the state's capacity to deliver public services adequately, thus weakening their willingness to pay taxes (MoFEC, 2018). This multifaceted situation underscores the need for well-designed and context-specific reforms, which are explored in the following section.

The tax gap, the shortfall between potential and actual tax revenue, serves as a diagnostic tool to understand where and why revenue falls short (AfDB/OECD/UNDP, 2017). For many developing countries, high levels of informality, limited enforcement capacity, and tax evasion contribute to large tax gaps (Schneider & Enste, 2000). According to the IMF (2019), narrowing Ethiopia's tax gap would significantly increase domestic resource mobilization, but requires a mix of policy, administrative, and compliance-related interventions.

Tax compliance depends on both enforcement mechanisms (e.g., audits, penalties) and voluntary factors such as perceptions of fairness, trust in government, and social norms (Levi, 1988; Torgler, 2007). Behavioral economics research (Luttmer & Singhal, 2014) also highlights that a taxpayer's willingness to comply improves when they perceive public benefits and transparency in how tax revenue is utilized. In Ethiopia, low taxpayer morale has been identified as a constraint, stemming from skepticism about government efficiency and limited awareness of tax obligations (Dom et al, 2022)

In many African countries, informality comprises up to 50–60% of GDP, making it a vast but under-taxed segment of the economy (AfDB, 2021). In Ethiopia, estimates suggest that informal activities—especially in agriculture, petty trade, and small manufacturing—remain significant (MoFEC, 2018).

Taxing the informal sector raises questions about balancing revenue generation and equity (Bird & Zolt, 2005). On one hand, expanding the tax base can reduce the burden on formal businesses and promote fairness. On the other, excessive taxation of small, low-income operators can exacerbate poverty and undermine social welfare (Fjeldstad & Heggstad, 2012). Scholars argue for a graduated approach—using simplified tax regimes, capacity-building, and incentives to formalize while ensuring protections for vulnerable groups (Joshi & Ayee, 2008). However, the demands for development and public infrastructure seem to be outpacing the rate at which a gradual transition can provide an adequate response. Conversely, The rise of technology also presents an opportunity to scale and reach new taxpayer segments at a fraction of the cost typically associated with legacy policy instruments.

## 2.3. Empirical Review

### 2.3.1. Empirical Review of Constraints

Despite widespread policy emphasis on enhancing domestic resource mobilization, developing countries continue to face significant structural and institutional constraints that depress their tax-to-GDP ratios. These challenges are well-documented in a growing body of empirical literature, which identifies both demand- and supply-side factors limiting fiscal capacity. Cross-country studies, sector-specific analyses, and subnational case studies converge on a central insight: improving tax revenue performance in the Global South requires more than technical fixes—it demands reforms that address deep-rooted political, economic, and administrative bottlenecks.

A study by Gaspar, Jaramillo, and Wingender (2016) uses cross-country panel data to demonstrate that many low- and middle-income countries are operating well below their estimated tax potential. Their analysis reveals that countries with similar income levels can exhibit vastly different tax-to-GDP ratios depending on institutional quality, governance, and economic structure. For instance, countries with large informal sectors, low administrative capacity, or widespread exemptions tend to collect significantly less tax revenue than their structural capacity would permit. This divergence underscores the need to distinguish between “tax effort” (how much countries collect) and “tax capacity” (how much they could collect), a distinction also emphasized by Fenochietto and Pessino (2013) through a stochastic frontier approach that quantifies inefficiencies in tax systems.

Sectoral composition is another critical but often overlooked constraint. Empirical work by Besley and Persson (2013) argues that states with stronger fiscal and legal capacity are more likely to extract taxes from high-productivity sectors. Yet in many developing countries, growth is concentrated in sectors that are difficult to tax—such as informal trade, subsistence agriculture, or tax-exempt public works—leading to a disconnect between GDP expansion and revenue growth. Another significant factor is the structure of taxation. Most African countries, for instance, rely heavily on indirect taxes such as VAT, customs duties, and excise taxes.

The OECD/AUC/ATAF Revenue Statistics in Africa (2022) report shows that indirect taxes make up over 60% of tax revenue in many Sub-Saharan economies. While easier to administer, these taxes are often regressive and do not scale proportionally with income or wealth. Moreover, over-reliance on indirect taxes can lead to inflationary distortions and compliance fatigue, particularly during economic shocks. In Ethiopia, empirical data shows that inflation rates exceeding 30% have distorted VAT compliance and inflated the base artificially, creating what some describe as a "threshold inflation trap"—where growth in nominal tax bases does not translate into real revenue gains.

The informal economy represents a persistent and empirically confirmed constraint. Studies by Joshi, Prichard, and Heady (2014) and Moore (2008) emphasize the challenges of taxing informal enterprises without undermining livelihoods or triggering evasion. The informal sector accounts for over 85% of employment in countries like Ethiopia (ILO, 2024) yet remains largely outside the tax net. Limited administrative capacity, weak data systems, and poor trust in public institutions discourage voluntary compliance. Empirical evidence from Paler (2013) further suggests that citizens are less willing to comply with tax obligations when they perceive revenue management as opaque or corrupt, reinforcing the importance of the fiscal social contract.

The empirical literature converges on the conclusion that low tax-to-GDP ratios in developing countries are not merely technical problems, but systemic outcomes of economic structure, governance constraints, and social contract dynamics. Existing empirical literature begs the need for a more granular, sector-specific research to identify "low-hanging fruit" for revenue reform—such as targeting high-growth yet undertaxed sectors—and for political commitment to adopt equitable and inclusive tax policies.

### 2.3.2. Empirical Assessment of Taxation Performance

Empirical assessments of Ethiopia's taxation performance suggest moderate gains following certain policy and administrative enhancements. For instance, the adoption of electronic filing in urban centers and the segmentation of taxpayers by size and sector have improved compliance among larger businesses (MoFEC, 2018). Nonetheless, revenue growth continues to be outpaced by the expansion of economic activities, especially in underserved rural and informal sectors (Dome et al, 2022). Studies also highlight persistent corruption and governance issues, particularly at local levels, as major impediments to revenue mobilization (Fjeldstad, 2004; IMF, 2019). While digitalization efforts show promise in reducing bureaucratic hurdles, systemic constraints, including low digital literacy and patchy internet access, hamper their full effectiveness (MoFEC, 2018). Moreover, the lack of consistent and high-quality data on informal sector activities complicates both the design and evaluation of tax policy (Joshi & Ayee, 2008).

Bayu (2015) analyzed the concept of tax buoyancy- the extent to which tax revenues naturally increase in response to economic growth, without changes in tax policy. A buoyant tax system is one where revenues rise at the same pace or faster than GDP growth. However, the study found that Ethiopia's direct taxes and domestic indirect taxes are non-buoyant in both the short and long term, meaning they fail to keep pace with economic expansion. Only foreign trade taxes were found to be buoyant, and only over the long term.

The study identified several variables that positively influence tax buoyancy: the value added by the services sector, import levels, and the size of the government's fiscal deficit. In contrast, official development assistance was found to have a negative effect on buoyancy, while industrial value added showed a positive but statistically insignificant association. These findings point to deep structural limitations in Ethiopia's revenue system, underscoring the urgency of broadening the tax base and enhancing administrative effectiveness to ensure revenue growth aligns more closely with economic performance (Bayu, 2015).

Belew (2001) reviewed tax reforms and recommended designing a tax system that can collect more revenue as the economy expands. The study emphasizes taxation of rapidly growing economic sectors, as well as focusing on taxing consumption goods with high demand elasticities as well as income and profits (Belew, 2001).

Abdella et al. investigated the effects of tax reform on private sector performance in Ethiopia. They identified notable discrepancies between tax legislation and implementing directives, along with vague and unclear provisions within proclamations, regulations, and guidelines. Furthermore, the study underscores a significant delay between the announcement of proclamations and the enforcement of related regulations, which contributes to uncertainty and poses challenges for businesses (Abdella et al, 2010).

Asaminew (2010), estimated Ethiopia's informal or underground economy using a monetary approach, suggesting that over 36 per cent of the recorded economy is unreported and unaccounted for in official statistics. Consequently, tax evasion is estimated at 10 per cent of the economy in 2010. These findings imply substantial uncollected revenue and highlight the importance of designing tax policies that address the incentives of small businesses (Asaminew, 2010).

Geda and Shimelis (2005 examined the impact of structural and institutional reforms on revenue generation by applying a tax burden analysis. Their findings reveal that taxes on goods such as excise, import duties, and sales taxes are generally progressive, while essential commodities like salt, sugar, and kerosene tend to be taxed regressively.

Belew (2001), in another study, reiterates that Ethiopia's low tax-to-GDP ratio points to a relatively modest tax burden, suggesting scope for raising additional revenue without undermining investment and private sector incentives. He again argues for focusing on taxing high-growth sectors and consumption of goods with high demand elasticity (Belew, 2001).

The literature consistently indicates that much of Ethiopia's income remains untaxed owing to the economy's structure and administrative inefficiencies. These studies collectively suggest that strengthening tax administration and promoting structural transformation—particularly toward the industrial sector—can help increase tax revenues without stifling economic growth.

Within the framework of the IMF's Extended Credit Facility, and acknowledging that recent actions (such as excise taxes on telecom and surtax on imports) have not effectively reversed the declining trend in the tax-to-GDP ratio, the Ethiopian government has committed to a comprehensive set of reforms aimed at improving fiscal sustainability and increasing domestic resource mobilization (IMF, 2024).

To address the persistently low tax-to-GDP ratio, the government plans to implement a series of measures (IMF, 2024). These include:

- **Strengthening tax policy:** This involves rationalizing exemptions, introducing new taxes (e.g., excise stamp regime, real estate tax), and reforming the presumptive tax regime. The focus is on broadening the tax base, particularly by exploring avenues like agricultural sector taxation.
- **Improving tax administration:** Key initiatives include enhancing taxpayer registration, promoting e-filing, and strengthening tax audits.
- **Addressing FX distortions:** Efforts will be made to mitigate the impact of foreign exchange distortions on corporate profits and the overall tax base.

Guided by the National Medium-Term Revenue Strategy (NMTRS), these reforms target a 4.0 percentage point increase in the tax-to-GDP ratio over the program's duration. The government underscores its dedication to promoting fairness, equity, and taxpayer compliance, while also advancing accession to the WTO and deeper integration into regional trade blocs.

## 2.4. Review of Tax Reform Strategies and Their Effectiveness

**Global Perspectives on Tax Reforms**

Across the globe, policymakers have employed various reform strategies to tackle the kinds of constraints outlined above. In Latin America, countries such as Chile have embraced VAT systems to streamline collection and broaden the tax base (Bird & Zolt, 2005). In Asia, Malaysia and Indonesia built robust administrative infrastructures and harnessed technology to combat corruption and improve compliance (Tanzi & Zee, 2000). Scholars group these reforms into three interrelated categories: administrative, policy, and legal.

Administrative reforms focus on empowering revenue authorities with better resources, training, and IT systems, thereby reducing human discretion and opportunities for corruption (Fjeldstad & Heggstad, 2012). Policy reforms typically target the structure of the tax code itself, aiming for simpler, more transparent regulations that minimize exemptions and lower compliance costs (IMF, 2019). Finally, legal reforms strengthen enforcement provisions and clarify the rights and

obligations of key stakeholders, fostering trust and consistency (Torgler, 2007; Braütigam et al., 2008).

Within Sub-Saharan Africa, countries grappling with large informal sectors and relatively weak institutional capacity face unique hurdles. Nonetheless, certain examples demonstrate that effective reforms can raise revenue and improve compliance. Rwanda, for instance, has successfully leveraged technology to register taxpayers electronically and introduced training programs to professionalize its revenue authority (AfDB, 2021). Ghana has adopted a segmented approach, differentiating between large taxpayers, small enterprises, and informal traders to better tailor compliance requirements and auditing processes (Joshi & Ayee, 2008). These experiences highlight the importance of pragmatic, context-driven approaches that account for local norms, administrative realities, and resource constraints. Reforms that appear successful in one setting may falter elsewhere if not adapted to the specific political, economic, and social context.

**Effectiveness and Equity Considerations**

It is important to not only evaluate the revenue impact of tax reforms but also their effects on equity. Many developing countries rely heavily on indirect taxes, such as VAT or excise duties, which can place disproportionate burdens on lower-income groups if not complemented by progressive policies (Bird & Zolt, 2005). On the other hand, introducing progressive income taxes or capital gains taxes can pose administrative challenges in environments where recordkeeping is weak (Bahl & Bird, 2008). Recent empirical studies suggest that strengthening institutions and building trust are key for making progressive taxation work in low-capacity settings, as citizens are more likely to accept heavier burdens if they trust government spending and view enforcement as fair (Luttmer & Singhal, 2014).

Ethiopia's Homegrown Economic Reform Agenda has already initiated several administrative and policy measures. These include efforts to curtail discretionary tax exemptions, introduce electronic filing systems, and enhance taxpayer education (MoPED, 2021). Ultimately, reform design must account for the country's agrarian foundations, governance challenges, and socio-cultural perceptions if it is to substantially increase the tax-to-GDP ratio without undermining equity (Fjeldstad & Heggstad, 2012).

**Informal Sector Taxation and Equity Considerations**

The informal sector remains a significant yet elusive part of many developing economies, often accounting for a substantial share of employment and gross domestic product (Schneider & Enste, 2000). In Sub-Saharan Africa, the proportion of economic activity that takes place outside formal regulatory frameworks can range from 40% to 60%, with some estimates placing it even higher in rural-dominated contexts (Chen, 2012). This sector includes subsistence farmers, petty traders, small-scale manufacturers, and service providers who typically do not register with government authorities or pay taxes. Scholars propose various reasons for this pervasive informality: some argue that onerous regulations and taxation push entrepreneurs to operate outside official channels (Joshi & Ayee, 2008), while others cite limited administrative reach and a lack of awareness or trust as primary barriers to formalization (Fjeldstad & Heggstad, 2012).

**Approaches to Broadening the Tax Base**

Expanding the tax net to include the informal sector offers benefits but also poses complex challenges. One school of thought advocates for incentives-based formalization, suggesting that easier business registration, simplified tax regimes, and accessible social services can encourage micro-entrepreneurs to register voluntarily (Bird & Zolt, 2005). Others emphasize enforcement-driven strategies, which rely on enhanced surveillance, compulsory registration, and penalties for unregistered businesses (Braütigam, Fjeldstad, & Moore, 2008). International examples reveal that a purely coercive approach often meets with resistance, especially when informal operators feel unfairly targeted or fear the cost implications of formalization (Chen, 2012). Some practitioners propose a hybrid approach, combining modest enforcement improvements such as better data collection and auditing of larger informal businesses with incentives or support for smaller operators to transition gradually into the formal sector (Joshi & Ayee, 2008; Schneider & Enste, 2000).

**Equity Implications in Informal Sector Taxation**

Efforts to tax the informal sector raise critical concerns about equity and social justice. On the one hand, extending the tax base promotes fairness by reducing the burden on compliant businesses (Bahl & Bird, 2008). On the other hand, imposing tax obligations on low-income individuals and microenterprises may threaten livelihoods if not carefully calibrated (Fjeldstad, 2004). Regressive impacts can arise when uniform tax rates or licensing fees disproportionately affect the smallest operators (Bird & Zolt, 2005). Moreover, gender considerations often come into play, as a large

segment of the informal workforce consists of women engaged in small-scale trading or cottage industries who may already face social and economic marginalization (Chen, 2012). A nuanced and graduated tax structure, possibly including thresholds that exempt very small businesses, is frequently recommended to reconcile equity objectives with the necessity of expanding fiscal revenue (IMF, 2019; Torgler, 2007). Ultimately, policymakers must strike a balance between capturing additional revenue and preserving the socioeconomic well-being of vulnerable groups (Prichard, 2015).

**Technological Innovations and Informal Sector Engagement**

Recent developments suggest that digital technologies and mobile money platforms can support more inclusive tax administration, allowing small vendors to register and remit taxes with minimal bureaucratic hurdles (Luttmer & Singhal, 2014). Countries such as Kenya and Tanzania have experimented with mobile platforms that link mobile banking services to revenue authorities, reducing the transaction costs for informal taxpayers while improving monitoring capabilities (AfDB/OECD/UNDP, 2017). Although these initiatives show promise, successful scaling depends on reliable connectivity, user-friendly interfaces, and basic digital literacy among the target population. Technological uptake must also be coupled with transparency and communication strategies that clarify tax obligations and benefits, lest taxpayers remain skeptical and resist formalization (Bahl & Bird, 2008).

Ethiopia's tax framework has undergone multiple evolutions over the last few decades, often coinciding with broader political and economic reforms (IMF, 2019). Early attempts to modernize the tax system focused largely on establishing a legal foundation for VAT and revamping income tax laws (MoFEC, 2018). However, implementation was constrained by limited administrative capacity, insufficient funding for tax authorities, and outdated record-keeping practices. Periodic reforms have attempted to simplify tax codes and rationalize exemptions, yet Ethiopia's ratio remains low relative to regional peers (AfDB, 2021).

## 2.5. Gaps Analysis

**Despite growing recognition that certain sectors may drive GDP growth yet remain undertaxed, the literature lacks rigorous, sector-specific analyses that would pinpoint the precise sources of Ethiopia's decreasing tax-to-GDP ratio.** Although numerous studies discuss

macro-level and institutional challenges to revenue collection, there is a critical shortage of empirical, sector-specific data that would pinpoint which industries or segments of Ethiopia's economy substantially drive GDP growth yet contribute minimally to tax revenues. Existing literature often provides aggregate measures or general diagnoses—such as agricultural dominance, widespread informality, and limited administrative capacity—without systematically cross-referencing each sector's output with actual tax yields. As a result, policymakers and researchers cannot fully discern the relative impact of governance or behavioral constraints versus structural factors unique to high-growth areas. This gap impedes a deeper understanding of how different subsegments—ranging from manufacturing and services to agribusiness—interact with the tax system, leaving the underlying causes of Ethiopia's persistently low tax-to-GDP ratio only partially explained.

**Although existing literature frequently advocates for administrative or policy reforms to boost tax compliance, it does not offer the cross-sectoral evidence needed to strategically identify "low-hanging fruits"—that is, those high-growth sectors where targeted interventions could yield the most immediate and substantial revenue gains given limited governmental resources.** Scholars often emphasize capacity-building or digital innovation, but few studies link sector-level GDP performance to corresponding tax yields in a way that illuminates which subsegments would be most responsive to reform efforts. In the absence of such granular data, policymakers risk adopting broad, undifferentiated approaches that fail to capitalize on the distinct opportunities presented by each economic segment. A more evidence-based, prioritized approach is crucial for a resource-constrained government, since focusing on high-potential, fast-growing industries can significantly enhance revenue collection with relatively modest investments. Without methodically pinpointing these low-hanging fruits, the gap between overall economic expansion and tax revenue growth is likely to persist, as limited resources are spread too thinly to achieve meaningful, targeted impact.

**Even if numerous scholars emphasize the need to incorporate equity into informal sector taxation, empirical measures of tax incidence across various informal subgroups remain largely unavailable.** Discussions of fairness are usually theoretical, cautioning against regressive effects on lower-income entrepreneurs but providing limited data on who bears the burden of new tax policies. This omission raises critical questions about how compliance costs and enforcement

might disproportionately affect micro-retailers, smallholder farmers, or home-based service providers—populations already operating on precarious margins. In the absence of systematic, evidence-driven insights, the literature cannot fully advise on where to focus so that the delicate balance between expanding the tax net and preserving the livelihoods of vulnerable communities is met, a balance that lies at the heart of truly equitable taxation strategies.

## 2.6 Logical and conceptual Framework

The interplay between independent and dependent variables in this sector-level quantitative analysis is central to understanding why some sectors in Ethiopia contribute disproportionately little to the national tax revenue, despite significant GDP growth. Here, the independent variables (IVs) encompass a range of sector-specific factors—most notably, the actual growth rate of each sector, the structural characteristics (e.g., degree of informality, governance constraints, and policy frameworks), and sector-level compliance behaviors. By contrast, the dependent variable (DV) focuses on sectoral tax underperformance, often measured through low tax-to-GDP ratios or a widening gap between sectoral growth and tax contributions.

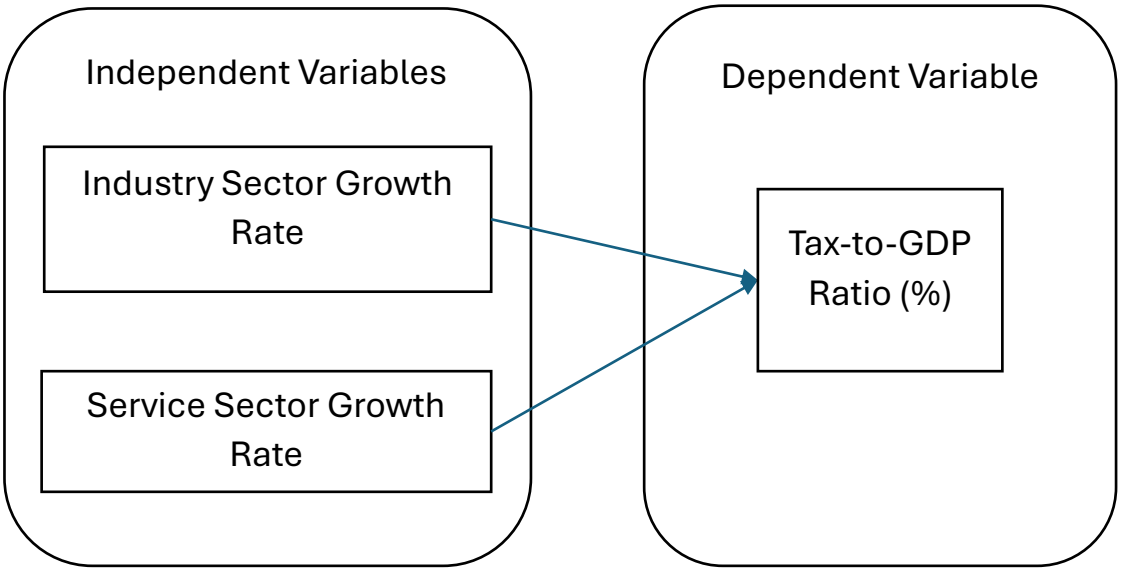
At the outset, each sector's growth rate and economic significance serve as a key indicator of its potential to generate tax revenue. For example, a booming manufacturing sector or rapidly expanding services industry implies a larger base for taxation. This sectoral growth (IV) should, in principle, produce a corresponding rise in tax yields. However, when descriptive statistics and regression analyses reveal a mismatch—namely, sectors that grow robustly but fail to translate that growth into proportionate tax revenues—this gap becomes the core dependent variable (i.e., the observed underperformance).

Delving deeper, the interplay is further shaped by the presence of governance issues, structural informality, and policy gaps within each sector (all of which also function as independent variables). A sector dominated by informal operations, for example, may exhibit strong GDP increases but minimal formal tax collection. This dynamic is captured by measuring each sector's degree of informality or compliance rates—factors that, when aggregated, directly influence the sector's overall tax yield (DV). Likewise, governance constraints such as weak enforcement or outdated tax regulations can undermine collections, even in sectors with ample revenue potential.

Once quantitative findings highlight which sectors lag in tax contributions relative to their GDP shares, the root-cause investigation shows precisely how and why certain independent variables exert stronger effects on the dependent variable. For instance, regression results may suggest that regulatory enforcement (an IV) bears a particularly significant relationship with sectoral compliance (part of the DV). This insight illuminates an actionable path: improving regulatory oversight in high-potential but underperforming sectors might substantially raise their tax-to-GDP ratios.

Ultimately, by mapping out the degree to which each independent variable—be it sector-specific growth or a governance factor—correlates with and impacts the dependent variable of tax underperformance, the study paves the way for targeted interventions. Policymakers can then prioritize strategies to address the identified causes, whether by refining tax policies, formalizing informal segments, or enhancing administrative capacity in certain industries. In doing so, the evidence-based approach ensures that efforts to boost tax revenue align closely with the actual constraints uncovered in each underperforming sector, thereby bridging the gap between robust sectoral expansion and a more equitable, proportional contribution to Ethiopia's tax-to-GDP ratio.

*Figure 3 : Logical Framework*



In this framework, the industry and service sectors serve as independent variables (IVs) expected to influence the tax-to-GDP ratio—the dependent variable (DV). However, this relationship is not automatic. Factors such as informality, cash-based transactions, tax exemptions, and limited administrative capacity often mediate the link between sectoral growth and tax performance. For instance, growth in informal construction or unregulated services may contribute little to revenue despite rising GDP shares.

This study focuses only on the direct relationship between sectoral GDP growth and the tax-to-GDP ratio. While mediating factors are acknowledged, they are not explicitly modeled at this stage. The goal is to assess whether sectoral growth correlates with tax performance, recognizing that the observed effects may reflect deeper structural dynamics. Future research may incorporate these intermediating variables to better explain causality.

# Chapter Three

# 3. Research Methodology

## 3.1. Research Approach and Design

This study adopts a **quantitative explanatory research design** to investigate the disconnect between economic growth and tax performance in Ethiopia. Specifically, the study aims to assess how the growth of key sectors—industry and services—has influenced the country's tax-to-GDP ratio over time. By statistically analyzing macroeconomic and fiscal data, the research seeks to identify structural factors behind Ethiopia's declining tax revenue performance, despite sustained GDP growth.

The explanatory design allows for the testing of relationships between sectoral GDP composition and national tax performance. The goal is to determine whether changes in the economic structure have contributed to a widening gap between potential and actual tax revenue.

## 3.2. Population and Scope

The research population comprises Ethiopia's macroeconomic sectors, with a focus on the industry and services sectors. These are evaluated for their respective shares of total GDP and their association with tax revenue outcomes. The dependent variable is the national tax-to-GDP ratio, and the independent variables are the share of industry and the share of services in GDP.

The time frame of analysis spans 24 years (1999–2023) to allow for the identification of long-term trends and structural shifts in the Ethiopian economy. The geographic scope is national, drawing on data published by government institutions and multilateral partners.

## 3.3. Data Sources and Collection

Data for the study will be sourced from official national and international repositories. GDP data disaggregated by sector will be obtained from the National Bank of Ethiopia, the Planning and Development Commission, and the Central Statistical Agency. Corresponding tax revenue data

will be sourced from the Ministry of Finance, the Ministry of Revenue, and IMF Article IV reports. Where gaps exist, secondary sources such as World Bank databases and OECD/AUC/ATAF reports will be consulted for verification and triangulation.

All monetary values will be adjusted for inflation and expressed in real terms using GDP deflators. Sector definitions will be standardized over time to ensure consistency across the dataset.

## 3.4. Model Specification and Analytical Strategy

The primary analytical tool used is Ordinary Least Squares (OLS) regression, estimated using the R programming language. The purpose is to test the relationship between sectoral GDP shares (industry and services) and the overall tax-to-GDP ratio.

Two separate regression models will be estimated:

**Model 1:**

$$TaxGDP_t = \alpha_0 + \alpha_1 \cdot IndustryShare_t + \epsilon_t$$

**Model 2:**

$$TaxGDP_t = \beta_0 + \beta_1 \cdot ServicesShare_t + \epsilon_t$$

Where:

- $TaxGDP_t$ : National tax-to-GDP ratio at time
- $Industry\ Share_t$ : Share of industry sector in GDP at time
- $Services\ Share_t$ : Share of services sector in GDP at time
- $\alpha_0$, $\beta_0$: Intercepts
- $\alpha_1$, $\beta_1$: Regression coefficients for sectoral shares
- $\epsilon_t$: Error term assumed to be normally distributed with zero mean and constant variance

Both models will be tested for statistical significance using a 95% confidence interval. P-values below 0.05 will be considered statistically significant. The analysis will include:

- Standard errors to estimate precision

- Adjusted $R^2$ to measure goodness of fit
- Durbin-Watson statistics to test for autocorrelation
- Heteroskedasticity checks (e.g., Breusch-Pagan test)
- Application of robust standard errors if heteroskedasticity is detected

In this study, Adjusted $R^2$ was used instead of the regular $R^2$ to provide a more accurate measure of model fit, given the structure of the analysis and the nature of the data. Since separate regression models were used to evaluate the impact of different sectoral GDP shares—specifically industry and services—on Ethiopia's tax-to-GDP ratio, Adjusted $R^2$ was necessary to account for the degrees of freedom and avoid overstating the explanatory power of the models. Unlike $R^2$, which can increase simply by adding variables regardless of their relevance, Adjusted $R^2$ penalizes the inclusion of unnecessary predictors and thus offers a more reliable estimate of how well each model explains the variation in tax performance (Kutner, Nachtsheim, & Neter, 2004; Hair et al., 2019).

The dataset will first be transformed using Isometric Log-Ratio (ILR) transformation to account for the compositional nature of GDP. This ensures that changes in one sector's share are correctly interpreted in relation to the rest of the economy.

## 3.5. Data Analysis Procedure

The analysis will proceed in three main steps. First, descriptive statistics will be used to track trends in sectoral GDP composition and tax-to-GDP ratios over time. This will help visualize shifts in economic structure and revenue performance. Second, ILR transformation will be applied to sectoral GDP data to avoid compositional bias. Third, OLS regression will be used to estimate the relationship between the growth of each sector and changes in tax performance.

All data analysis will be conducted using R, which provides advanced statistical tools for time series data, compositional analysis, and model diagnostics. The results will be presented with full statistical outputs including coefficients, confidence intervals, p-values, and residual plots.

## 3.6. Limitations

The study faces several limitations. First, access to disaggregated tax data by sector is limited, which constrains the ability to directly link sector-specific tax receipts to GDP. Second, the large informal sector in Ethiopia may cause sectoral GDP to be understated and tax compliance to be unevenly documented. Third, external shocks such as inflation, political instability, or global economic disruptions may have introduced noise into the data. Despite these limitations, the study's methodological rigor—particularly in using ILR transformation and robust regression techniques—ensures a valid and informative analysis of the relationship between structural economic change and tax performance.

## 3.7 Ethical Considerations

This study relies primarily on secondary quantitative data from publicly available and institutional sources such as national accounts and tax records. As such, ethical risks are minimal. All data will be used in aggregate form to ensure that no individual taxpayer, enterprise, or government entity is identifiable. No primary data will be collected from human subjects unless supplementary expert interviews are deemed necessary, in which case informed consent will be obtained, and participation will be entirely voluntary. The research adheres to national and institutional data use guidelines, with all datasets securely stored and used solely for academic purposes. No manipulation or misrepresentation of official data will occur, and care will be taken to interpret findings in a manner respectful of Ethiopia's policy environment and institutional context.

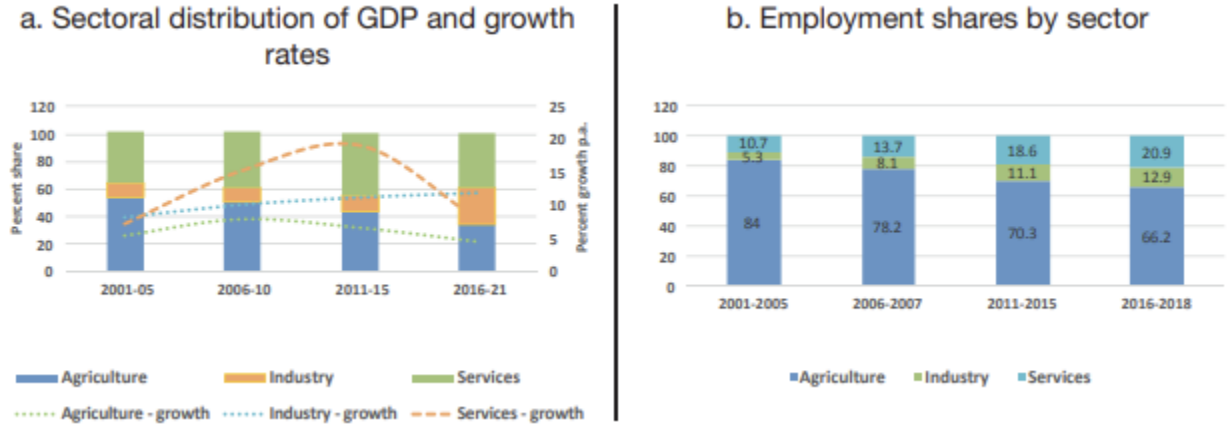
# Chapter Four

# Data Presentation, Analysis and Discussions

## 4.1. Sector-Level Econometric Analysis

Over the past decade, Ethiopia has witnessed an intriguing paradox: a decline in its tax-to-GDP ratio has coincided with an expansion in the construction driven industry sector (AFDB, 2022; Figure 4).

*Figure 4: Sectorial Breakdown in Ethiopia*




Source: AfDB, 2022

This seeming contradiction prompts a closer examination of the industry sector and its fiscal implications. Despite robust industry growth, especially between 2000 and 2021 when its GDP share nearly tripled (NBE, 2023; Appendix, table 1), the country's tax performance has remained underwhelming, suggesting significant gaps in domestic resource mobilization from high-growth sectors.

Tax collection in Ethiopia faces inherent challenges due to the significant role of agriculture in its economy. This is compounded by the economy's high level of informality, with World Bank estimates indicating the informality at 34% of GDP in 2018. Empirical evidence consistently demonstrates that both the structure of an economy and the extent of its informal sector are critical determinants of domestic revenue mobilization (McNabb et al., 2021, Persson and Besley, 2014; Kibret, 2016;)

From face value, it seems that the slowdown in the service sector from 2015 to 2021 may coincide with the decline in the tax to GDP ratio. (Figure 4)

In the context of developing economies, the question of what drives tax performance remains central to debates on fiscal sustainability and development financing. One frequently cited factor is the structural composition of the economy (Tanzi, 2008). Among the three major sectors—agriculture, industry, and services—the industry sector is often associated with greater formality, better documentation, and a higher tax base (Suprana, 2024). However, assessing the precise impact of sectoral composition on tax outcomes presents methodological challenges, especially due to the compositional nature of the data: the shares of agriculture, industry, and services must sum to 100%.

This study investigates the effect of the industry and service sector share on the tax-to-GDP ratio of Ethiopia over a 24-year period, using a methodology that explicitly addresses the compositional constraints of sectoral data. Specifically, the research employs the Isometric Log-Ratio (ILR) transformation, a technique from compositional data analysis, to overcome multicollinearity and enable valid inference. (Pawlowsky, 2011; Hron, 2012)

The data comprises 24 years of observations on: from 1992 to 2015 EC or (1999/2000 – 2022/2023) extracted from the National Bank of Ethiopia report. (NBE, 2015 -2023)

- **Tax-to-GDP ratio** (dependent variable),
- Sectoral shares of **industry**, **agriculture**, and **services** (independent variables).

Preliminary regressions using raw sector shares revealed issues of high multicollinearity, as indicated by Variance Inflation Factors (VIFs) > 26 for both industry and service. This was expected given the unit-sum constraint among the three sectors. Including all three in an ordinary least squares (OLS) regression would produce biased and unstable coefficient estimates (Pawlowsky, 2011; Hron, 2012).

To address this, the research applied the Isometric Log-Ratio (ILR) transformation, which converts compositional data (i.e., relative parts of a whole) into orthonormal coordinates that can be used in standard linear models.

### 4.1.1. Industry-Focused Model

Following a deceleration between 2019 and 2022, the industry sector experienced accelerated growth in 2023, largely driven by a rebound in construction. This vital sector, employing approximately 5 percent of the labor force (CSA, 2021) and averaging 11 percent annual growth since 2017, had seen declining growth rates in recent years.

*Figure 5: Industry Sector Growth*

Source: The World Bank

Rising cement prices, increased construction costs due to COVID-19 disruptions and material price hikes and conflict-related logistical challenges have hindered the sector, evident in unfinished buildings nationwide. However, a modest recovery was observed in 2023. In contrast, the manufacturing sector has faced headwinds from forex shortages, AGOA suspension, logistics costs, financing constraints, and regulatory hurdles. While electricity and water sectors have performed adequately, construction remains the dominant industrial sub-sector, accounting for 72 percent in 2023, compared to manufacturing's 22 percent. Overall, the industrial sector's growth rate has been on a downward trend since 2018 (UNDP, 2024).

The first model regresses tax-to-GDP on the ILR-transformed industry share variable.

This model uses a single ILR variable where **industry** is in the numerator, compared to the geometric mean of **agriculture** and **services**:

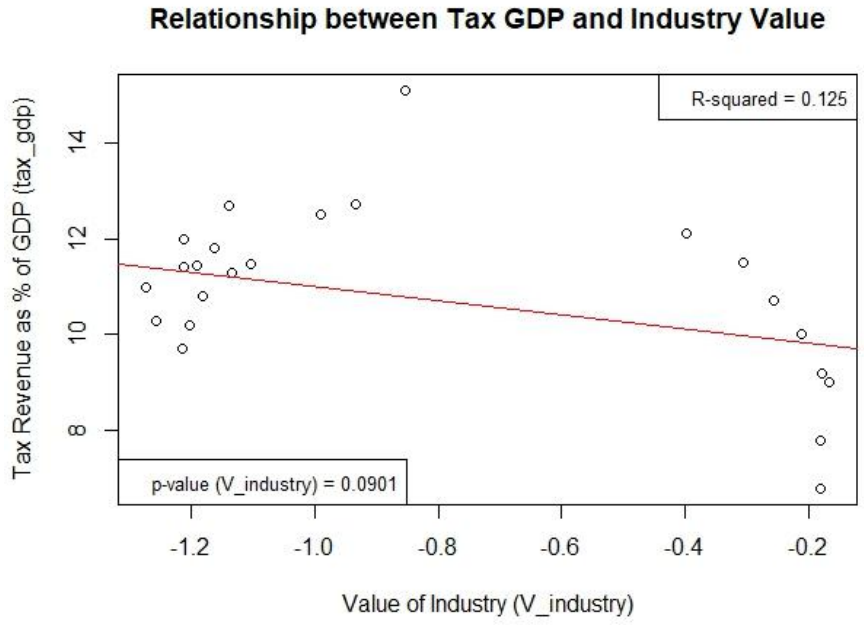
$$V_{\text{industry}} = \sqrt{\frac{2}{3}} \cdot \ln\left(\frac{\text{industry share}}{\sqrt{\text{agriculture share} \cdot \text{services share}}}\right)$$

$$\text{Tax-to-GDP}_i = \beta_0 + \beta_1 \cdot V_{\text{industry},i} + \epsilon_i$$

The results are summarized as follows:

- **Coefficient (industry)**: –1.49
- **Standard error**: 0.84
- **p-value**: 0.090
- **Adjusted $R^2$**: 0.085

*Figure 6: Relationship between Tax GDP and Industry Value*




The first regression model suggests a negative relationship between the industry's share of GDP and the overall tax-to-GDP ratio. Specifically, a 1 percentage point increase in the industry's GDP

share is associated with an estimated 1.49 percentage point decline in the tax-to-GDP ratio, holding other factors constant.

While the coefficient is statistically marginally significant at the 10% level ($p = 0.090$), it still warrants interpretative consideration. The relatively large standard error (0.84) indicates some uncertainty around the estimate, suggesting that the magnitude of the effect may vary in alternative samples or periods.

The adjusted $R^2$ of 0.085 indicates that approximately 8.5% of the variation in Ethiopia's tax-to-GDP ratio can be explained by changes in the industry's GDP share. Though modest, this is meaningful in macroeconomic studies where multiple unobserved variables often affect fiscal outcomes.

**Interpretation:** The negative coefficient may reflect several underlying structural factors in the Ethiopian economy:

- A significant share of industrial expansion—particularly in construction and state-led infrastructure—has occurred through tax-exempt or informally executed projects, limiting revenue generation.
- The prevalence of unregistered firms, in-kind payments, and subcontracting without proper VAT collection could reduce the taxable base within the sector.
- Heavy capital investment with long gestation periods may drive GDP growth without immediate tax yield, especially where depreciation allowances and tax holidays are applied.

This finding may appear counterintuitive at first glance—industry is often considered more taxable due to its physical visibility and centrality to production (Suprana, 2024). However, Ethiopia's industrial landscape is dominated by construction and state-led infrastructure projects, sectors that often benefit from tax incentives, exemptions, and poor compliance enforcement. Furthermore, small-scale construction may still operate in informal environments with weak reporting and auditing systems. This could explain why industrial expansion namely construction, growth, may not lead to proportional gains in revenue collection. Additionally, the private urban housing sector

operates with informal construction workers end to end. The public construction sector also does as well, to a certain extent.

### 4.1.2. Services-Focused Model

This model focuses on **services**, comparing it to the geometric mean of **industry** and **agriculture**:

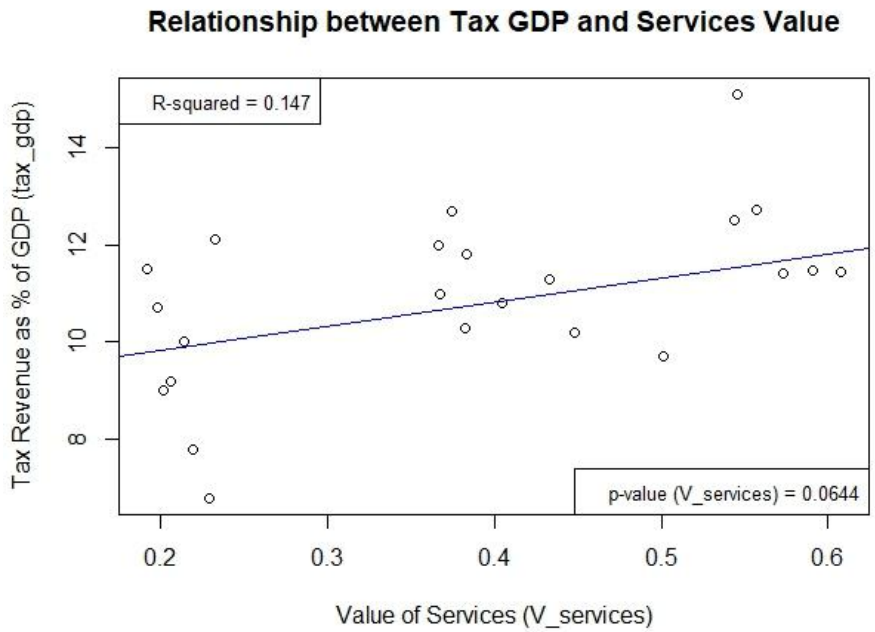
$$V_{\text{services}} = \sqrt{\frac{2}{3}} \cdot \ln\left(\frac{\text{services share}}{\sqrt{\text{agriculture share} \cdot \text{industry share}}}\right)$$

$$\text{Tax-to-GDP}_i = \alpha_0 + \alpha_1 \cdot V_{\text{services},i} + \epsilon_i$$

The second model shifts focus on the **services sector**, assessing how its relative expansion affects tax-to-GDP:

- **Coefficient (services)**: +4.94
- **Standard error**: 2.54
- **p-value**: 0.064
- **Adjusted $R^2$**: 0.108

*Figure 7: Relationship between Tax to GDP ration and Service value*



The second model estimates a positive relationship between the services sector's share of GDP and the tax-to-GDP ratio. A 1 percentage point increase in the service sector's GDP share is associated with a 4.94 percentage point increase in the tax-to-GDP ratio, with the coefficient being marginally significant at the 10% level ($p = 0.064$).

Although the standard error (2.54) indicates some variability around the point estimate, the direction and size of the coefficient suggest a relatively strong association compared to the industrial sector. The adjusted $R^2$ of 0.108 shows that 10.8% of the variation in the tax-to-GDP ratio is explained by changes in the services sector's size.

**Interpretation:** This positive relationship reflects the generally more formalized, transaction-based, and urban nature of many service subsectors in Ethiopia, such as:

- Banking, telecommunications, hospitality, and retail, which tend to be better regulated and more integrated with electronic payment systems and e-invoicing initiatives.
- Higher visibility and auditability of service firms, many of which operate from fixed premises and maintain basic records, making them more accessible to revenue authorities.
- The impact of recent modernization reforms such as electronic tax filing and POS integration, which may disproportionately benefit tax enforcement in the service sector compared to others.

Thus, the expansion of services relative to other sectors appears to improve the government's ability to mobilize domestic revenue.

### 4.1.3. Limitations of the Research

Although the findings are directionally insightful, the models suffer from limited explanatory power (adjusted $R^2$ of ~8–11%) and marginal significance levels. This suggests that the sectoral structure alone cannot fully explain tax performance. Additionally, while the ILR method effectively addresses compositional bias, it requires cautious interpretation: coefficients represent relative effects, not absolute sector impacts.

### 4.1.4. Areas for Future Research

While this study offers important insights into the structural disconnect between GDP growth and tax performance in Ethiopia, it also opens up multiple avenues for further inquiry. Understanding the drivers of fiscal underperformance in low-income, high-growth economies requires sustained and multidimensional research. The following areas are recommended for future academic and policy-oriented exploration:

**A. Sub-Sectoral Disaggregation of the Industry and Services Sectors**

This study treats the industry and service sectors as aggregated units. However, these broad categories encompass highly diverse sub-sectors with varying levels of formality, profitability, and tax compliance. For example, within industry, construction, manufacturing, and mining behave differently in terms of revenue potential and regulatory coverage. Similarly, within services, financial services, retail, transport, and ICT contribute differently to both GDP and the tax base.

Future research should undertake fine-grained sub-sectoral analysis, identifying which specific industries contribute to tax leakage or tax effort gaps. Such studies could inform more tailored interventions, such as sector-specific tax regimes or compliance support programs.

**2. Dynamic Panel or Time Series Models with Structural Breaks**

The current study applies a static regression framework. Future research could employ dynamic panel models or autoregressive distributed lag (ARDL) models to capture the temporal dynamics of tax responsiveness to sectoral growth. Moreover, incorporating structural breaks would allow researchers to assess the impact of major policy shifts (e.g., tax code reforms, introduction of electronic filing, or VAT exemptions) on sectoral tax performance over time.

Such models could provide a more nuanced understanding of how specific reforms or macroeconomic shocks have altered the relationship between GDP structure and tax capacity.

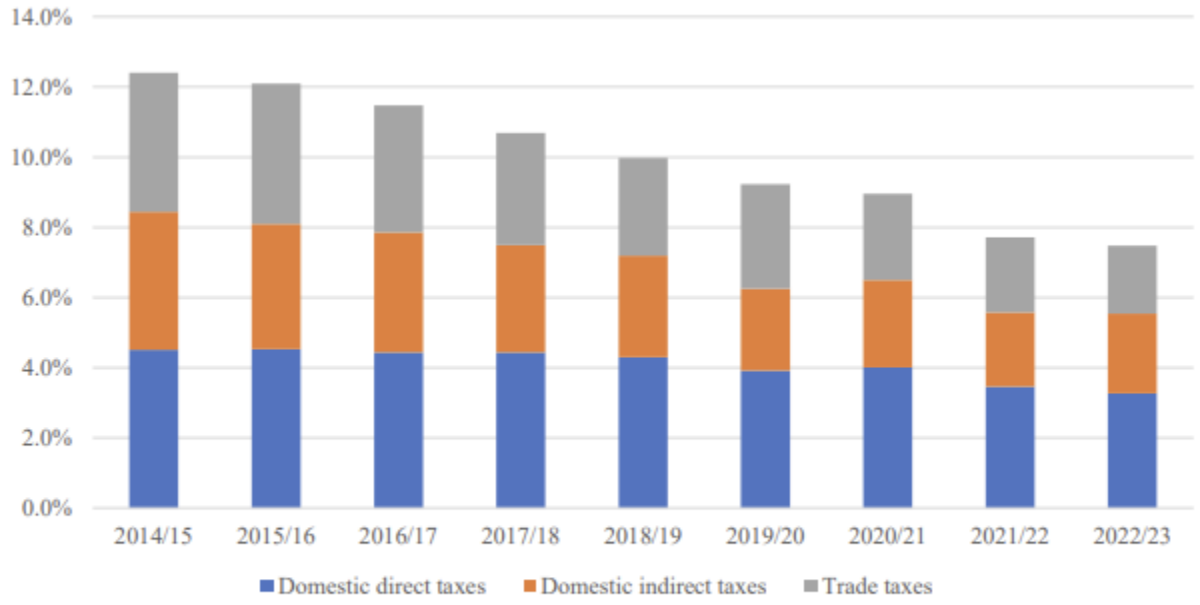
## 4.2. Specific tax instruments vis-à-vis tax to GDP ratio

This section explores the changing composition of Ethiopia's tax revenue, the specific tax instruments responsible for the decline, and the multi-layered effects of persistently high inflation on the country's tax system

### 4.2.1. The Decline in Indirect and Trade Taxes

One of the insights of the last decade in Ethiopia's fiscal profile is the shift in the composition of total tax revenue. Between 2014/15 and 2022/23, the share of domestic indirect taxes fell from 31.7% to 25.8%, while international trade taxes dropped from 31.9% to 30.4%. These are not marginal changes: indirect and trade taxes together accounted for nearly two-thirds of tax revenue in 2014/15. Their decline reflects a change in the country's fiscal structure (figure 6).

*Figure 8: Ethiopia's overall tax composition (as % of GDP)*




*Note*: 'Trade tax' includes both import VAT and excise on imported goods.

*Source*: Ministry of Finance staff computation, Tax Policy Department.

Several factors may be at work behind this shift:

- Trade liberalization efforts, including tariff reductions and customs reform, may have eroded the trade tax base.
- Domestic indirect taxes may have suffered due to a growing informal sector, weak compliance enforcement, and delayed refund mechanisms.
- Tax exemptions and incentives, particularly in industrial and import-substitution sectors, may have further diluted the indirect tax base.

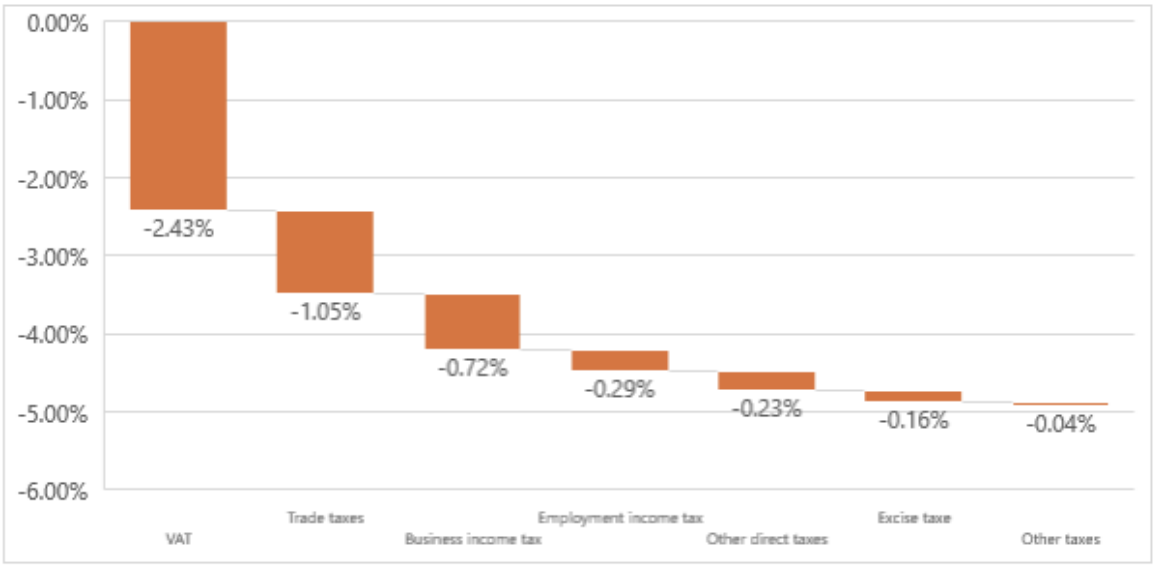
- It may perhaps be driven partly by the rise in direct taxes, particularly the personal income tax or CIT.

Hence a disaggregated analysis is required to pinpoint the drivers of the decline

**2. Disaggregated Drivers of the Tax-to-GDP Decline**

The overall decline in the tax-to-GDP ratio from 12.7% to 6.8% is not equally distributed across tax types.

*Figure 9: Change in tax-to-GDP ratio between 2015 and 2023*




*Note:* Business income tax refers to income tax on incorporated and unincorporated businesses. Trade taxes only include customs and surtax, with VAT on imports classified under VAT, and excise on imports classified under excise. Other direct taxes refer to taxes on rental incomes, dividends, capital gains, royalties, withholding taxes on imports, interest income taxes, agricultural income tax and urban/rural land value tax.

*Source*: Tax Policy Department, Ministry of Finance

A breakdown reveals that the contraction is largely driven by three key tax instruments:

- Value Added Tax (VAT): –2.43% of GDP
- Trade Taxes (customs duties and border taxes): –1.05% of GDP
- Business Income Taxes: –0.72% of GDP

**2.1. The VAT Paradox: Underperformance Amid Economic Growth**

VAT is widely recognized as a growth-friendly tax due to its neutrality and broad base across consumption categories (Keen and Lockwood, 2010). However, in Ethiopia, VAT has underperformed significantly over the past decade. Between 2014/15 and 2022/23, VAT revenue declined by 2.43 percentage points of GDP, highlighting deep structural and administrative inefficiencies (Ministry of Finance, 2024). One major challenge is the widespread evasion and underreporting of taxable sales, particularly by small and medium-sized enterprises (SMEs) in the retail and service sectors. These firms frequently operate with cash transactions and limited record-keeping, enabling them to under-declare revenues and evade VAT obligations (Gebresilasse & Sow, 2015).

Another significant barrier to effective VAT collection is the complex and often delayed refund process, which discourages formal participation in the tax system, especially among exporters and capital-intensive businesses. Furthermore, Ethiopia's progress in digitizing tax administration remains incomplete. The limited adoption of electronic tax registers (ETRs) and point-of-sale systems makes it difficult for the authorities to monitor real-time sales and detect non-compliance (Global Government Fintech, 2019).

This VAT underperformance is especially problematic because VAT is expected to expand in tandem with GDP growth. Instead, despite consistent economic expansion, VAT revenue has decelerated, pointing to weak enforcement and compliance infrastructure. Compounding this is the inflationary context: because VAT is levied on nominal transaction values, price increases push more businesses above the VAT registration threshold, regardless of whether their real profitability has improved. This phenomenon—referred to as the threshold inflation trap—results in marginal revenue gains while imposing significant administrative burdens on tax authorities and compliance costs on small firms (Gebresilasse & Sow, 2015). Ironically, such expansion may reduce net compliance, as newly included businesses often lack the systems, incentives, or capacity to fulfill VAT obligations effectively. This dynamic suggests that simply expanding the VAT base through threshold-driven inclusion is not a reliable strategy for revenue growth. Without parallel investments in enforcement capacity, taxpayer support, and administrative simplification, VAT expansion in an inflationary environment may paradoxically undermine overall compliance and erode trust in the tax system.

### 2.2. Trade Taxes: Liberalization and Leakage

The decline in trade tax revenue aligns with Ethiopia's trade policy shift towards greater regional and international integration (e.g. AfCFTA, and WTO accession process). While liberalization is a strategic priority (UNECA, 2021), the fiscal implications have not been sufficiently offset by domestic tax reforms.

For example, a study on the AfCFTA's impact in the COMESA region found that while trade creation is significant, member states-including Ethiopia-face substantial losses in tariff revenue (estimated at $319.4 million regionally), necessitating broader domestic tax bases to compensate for these losses.

Moreover, customs under-valuation, illicit cross-border trade, and weak border enforcement have further contributed to trade tax erosion, raising concerns about revenue leakage.

### 2.3. Business income tax and inflation

Business income tax collections fell by 0.72 percentage points of GDP. This decline may reflect a narrowing formal sector, increasing informality, or weakened enforcement capacity. Anecdotal evidence suggests that small and medium enterprises have shifted to informal transactions, especially amid inflationary pressures and economic uncertainty.

Persistently high inflation—exceeding 30% in recent years—has further complicated tax administration. While inflation can, in theory, boost nominal revenues, it also introduces distortions that weaken compliance, reduce real revenue yields, and strain enforcement.

High inflation reduces the real value of tax obligations between the time a transaction occurs and when it is paid. This discourages voluntary compliance and increases the incentive for cash-based, informal transactions. According to Beer (2023), inflation directly undermines revenue collection by increasing the returns to evasion while reducing the perceived fairness of the tax system.

## 4.3. Benchmarking Successful Reformers

### 4.3.1. Key Lessons

Drawing from recent success of low-income countries (LICs) like Rwanda, Uganda, Burkina Faso, and Mauritania, three key lessons emerged. First, political commitment must be strategic-anchored in a clear, sequenced plan rather than reactive legislation that risks public backlash. Second, comprehensive reforms that align tax policy, administration, and digital tools through frameworks like Medium-Term Revenue Strategies (MTRS) yield more durable outcomes than piecemeal efforts. Third, early wins such as excise hikes or reduced exemptions can rapidly boost revenue and credibility, building momentum for deeper structural reforms.

1. **Political Commitment is Foundational**

Political will at the highest levels is critical to overcoming resistance from powerful interests, especially in weak institutional environments. In Uganda and Burkina Faso, early executive backing enabled decisive reform rollouts (IMF, 2016; Kloeden,2011).

While political commitment is undeniably foundational to the success of tax reform—as seen in Uganda and Burkina Faso—it must be emphasized that not all political commitment is automatically constructive. For political will to translate into meaningful outcomes, it must be paired with a coherent, well-sequenced, and clearly communicated strategy. Without this, even the most well-intentioned reform agendas risk being perceived as coercive or arbitrary.

In Ethiopia's current reform landscape, political commitment has been expressed through ambitious revenue targets and the passage of multiple new tax legislations. However, this flurry of regulatory activity has not always been matched by a public-facing roadmap or phased implementation plan that citizens and businesses can understand and internalize. The result is often confusion, mistrust, and even non-compliance.

Introducing a barrage of legal instruments—from property taxes to presumptive tax expansions—without a clearly sequenced and communicable action plan may paradoxically undermine the very legitimacy and compliance that political leadership seeks to bolster. Reform efforts, when seen as abrupt or punitive, risk alienating taxpayers, especially those in the informal and semi-formal sectors who already feel marginalized by the system.

In this light, constructive political commitment must move beyond top-down directives or legislative proliferation. Instead, it should be:

- **Strategic**: Anchored in a Medium-Term Revenue Strategy (MTRS) that lays out priorities, timelines, and responsibilities.
- **Communicative**: Framed around public education, trust-building, and transparency about how tax revenues will be used.
- **Participatory**: Developed through consultation with taxpayers, businesses, and regional governments to enhance buy-in and context-sensitivity.
- **Balanced**: Emphasizing **voluntary compliance**, incentives, and service improvements—rather than an exclusive reliance on audits and enforcement crackdowns.

True political commitment is reflected not merely in the volume of laws passed or penalties imposed, but in the state's capacity to inspire compliance through fairness, predictability, and reciprocity. Citizens are more likely to comply when they believe that taxation is not just an obligation, but a two-way social contract—one in which the state delivers meaningful returns in the form of infrastructure, public goods, and inclusive development.

Thus, Ethiopia's reform journey should prioritize strategic statecraft over legislative velocity, and citizen engagement over coercive enforcement. A stable, broad-based, and equitable tax system depends on more than just resolve; it requires vision, clarity, and trust.

2. **Comprehensive Reform Beats Piecemeal Interventions**

Countries that combine tax policy with revenue administration reforms—especially through Medium-Term Revenue Strategies (MTRS)—achieve more persistent and scaled outcomes. Rwanda and Uganda demonstrated how MTRS can guide tax modernization and improve cross-agency coordination (Kangave et al. ,2017; Akitoby et al, 2019; IMF, 2018). This shows the need for a more coordinated rollout and synergistic approach.

Tax reform is often wrongly approached as a series of isolated policy tweaks—an exemption removed here, an audit program introduced there. However, international experience from countries like Rwanda and Uganda makes it clear that the most successful and sustainable tax reforms are comprehensive in nature. They do not merely adjust rates or plug compliance gaps but

restructure the tax system holistically by aligning tax policy, revenue administration, and institutional coordination through a shared strategic framework.

One of the most effective vehicles for this integration has been the Medium-Term Revenue Strategy (MTRS), a multi-year reform blueprint that lays out how a country will increase domestic revenue in a coherent, sequenced, and politically feasible manner. Rwanda's MTRS, for instance, guided everything from IT infrastructure upgrades and staffing reforms to VAT policy changes and risk-based audit mechanisms. Uganda's MTRS fostered greater collaboration between its tax authority and treasury, helping overcome siloed implementation and data fragmentation (Kangave et al., 2017; IMF, 2018; Akitoby et al., 2019).

By contrast, piecemeal reforms—often reactive and donor-driven—tend to fall short. Without alignment across policy, administration, and technology, gains made in one area are quickly offset by dysfunction in others. For example, enhancing audit protocols may fail if outdated legislation allows excessive exemptions. Likewise, digital systems cannot thrive if the underlying tax base remains narrowly defined or compliance incentives are absent.

3. **Early Wins Build Momentum**

Quick-impact reforms (e.g., excise hikes, reduced exemptions, VAT base expansion) helped countries like The Gambia and Senegal gain political credibility, which then enabled more ambitious second-stage reforms (WHO, 2014). Sequence is important to build momentum (Akitoby et al, 2019).

In fiscal reform, timing and sequencing are not just operational considerations—they are strategic imperatives. A growing body of international experience shows that well-chosen, quick-impact reforms can serve as catalysts for deeper, more ambitious second-stage interventions. These early wins signal government credibility, reassure international partners, and build the public and political capital necessary for sustained reform.

Countries such as The Gambia and Senegal exemplify this sequencing logic. Both launched their reform efforts with relatively low-cost, high-yield interventions such as excise tax hikes, narrowing of VAT exemptions, and better enforcement of existing trade taxes (WHO, 2014).

These measures quickly boosted revenue collections and, just as importantly, demonstrated to citizens and stakeholders that the government could deliver tangible results. As a result, these early successes helped soften resistance to more complex institutional and structural reforms introduced in subsequent phases.

According to Akitoby et al. (2019), the momentum generated by early wins can strengthen reform coalitions, marginalize vested interests that oppose change, and build the narrative that reform is not only possible, but already working. It creates a positive feedback loop: early revenue gains fund visible public services, which in turn raise compliance and trust, further improving fiscal capacity.

Ethiopia stands at a similar inflection point. With one of the lowest tax-to-GDP ratios in Sub-Saharan Africa (currently around 6.2%), the pressure to deliver rapid gains is intense. Yet this pressure must be strategically managed. Ethiopia's tax reform efforts—while well-intentioned—have sometimes leaned toward broad, complex overhauls without first securing the confidence of taxpayers and reform implementers through clear, achievable early wins.

To follow the successful sequencing seen in The Gambia and Senegal, Ethiopia should prioritize a few quick-yielding, politically palatable measures, such as:

- **Excise tax reforms** on tobacco, alcohol, sugary drinks, or luxury vehicles, which are easier to administer and can be defended on public health or equity grounds.
- **Rationalizing VAT exemptions**, especially where they benefit better-off groups or sectors that already have high profitability.
- **Closing customs loopholes and reducing illicit trade**, which have strong public support and can generate quick fiscal dividends.

Such reforms should be highly visible, linked to tangible public goods (e.g., earmarked health spending, school construction), and communicated widely to the public. This not only improves voluntary compliance but also generates narrative momentum—a sense that the reform agenda is purposeful, working, and worth supporting.

However, quick-impact reforms are not an end in themselves. Their primary role is to set the stage for deeper institutional and behavioral changes—such as formalizing the informal sector, enhancing audit capacity, or revising the personal income tax regime.

### 4.3.2. Equitable Inclusion of the Informal Sector

The informal sector remains a defining characteristic of Ethiopia's economy, accounting for over 60% of employment and a significant share of domestic output (CSA, 2021). Despite its magnitude, the sector contributes minimally to formal tax revenue due to a combination of regulatory exclusion, weak administrative outreach, and limited taxpayer incentives. Attempts to tax informal actors without accounting for their vulnerabilities often backfire, exacerbating distrust and pushing economic activities further underground.

Global experience demonstrates that taxing the informal economy requires balancing efficiency, fairness, and voluntary compliance. Lessons from IMF-supported reform programs, as well as country specific studies from Sub-Saharan countries and South Asia, offer actionable models that Ethiopia can adapt.

**1. Simplified and Tiered Tax Systems**

Rwanda and Ghana have successfully implemented presumptive turnover tax systems, which apply flat or tiered tax rates based on estimated revenues, not complex accounting books. This model reduces compliance costs, simplifies tax administration, and avoids the need for detailed financial disclosures that many small enterprises are unable to provide. (Akitoby et al, 2018)

For example, Rwanda's presumptive tax allows businesses with turnover under a defined threshold to pay a fixed rate of tax based on gross sales, while higher-turnover businesses are taxed under the standard corporate tax regime. This approach encourages voluntary registration and provides a pathway toward gradual formalization.

Ethiopia has experimented with presumptive taxation for small businesses, but the regime remains poorly structured and inconsistently applied across regions. Many small firms are unclear about thresholds, face arbitrary assessments, or are lumped into inappropriate tax categories, often without transparency or recourse. A more structured, tiered presumptive tax system—differentiated by turnover brackets and paired with simple recordkeeping templates—would

enhance predictability and reduce resistance. Like in Rwanda, firms under a defined threshold could be taxed at a flat rate, while those above it could gradually transition to a standard corporate tax regime, promoting formalization with dignity.

**2. Mobile and Digital Registration Platforms**

In Pakistan and Uganda, mobile-based tax registration and declaration systems have been piloted to overcome geographic and administrative barriers. These systems use USSD and SMS technology to allow informal entrepreneurs to register, declare income, and pay taxes using basic feature phones. (IMF, 2018)

Such innovations reduce travel and time costs for rural and peri-urban entrepreneurs while strengthening data collection for tax authorities. Uganda's integration of mobile money with tax payments has also enabled flexible, small-sum payments that suit irregular cash flows common in the informal sector.

Ethiopia's digital tax reforms—such as e-filing and e-receipt systems—are still in early stages and mostly geared toward medium and large firms in urban areas. However, over 85% of employment is informal, with many informal traders operating in cash-based, rural, or peri-urban environments. Expanding tax registration through mobile platforms in local languages using basic feature phone technology would significantly lower access barriers. Integrating mobile money (e.g., Telebirr) into payment systems could also enable low-cost, staggered tax payments suited to the cash flows of informal operators.

3. **Community-Driven Tax Administration**

Senegal's reform strategy included active engagement with trade unions, market associations, and chambers of commerce to co-design and co-enforce tax policies (World Bank, 2018). By embedding tax compliance within local social and economic networks, the state was able to enhance legitimacy, reduce resistance, and foster cooperative enforcement (OECD, 2021).

In settings where trust in government is low, community-based enforcement can bridge the gap between tax authorities and informal taxpayers. Local associations may also serve as intermediaries in dispute resolution and compliance support.

Ethiopia suffers from low taxpayer morale and limited trust in tax institutions, particularly at subnational levels. (Tumoro et al, 2025) Engagement with market associations, informal sector cooperatives, and trade unions could help translate national tax goals into local language and context, improving outreach and compliance. These groups could also play an intermediary role in resolving disputes, organizing education campaigns, and creating peer pressure for compliance, particularly in marketplaces, construction hubs, and transport sectors.

**4. Incentive-Linked Formalization**

In many successful reforms, formalization was linked to tangible economic benefits. For instance, Kenya and Rwanda allowed tax-compliant businesses to access government contracts, public procurement schemes, and microfinance (IMF, 2022; OECD, 2023). In Tanzania, tax registration was linked to access to business licenses and trade fairs.

This approach changes the perceived value of taxation from extractive to enabling, particularly when combined with outreach and support services for microenterprises.

Core Lessons from International Experience

- Prioritized voluntary compliance over coercive enforcement.
- Integrated service delivery or access to credit into tax registration.
- Designed systems that matched the capacity and realities of small-scale economic operators.

Currently, the perception of taxation in Ethiopia is overwhelmingly extractive—citizens often view it as a cost with no clear benefit or return. (Prichard et al, 2014; Tumoro et al, 2015) Reforms should aim to link tax registration to tangible advantages such as eligibility for MSE grants, government tenders, or priority business zones. Formal tax records could also serve as collateral substitutes for microfinance eligibility or access to credit guarantee schemes. These incentive structures would help reframe formalization as a business development strategy, especially in youth-led and women-owned enterprises.

# Chapter Five

# Summary of Findings, Recommendation and Conclusion

This final chapter consolidates the key insights derived from the study's analysis of Ethiopia's declining tax-to-GDP ratio, the structural and sectoral drivers behind it, and the potential policy responses to reverse the trend. It begins by summarizing the main empirical findings, followed by a set of actionable recommendations grounded in both international best practices and Ethiopia's fiscal context. The chapter concludes by reflecting on the broader implications of the study for equitable tax reform and outlining potential areas for future research.

## 5.1. Summary of Findings

**1. Sectorial Findings**

Ethiopia's declining tax-to-GDP ratio presents a paradox when viewed alongside the expanding industry sector—particularly construction. Despite the industry sector's GDP share nearly tripling between 2000 and 2021, its tax performance has remained weak. Econometric analysis using ILR transformation over a 24-year period reveals:

- **Industry sector expansion is negatively associated** with tax-to-GDP performance (Coefficient: –1.49; $p = 0.090$). This counterintuitive result may be explained by the dominance of informal, small-scale construction and state-led projects benefiting from exemptions and poor compliance oversight.
- **Service sector expansion** is **positively associated** with tax-to-GDP performance (Coefficient: +4.94; $p = 0.064$). Formal service activities—such as banking, telecoms, and utilities—tend to be more traceable and taxable, contributing to higher revenue efficiency.

These findings suggest that not all growth translates into fiscal gains. While industrial expansion—especially in construction—offers GDP growth, it does not guarantee proportional tax contributions without reforms. In contrast, the formalization and expansion of the services sector may be a more viable strategy for improving domestic revenue mobilization.

**2. Declining Contributions of Specific Tax Instruments**

The composition of Ethiopia's tax revenue has shifted over the past decade, with declines in key instruments contributing significantly to the drop in the tax-to-GDP ratio (from 12.7% to 6.8% between 2014/15 and 2022/23):

- **Value Added Tax (VAT)** declined by **2.43 percentage points** of GDP. Despite being growth-friendly, VAT underperformed due to widespread evasion, weak record-keeping among SMEs, and complex refund procedures. The inflation-driven expansion of the VAT base without administrative readiness exacerbated compliance challenges.
- **Trade Taxes** fell by **1.05 percentage points**, influenced by tariff reductions, regional trade integration (e.g., AfCFTA), customs under-valuation, and illicit trade. Liberalization has not been offset by compensatory reforms.
- **Business Income Tax** dropped by **0.72 percentage points**, reflecting a shrinking formal sector, rising informality, and enforcement challenges—especially under sustained inflationary pressure.

**3. Inflation and Tax System Vulnerabilities**

Persistently high inflation has significantly compounded Ethiopia's tax administration challenges. It erodes the real value of tax revenues, weakens enforcement capacity, and distorts compliance incentives. Inflation also increases the returns to tax evasion, pushing more businesses into the informal sector. In the case of VAT, rising prices push firms above the registration threshold without a corresponding increase in real profitability or administrative capacity, resulting in what is known as the "threshold inflation trap." This phenomenon leads to marginal revenue gains at best, while overburdening small firms and straining already limited enforcement resources.

## 5.2. Recommendations

Based on the quantitative diagnostic phase, which identified persistent underperformance in key sectors such as construction, wholesale and retail trade, and manufacturing, Ethiopia's tax system exhibits structural and administrative inefficiencies. These inefficiencies manifest in the form of high tax evasion, disproportionate reliance on a narrow base of formal taxpayers, and weak enforcement mechanisms. The reform strategy begins by translating these insights into targeted policy and administrative interventions that can improve revenue outcomes while preserving equity and minimizing economic disruption.

Drawing on successful reforms from peer countries Such as Burkina Faso, Senegal, Uganda and Gambia (See figures in the appendix), the proposed interventions are categorized into four pillars of reform:

**1. Simplifying the Tax System to Improve Compliance**

A complex tax system with multiple rates, exemptions, and procedural hurdles creates compliance burdens that disproportionately affect SMEs, which make up a large portion of Ethiopia's economy. Many SMEs operate informally to avoid high compliance costs or lack the administrative capacity to engage with a complex system.

**Reform Actions:**

- Introduce or revise simplified tax regimes for SMEs, such as a tiered presumptive tax based on turnover or location, akin to Rwanda's flat presumptive tax model.
- Reduce the number of tax brackets and streamline filing processes, particularly for personal income tax and VAT.
- Develop one-stop-shop portals and digital self-assessment tools to support small taxpayers in registration and filing.

**Rationale:**

Simplicity not only improves compliance but also reduces enforcement costs for the Ministry of Revenue. The reforms foster a culture of voluntary compliance and allow the authority to reallocate resources toward higher-risk and higher-yield segments.

**2. Removing or Rationalizing Tax Exemptions**

Ethiopia's tax base has been heavily eroded by widespread and often discretionary tax exemptions—particularly in VAT, corporate income tax (CIT), and import duties. Exemptions for investment, construction materials, and NGOs, while sometimes justified, are frequently exploited or loosely monitored.

**Reform Actions:**

- Conduct a comprehensive tax expenditure review to quantify and evaluate the cost-effectiveness of current exemptions.
- Eliminate non-targeted VAT exemptions and consolidate existing ones to reduce leakage, following Uganda's model of curbing VAT zero-rating (IMF,2015b).
- Replace open-ended investment tax incentives with performance-based incentives tied to job creation, export performance, or technology transfer.

**Rationale:**
Reducing exemptions improves horizontal equity—ensuring that similar taxpayers are treated equally—and broadens the tax base without raising headline rates. It also simplifies administration and reduces avenues for rent-seeking and corruption.

**3. Reforming Indirect Taxes: VAT and Excise Duties**

While indirect taxes account for a large share of Ethiopia's tax revenue, their design and administration have weakened over time. The decline in the VAT-to-GDP ratio is particularly concerning, as VAT is theoretically self-enforcing and growth-friendly.

**Reform Actions:**

- Expand the VAT base by removing sectoral exemptions and reducing the VAT registration threshold to capture medium-sized businesses.
- Strengthen VAT refund mechanisms to improve compliance among SMEs and large businesses, possibly by automating refund claims (Keen, 2013).
- Introduce or increase excise taxes on socially harmful goods such as tobacco, alcohol, sugary beverages, and fossil fuels, as done in Burkina Faso and The Gambia (Akitoby et al, 2019).

**Rationale:**

Well-designed VAT and excise systems are among the most efficient ways to raise revenue. VAT base broadening can yield substantial revenue with minimal economic distortion, while excise taxes provide a dual benefit—revenue and behavioral correction.

**4. Strengthening Revenue Administration**

Improving tax policy is only half the equation. A weak revenue administration system—marked by poor taxpayer registration, low audit capacity, and fragmented data systems—undermines compliance and enforcement.

**Reform Actions:**

- Introduce or expand taxpayer segmentation, starting with strengthening the Large Taxpayer Office (LTO) and creating dedicated Medium Taxpayer Offices (MTOs) in regional hubs (Kangave et al, 2017).
- Build a risk-based compliance framework covering registration, filing, payment, and reporting—learning from Rwanda's integrated audit system (Miguel et al, 2024; Akitoby et al, 2019).
- Leverage digital tools to modernize taxpayer services, including e-filing, e-payment, and automated reminders.
- Integrate third-party data sources (Fayda, banks, customs, utilities, land registries) into taxpayer profiles for better enforcement and verification.

**Rationale:**

Segmentation allows revenue authorities to tailor services and enforcement to different taxpayer types, improving efficiency. When combined with digital tools and data analytics, this strengthens compliance and reduces administrative leakage.

## Recommendations on the Medium-Term Revenue Strategy (MTRS)

The success of reforms depends on their integration into a **coherent, sequenced, and institutionally supported reform framework**. Ethiopia has a MTRS (Ministry of Finance, 2024; table 3); however, it lacks the specificity and focus needed to drive successful change.

Ethiopia's MTRS for 2024 to 2028 represents an ambitious and comprehensive attempt to enhance domestic resource mobilization. Spanning a vast array of reforms in tax policy, administration, and intergovernmental coordination, the MTRS reflects a strong political commitment to reversing the country's declining tax-to-GDP ratio. However, while its breadth is commendable, the strategy would benefit significantly from greater prioritization, simplification, and clearer sequencing to maximize its feasibility and long-term impact.

Among its major strengths, the MTRS demonstrates a modern understanding of tax administration. The establishment of a reform administration unit at the Ministry of Revenue (MoR) is a step toward centralized coordination and accountability. Plans to build a compliance risk management (CRM) framework and digitize core functions—such as e-Audit, e-Filing, and real-time transaction monitoring through upgraded sales registration machines—reflect international best practices in data-driven enforcement. Furthermore, repeated self-assessments using tools like TADAT and FITAS suggest a commitment to evidence-based reform, while efforts to harmonize federal, regional, and city-level tax administrations respond to Ethiopia's decentralized fiscal structure.

Additionally, the MTRS rightly emphasizes institution building. It outlines reforms to strengthen revenue agencies, introduce fair market valuation systems, and upgrade human capital, including a proposed Domestic Taxes and Customs Tariff Institute. These are foundational for sustainability and administrative resilience.

Despite these strengths, the MTRS suffers from significant limitations. Chief among them is the lack of clear prioritization. The strategy presents a long list of initiatives—ranging from IT upgrades and institutional restructuring to risk management and inter-ministerial coordination—without a clear order of execution. Foundational reforms, such as building the CRM system, are listed alongside more advanced measures like e-Risk modeling or inter-agency data science

initiatives, making it difficult to distinguish what must come first. These risks overburdening implementation capacity and diluting focus.

Second, the MTRS lacks clearly defined targets and performance benchmarks. While tools like TADAT are referenced, there is little linkage between diagnostic findings and specific reform measures. This limits the ability to track progress, evaluate impact, or adapt based on results.

Third, the strategy does not sufficiently address informal sector inclusion. While it references improving voluntary compliance, it lacks a coherent approach to bringing Ethiopia's vast informal economy—comprising over 60% of employment—into the tax net in an equitable and sustainable way. There is no plan for simplified tax regimes, mobile registration, or formalization incentives, all of which have proven effective in peer countries like Rwanda and Senegal (IMF ,2023).

To address these gaps, a more structured and focused approach is needed. First, the MTRS should be reorganized into a few clear reform pillars—such as Compliance & Enforcement, Digital Transformation, Taxpayer Services, and Institutional Coordination. Within each pillar, reforms should be sequenced into short-, medium-, and long-term priorities, ensuring that foundational systems and capacities are built before more complex reforms are undertaken.

Second, the strategy should include a set of measurable performance indicators tied to key reforms. For example, it could aim to increase the VAT compliance rate by a specific percentage within two years or to integrate 100,000 informal businesses into the presumptive tax system by 2026. Such targets enhance accountability and enable adaptive management.

Third, the MTRS must integrate a dedicated informal sector strategy. This could include the rollout of a simplified turnover tax, mobile-based registration platforms, and links between tax compliance and access to microfinance or business licenses. Formalization efforts should be designed with proportionality and reciprocity in mind—ensuring that taxes do not penalize microenterprises and that compliance leads to tangible benefits.

Finally, the government should clearly communicate a set of "quick wins"—reforms that can deliver visible results within the first year. These might include expanding e-filing for large taxpayers, launching pilot presumptive tax zones, or instituting electronic invoices for government contractors. These early successes can build momentum and political support for deeper reforms.

## 5.4. Conclusion

Ethiopia's continued decline in the tax-to-GDP ratio—from approximately 12% in 2013 to 6.2% in 2024—represents a serious constraint on the country's ability to finance essential public goods and pursue inclusive development. This study was guided by three specific objectives: (1) to identify the leading causes constraining Ethiopia's tax-to-GDP ratio, (2) to propose actionable reforms to increase tax performance, and (3) to develop equitable strategies for expanding the tax base, particularly in the informal sector.

To address the first objective, the study used national accounts and tax revenue data to conduct regression analyses that explored the relationship between sectoral GDP composition and tax performance. The results revealed a persistent and statistically significant negative association between industry sector growth and tax-to-GDP performance over the past decade, suggesting a structural irregularity that warrants further investigation. Conversely, the service sector exhibited a moderate positive effect on tax collection. However, the aggregate nature of sectoral data conceals intra-sector variation, making it difficult to pinpoint the root causes of underperformance. This reinforces the need for sub-sectoral studies using disaggregated and grassroots-level data to isolate the specific drivers behind Ethiopia's revenue shortfall.

For the second objective, the study assessed international best practices and identified a set of high-impact, actionable reforms. These include rationalizing tax exemptions, rolling out e-invoicing systems, and strengthening customs enforcement through risk-based audits. These policy instruments were selected based on their proven effectiveness in comparable contexts and their ability to yield quick revenue gains with limited administrative burden.

In response to the third objective, the study emphasized the importance of integrating informal sector actors through equitable mechanisms. Drawing lessons from countries like Rwanda, Senegal, and Uganda, it recommended simplified presumptive tax regimes, mobile-based registration systems, and incentive-linked formalization programs. These approaches prioritize voluntary compliance, reduce barriers to entry, and link taxation with tangible economic benefits—such as access to credit, procurement, and business services.

While Ethiopia's current Medium-Term Revenue Strategy demonstrates commitment to digitalization and compliance reform, it lacks the strategic prioritization, sequencing, and equity considerations needed to reverse the tax decline sustainably. The study therefore recommends reorganizing the strategy around three pillars: (1) value-added tax reform, (2) stronger trade enforcement, and (3) inclusive integration of the informal economy. Each should be supported by phased implementation milestones and measurable targets for both revenue generation and distributional fairness.

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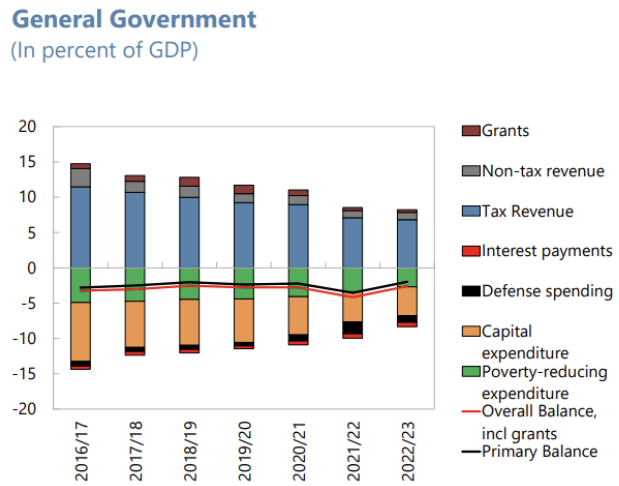
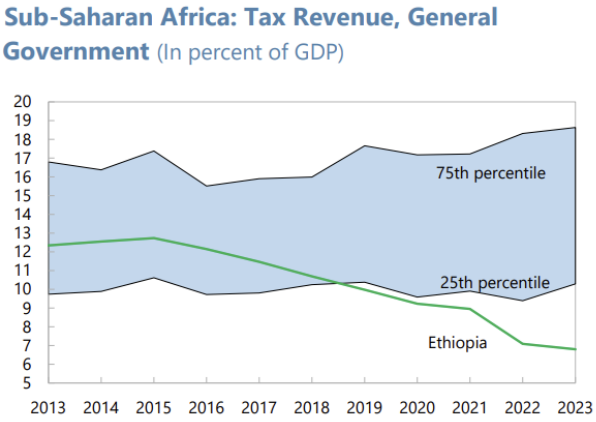
# Appendix

Figure 1: Tax Developments in Ethiopia

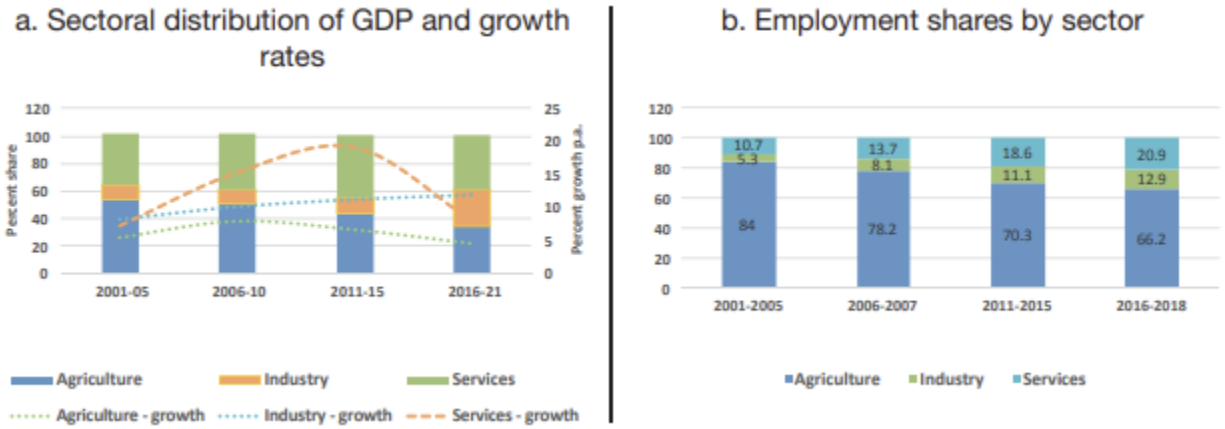



Sources: Ministry of Finance and IMF staff calculations




Sources: World Economic Outlook and IMF staff calculations

Figure 2: Sectorial Breakdown in Ethiopia

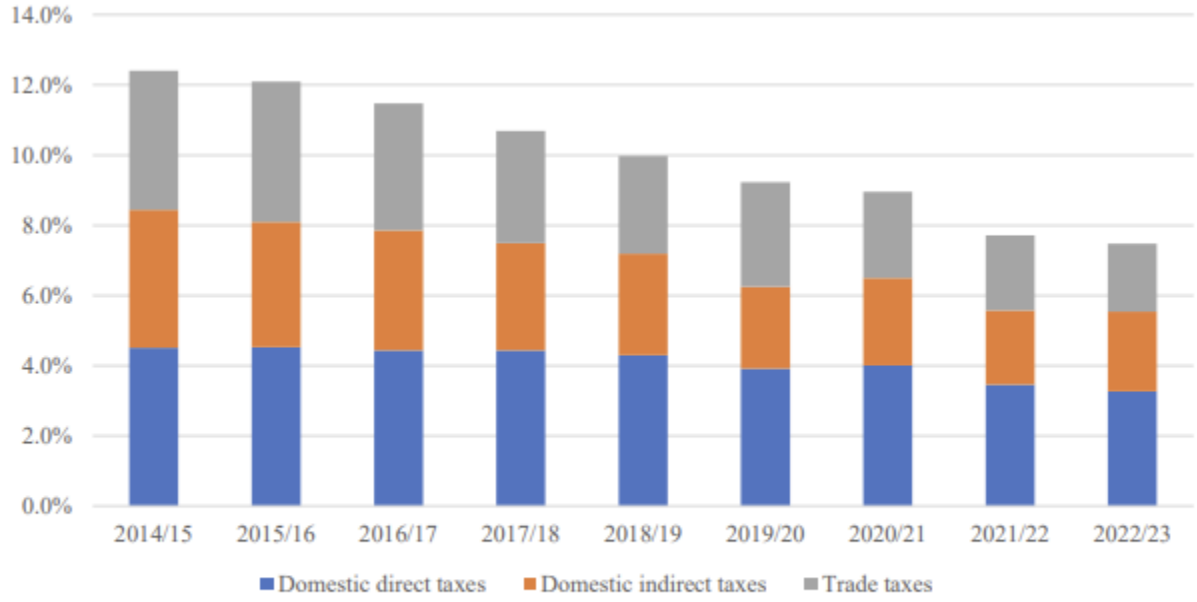



Source: AfDB, 2022

Figure 3: Industry Sector Growth

Source: The World Bank

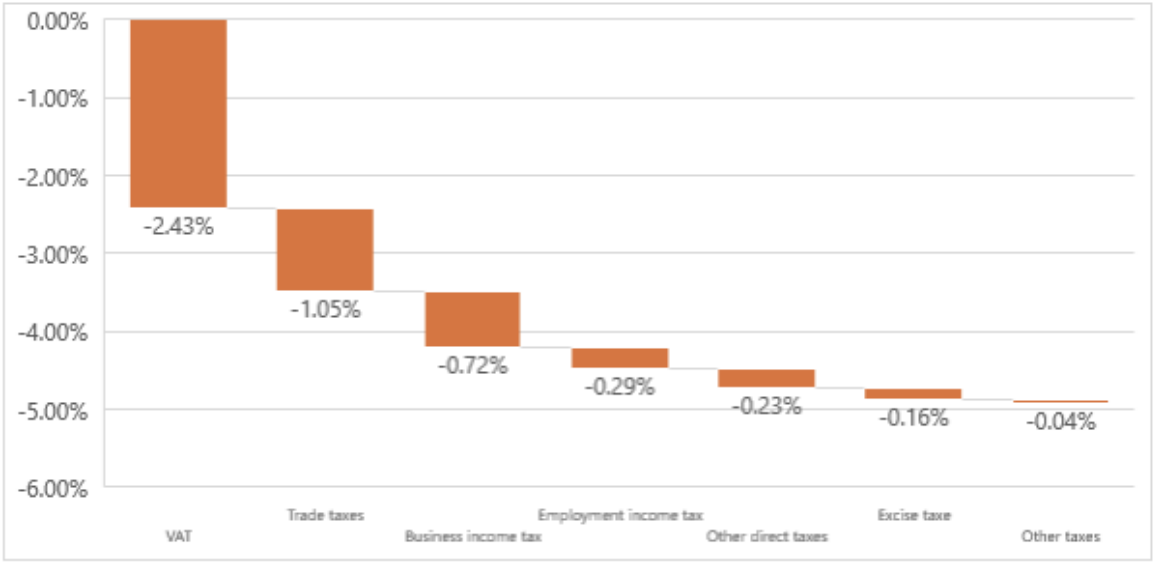
Figure 4: Ethiopia's overall tax composition (as % of GDP)




*Note*: 'Trade tax' includes both import VAT and excise on imported goods.

*Source*: Ministry of Finance staff computation, Tax Policy Department.

Figure 5: Change in tax-to-GDP ratio between FY 2014/15 and FY 2022/23




*Note:* Business income tax refers to income tax on incorporated and unincorporated businesses. Trade taxes only include customs and surtax, with VAT on imports classified under VAT, and excise on imports classified under excise. Other direct taxes refer to taxes on rental incomes, dividends, capital gains, royalties, withholding taxes on imports, interest income taxes, agricultural income tax and urban/rural land value tax.

*Source*: Tax Policy Department, Ministry of Finance

Figure 6: Burkina Faso Reform results (IMF,2024)

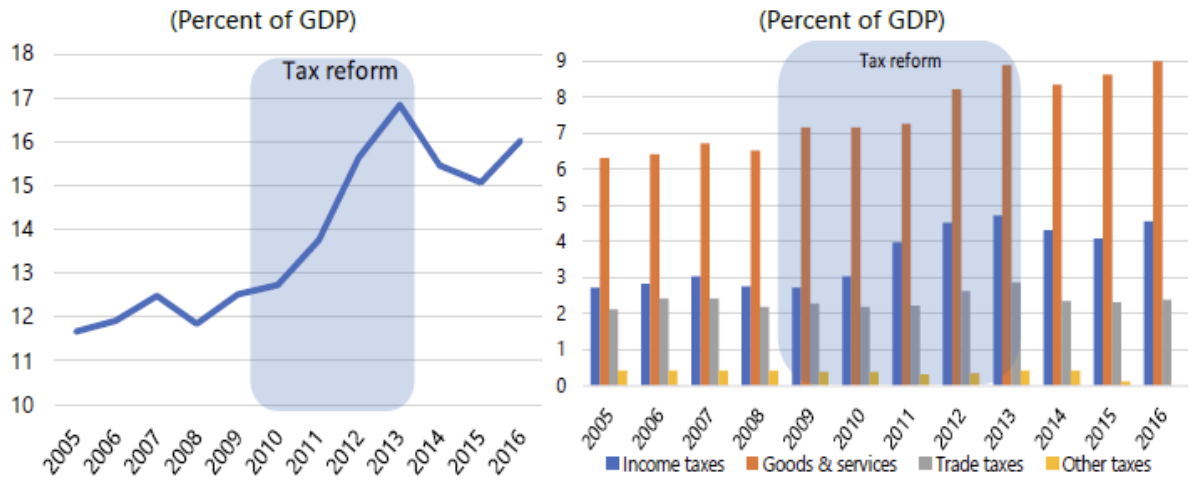


Figure 7: The Gambia tax reform results (IMF,2024)

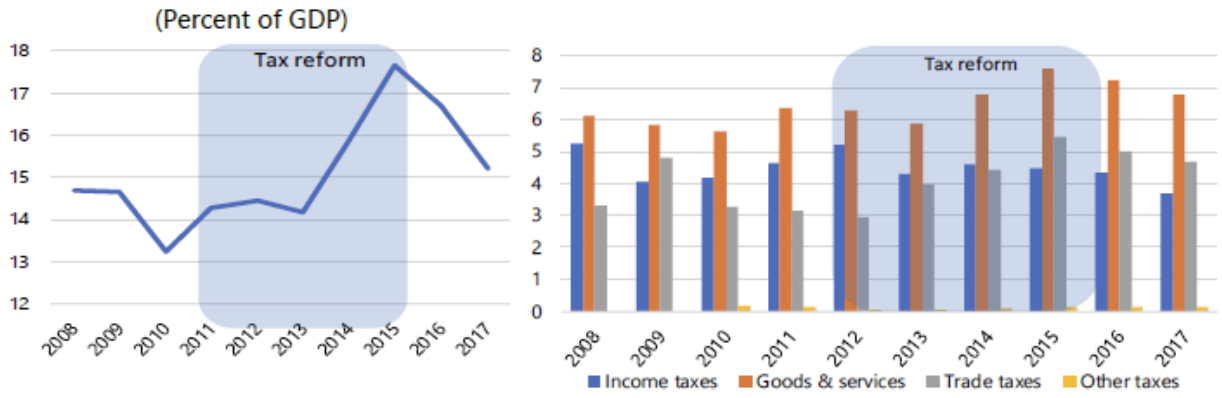



Figure 8: Rwanda tax reform results (IMF,2024)

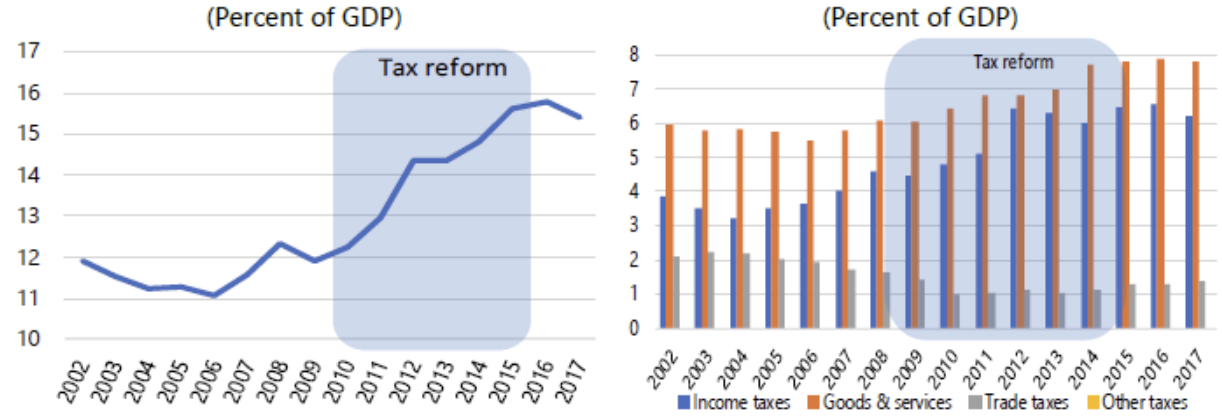
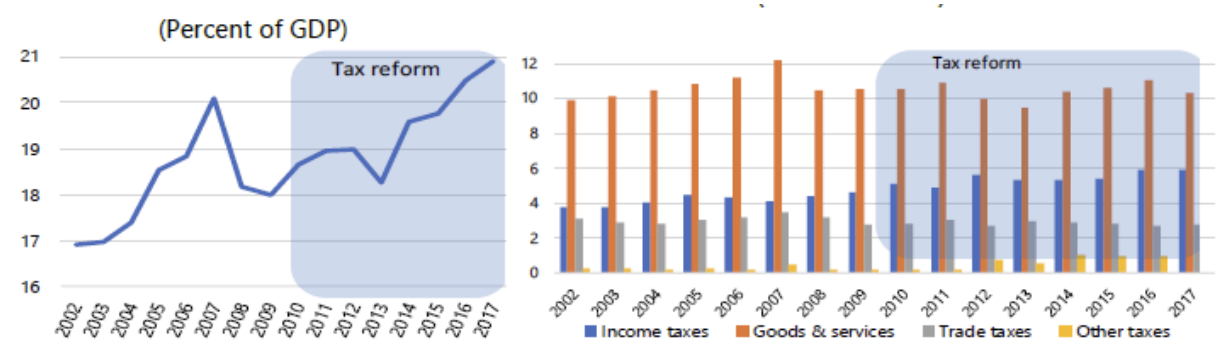



Figure 9: Senegal tax reform results (IMF,2024)



# Tables

**Table 1: NBE Macroeconomic data from 1992 to 2015 (E.C.)**

| Tax to GDP Ratio | Industry share | Agriculture share | Services share | country | Year (E.C.) |
|---|---|---|---|---|---|
| 10.3 | 9.7 | 55.3 | 37 | Ethiopia | 1992 |
| 11 | 9.5 | 56.4 | 36.3 | Ethiopia | 1993 |
| 12 | 10 | 53.7 | 36.3 | Ethiopia | 1994 |
| 11.3 | 11 | 49.4 | 39.6 | Ethiopia | 1995 |
| 12.7 | 10.9 | 51.6 | 37.5 | Ethiopia | 1996 |
| 11.8 | 10.6 | 51.9 | 37.5 | Ethiopia | 1997 |
| 10.8 | 10.4 | 51.5 | 38 | Ethiopia | 1998 |
| 10.2 | 10.2 | 50.5 | 39.3 | Ethiopia | 1999 |
| 9.7 | 10.1 | 48.8 | 41 | Ethiopia | 2000 |
| 7 | 10.1 | 47.3 | 42.6 | Ethiopia | 2001 |
| 11.42 | 10.17 | 46.13 | 43.7 | Ethiopia | 2002 |
| 11.45 | 10.4 | 44.37 | 45.23 | Ethiopia | 2003 |
| 11.47 | 11.5 | 43.1 | 45.9 | Ethiopia | 2004 |
| 12.5 | 13 | 42 | 45.5 | Ethiopia | 2005 |
| 12.71 | 13.8 | 40.2 | 46.6 | Ethiopia | 2006 |
| 15.09 | 15 | 38.7 | 47 | Ethiopia | 2007 |
| 12.1 | 23.5 | 37.2 | 39.3 | Ethiopia | 2008 |
| 11.5 | 25.6 | 36 | 38.4 | Ethiopia | 2009 |
| 10.7 | 26.7 | 34.5 | 38.7 | Ethiopia | 2010 |
| 10 | 27.8 | 32.9 | 39.3 | Ethiopia | 2011 |
| 9.2 | 28.6 | 32.3 | 39.1 | Ethiopia | 2012 |
| 9 | 28.9 | 32.1 | 39 | Ethiopia | 2013 |
| 7.8 | 28.5 | 32 | 39.5 | Ethiopia | 2014 |
| 6.8 | 28.5 | 31.7 | 39.8 | Ethiopia | 2015 |

**Table 2: Regression results for Industry focused and Service focused ILR model.**

| Model | Intercept | Sector_Coefficient | Std_Error | t_value | p_value | Adj_R2 |
|---|---|---|---|---|---|---|
| Industry-Focused | 9.5245 | -1.4858 | 0.8381 | -1.773 | 0.0901 | 0.08522 |
| Service-Focused | 8.8550 | 4.9400 | 2.5370 | 1.947 | 0.0644 | 0.10820 |

**Table 3: Ethiopia's NMTRS 2024 -2028**

| TAX ADMINISTRATION MEASURES | BASE YEAR | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 2027/28 | 20223/24 to 2027/28 |
|---|---|---|---|---|---|---|---|
| **1. TAX ADMINISTRATIVE MEASURES** | **0.00** | **0.00** | **0.20** | **0.60** | **0.90** | **1.20** | **2.90** |
| Establishing a reform administering unit at the MoR | | | | | | | |
| Conducting regular self-assessments of the tax authority's digitisation maturity level | | | | | | | |
| Conducting Two TADAT assessment and ensuring at least average one rank higher from first assessment rank result | | | | | | | |
| Conducting readiness to manage international tax risks using the Framework for International Tax Administrative Strengthening (FITAS) tool kit | | | | | | | |
| Build Compliance Risk Management (CRM) Framework | | | | | | | |
| Improving the IT and data management system (iTAS, Introduce e-Audit, e-Risk Assessment, etc) | | | | | | | |
| Improving existing taxpayer touch-points | | | | | | | |
| Instituting a dynamic computerized risk management system | | | | | | | |
| Making the Audit, Risk, Intelligence, and Investigation independent from each other | | | | | | | |
| Strengthening the revenue management within the revenue authorities including the regional revenue bureaus | | | | | | | |
| Preparing a human resource development strategy | | | | | | | |
| Introducing excise stamps, and tracking and tracing mechanisms | | | | | | | |

| TAX ADMINISTRATION MEASURES | BASE YEAR | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 2027/28 | 20223/24 to 2027/28 |
|---|---|---|---|---|---|---|---|
| Improving voluntary compliance | | | | | | | |
| Establishing a national fair-market value institution/structure | | | | | | | |
| Setting up a government & and state-owned enterprises taxpayers' office (SOETO) or SOETU | | | | | | | |
| Introducing a data management policy/manual | | | | | | | |
| Setting up an institutionalized inter-ministry/ agency/ bureaus communication mechanism | | | | | | | |
| Upgrading the existing sales registration machine technology in order to send detailed sales and purchase real time data to the tax administration server | | | | | | | |
| Introduce data science to develop effective and timely services and interventions | | | | | | | |
| Re-structure the Research Department upgrading it to Domestic Taxes and Customs Tariff Institute to improve and harmonise the Tax Administration system (Federal, Regional, City Administration etc). This may include the existing Regional Support Department of MoR. | | | | | | | |
| Develop a strategy to harmonize vertical and horizontal tax administration (Federal with Regions with City Administration and Regions with Regions with City Administration etc). This may include helping regions and city administrations to evaluate their system applying TADAT, Digitization Maturity, CRM, etc. | | | | | | | |