

Ethiopia's Tax System: Structure, Performance, and Benchmarking

Gabriel Hegab

SIP/2025/108

IMF Selected Issues Papers are prepared by IMF staff as background documentation for periodic consultations with member countries. It is based on the information available at the time it was completed on June 16, 2025. This paper is also published separately as IMF Country Report No 25/189.

2025
JUL



IMF Selected Issues Paper
African Department

Ethiopia's Tax System: Structure, Performance, and Benchmarking
Prepared by Gabriel Hegab*

Authorized for distribution by Annalisa Fedelino
July 2025

IMF Selected Issues Papers are prepared by IMF staff as background documentation for periodic consultations with member countries. It is based on the information available at the time it was completed on June 16, 2025. This paper is also published separately as IMF Country Report No 25/189.

ABSTRACT: This Selected Issues Paper reviews Ethiopia's tax system, highlighting its persistently low tax-to-GDP ratio despite sustained economic growth. It benchmarks Ethiopia's revenue performance against regional and structural peers, examines the structure and efficiency of major tax categories, and analyzes revenue responsiveness to the business cycle. Using stochastic frontier analysis, it estimates the country's tax potential and identifies significant gaps.

RECOMMENDED CITATION: Hegab, G. (2025). "Ethiopia's Tax System: Structure, Performance, and Benchmarking" IMF Selected Issues Paper No. 2025/108; Washington, D.C. International Monetary Fund

JEL Classification Numbers:	H20; H21; E62; O55; C23
Keywords: [Type Here]	Tax policy; Revenue mobilization; Tax efficiency; Tax potential; Benchmarking; Stochastic frontier analysis; Value-added tax; Income tax; Trade tax; Fiscal sustainability; Ethiopia; Sub-Saharan Africa
Author's E-Mail Address:	ghegab@imf.org

SELECTED ISSUES PAPERS

Ethiopia's Tax System: Structure, Performance, and Benchmarking

Federal Democratic Republic of Ethiopia

Prepared by Gabriel Hegab



THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

SELECTED ISSUES

June 16, 2025

Approved By
AFR Department

Prepared by Gabriel Hegab (FAD).

CONTENTS

ETHIOPIA'S TAX SYSTEM: STRUCTURE, PERFORMANCE, AND BENCHMARKING	3
A. Motivation and Background	3
B. Tax Revenue Structure and Trends	4
C. Tax Policy and Revenue Performance	8
D. Tax Revenue Elasticities and the Business Cycle	11
E. Revenue Potential and Tax Gaps	13
F. Policy Actions and Revenue Mobilization Under the ECF-Supported Program	15
G. Conclusion	17

TABLE

1. Taxation Mandates of the Federal and Regional Governments	5
--	---

FIGURES

1. Real GDP Growth and Tax Revenues	3
2. Tax Structure	6
3. General Government Taxes	7
4. Selected Indicators	7
5. PIT and CIT Tax Revenues	8
6. Personal Income Tax (PIT)	9
7. Corporate Income Tax (CIT)	9
8. Value Added Tax (VAT)	10
9. Output Gap	11
10. Estimated Elasticities of Tax Revenues to Business Cycles	12
11. Trade Openness, Agriculture, and Tax Revenue	13
12. Selected Indicators, 2020–23	14
13. Tax Revenue Potential and Tax Effort, 2022	15
14. Tax Administration Performance Comparison	16
15. Selected Indicators Projections	17

BOX

1. Stochastic Frontier Analysis: Estimating Ethiopia's Tax Potential	15
--	----

ANNEX

I. Stochastic Frontier Model	19
------------------------------	----

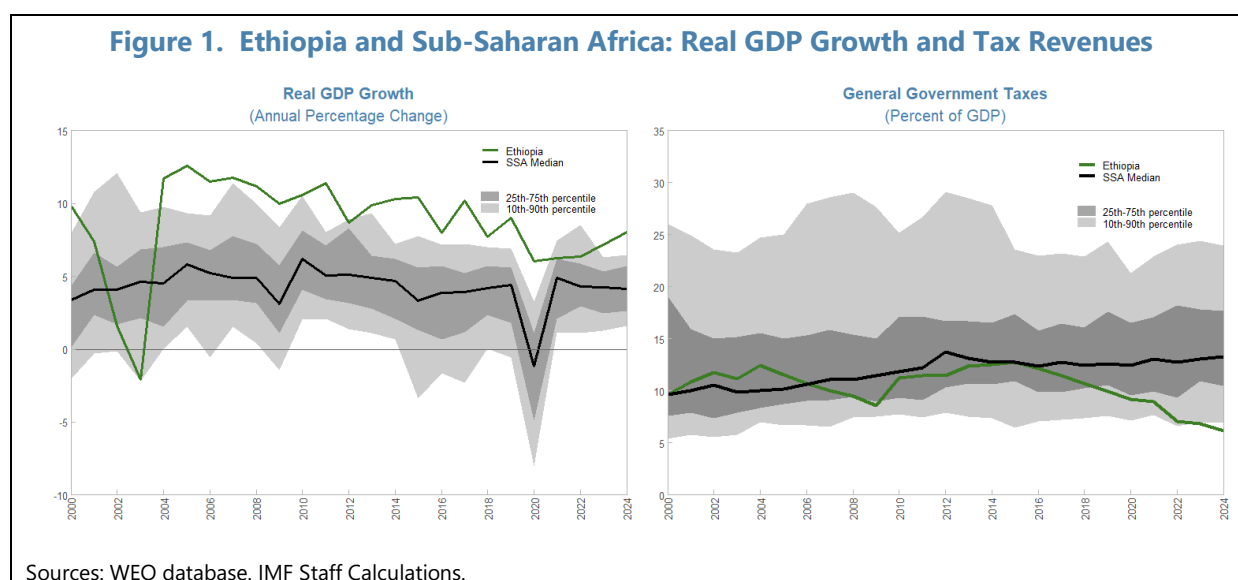
References	20
------------	----

ETHIOPIA'S TAX SYSTEM: STRUCTURE, PERFORMANCE, AND BENCHMARKING¹

Ethiopia's tax system plays a critical role in shaping its fiscal sustainability and economic development trajectory. Despite being one of the fastest-growing economies in Sub-Saharan Africa (SSA), Ethiopia's tax-to-GDP ratio remains among the lowest in the region, highlighting persistent revenue mobilization challenges. While many peer countries have strengthened their tax capacity through policy and administrative reforms, Ethiopia's revenue performance has stagnated, limiting its ability to finance essential infrastructure, social programs, and development priorities. Given the increasing fiscal pressures and the need for sustainable domestic revenue mobilization, this SIP assesses Ethiopia's tax system by benchmarking its performance against regional and structural peers. It explores the key factors constraining tax revenue collection, estimates Ethiopia's tax potential, analyzes revenue elasticities to the business cycle, and assesses tax efficiency across major tax categories.

A. Motivation and Background

1. Ethiopia has sustained one of the highest growth rates in Sub-Saharan Africa (SSA), yet its tax revenue mobilization remains among the weakest in the region. Over the past two decades, Ethiopia's real GDP growth has consistently outperformed regional peers, driven by large-scale public investment, rapid urbanization, and structural economic shifts. However, despite this robust expansion, domestic revenue generation has lagged behind, severely constraining the government's ability to finance development priorities and maintain fiscal stability (Figure 1, left).



¹ The author gratefully acknowledges the valuable suggestions, inputs, and feedback provided by Álvaro Piris Chavarri, Annalisa Fedelino, Volodymyr Tulin, Deirdre Daly, Marcos Poplawski-Ribeiro, Andrea Lemgruber, Jimena Acedo, Ana Sofia Pessoa, Kevin Shoom, and Juan Fernando Morán Arce. Special thanks are due to Sandhya Rajyam Garimella for her research assistance and contributions.

2. Ethiopia's tax-to-GDP ratio is among the lowest in SSA, ranking below the 10th percentile of the regional distribution. While many countries in the region have made significant progress in enhancing tax collection, Ethiopia's performance has stagnated and, in recent years, declined. The country's general government tax revenues remain below the SSA median and continue to diverge downward, reflecting deep-rooted structural inefficiencies in tax administration and compliance (Figure 1, right). This decline reflects lower contributions across all major tax categories.

3. The divergence between Ethiopia's economic growth and its weak tax performance highlights fundamental weaknesses in revenue mobilization. Despite a rapidly expanding economy, Ethiopia's tax system is characterized by a narrow tax base, high levels of informality, and inefficiencies in tax administration. In particular, personal income tax (PIT) and corporate income tax (CIT) contributions are low by regional standards, and weaknesses in consumption tax collection further constrain revenue potential.

4. Strengthening domestic revenue mobilization is essential for Ethiopia's macroeconomic stability and long-term development. Addressing structural weaknesses in tax policy and administration will be crucial in expanding fiscal space for critical investments in infrastructure and social programs. This paper benchmarks Ethiopia's tax performance against regional and structural peers, assesses the country's tax potential, and outlines policy measures to enhance revenue collection. The analysis is particularly relevant in the context of Ethiopia's engagement with the IMF and ongoing tax reforms aimed at improving fiscal resilience.

B. Tax Revenue Structure and Trends

5. Ethiopia's government revenue is heavily dependent on tax collection, with grants and non-tax revenues playing a minimal role. Like many other SSA economies, Ethiopia's fiscal framework is primarily supported by domestic tax revenues, while external grants and non-tax income contribute only a marginal share. The sustained decline in tax revenue has led to proportional expenditure reductions, particularly in capital spending and poverty-related programs, as the government seeks to contain fiscal deficits (Figure 2, top left).

6. Tax revenue sources are relatively balanced across different tax categories, though direct taxes currently play the dominant role. In the period 2021-2023, direct taxes on income, profits, and capital gains accounted for approximately 3.5 percent of GDP, making them the largest contributor to total revenues. Taxes on international trade and transactions were the second most significant source, generating around 2.2 percent of GDP, while taxes on goods and services—primarily VAT and excise duties—contributed approximately 2.0 percent of GDP (Figure 2, bottom).

7. Ethiopia's tax composition reflects the complexities of its federal structure, where tax rights are constitutionally divided between the federal government and regional states. While the federal government has exclusive authority over import and export duties, income taxes on civil servants, taxes on publicly owned enterprises, and national transport services, regional states levy taxes on private sector employees, agricultural income, property rents, and small traders within their

jurisdictions. Additionally, some taxes, such as those on profits, sales, and excise duties of jointly established enterprises, as well as revenues from large-scale mining and petroleum operations, are concurrently administered by both levels of government. Despite this decentralized structure, the federal government remains the primary tax-collecting entity, accounting for more than 70 percent of total tax revenues. Table 1 below outlines the taxation mandates of the federal and regional governments in Ethiopia.

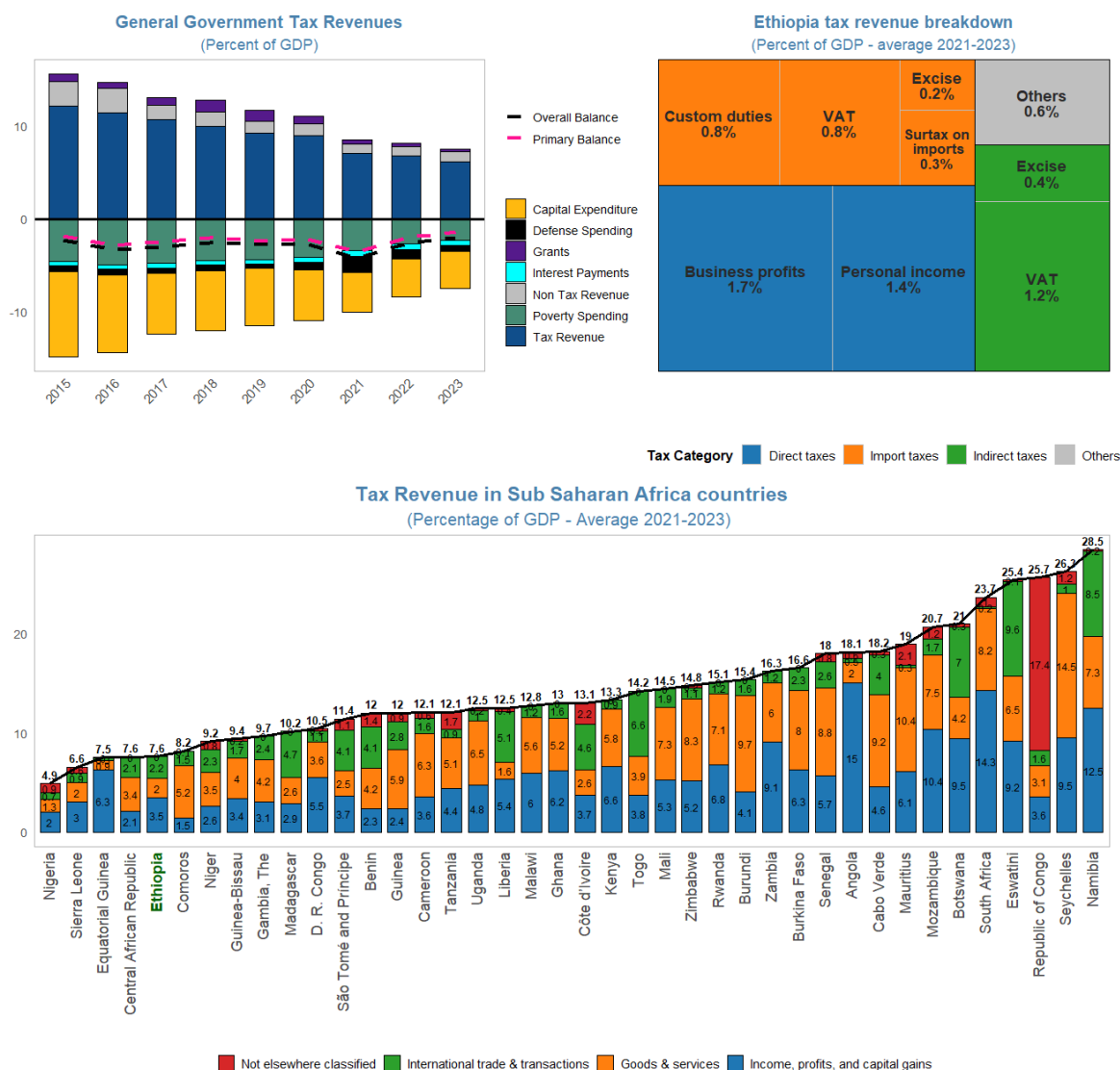
Table 1. Ethiopia: Taxation Mandates of the Federal and Regional Governments

Federal government levies and collects:	<ul style="list-style-type: none"> • Custom duties, taxes, and other charges on imports and exports • Income tax on employees of the federal government and international organizations • Income, profit, sales, and excise taxes on enterprises owned by the federal government • Taxes on incomes and winnings from national lottery and games of chance • Taxes on income of air, rail, and sea transport services • Taxes on income of houses and properties owned by the federal government • Fees and charges related to licenses issued and services rendered by organs of the federal government • Taxes on monopolies • Federal stamp duties
State governments levy and collect:	<ul style="list-style-type: none"> • Income taxes on employees of the state and of private enterprises • Fees for land usufructuary rights • Incomes of private farmers and farmers incorporated in cooperative associations • Profit and sales taxes on individual traders carrying out a business within their territory • Income from transport services rendered on waters within their territory • Taxes on income derived from private houses and other properties within the state; and rent on houses and properties they own • Profit, sales, excise, and personal income taxes on income of enterprises owned by regional states • Taxes on income derived from mining operations, and royalties and land rentals on such operations • Fees and charges relating to licenses issued and services rendered by state organs • Royalty for use of forest resources
Both concurrently levy and collect:	<ul style="list-style-type: none"> • Profit, sales, excise, and personal income taxes on enterprises they jointly establish • Taxes on the profits and sales of companies and on dividends due to shareholders • Taxes on incomes derived from large-scale mining and all petroleum and gas operations, and royalties on such operations
Source: FDRE Constitution (1995), and Ethiopian Statistical Service (ESS) & World Bank (2024)	

8. Specialized tax offices play a crucial role in Ethiopia’s federal revenue collection, with large taxpayers contributing the majority of tax revenues. The Large Taxpayers Office (LTO) and Medium Taxpayers Office (MTO) have been instrumental in streamlining tax administration and compliance efforts. On average, LTOs have accounted for around 70 percent of federal tax revenues over the past five years, while MTOs and small taxpayer offices have contributed approximately 15 percent each. Collections are largely driven by state-owned enterprises (SOEs), which, on average, have accounted for approximately 45 percent of total LTO tax collections. This distribution underscores the continued importance of SOEs in Ethiopia’s tax base, while the private sector’s contribution has grown over time.

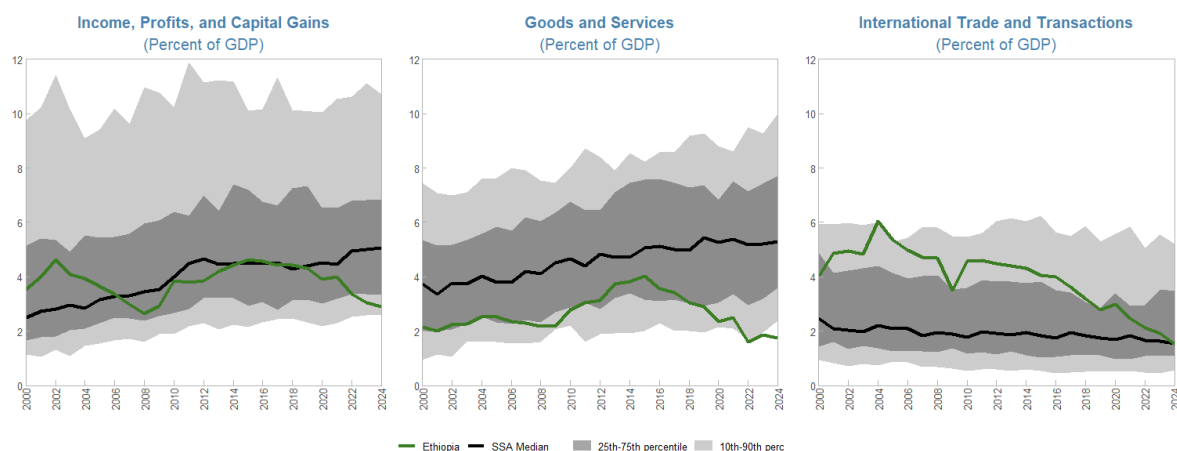
9. Tax revenues in Ethiopia are distributed across direct, indirect, and trade-related categories, reflecting the country’s tax structure and jurisdictional divisions. As shown in Figure 2, top right—where the category colors align with those in the bar chart of Figure 2, bottom panel—on average, business profit taxes (1.7 percent of GDP) and personal income taxes (1.4 percent of GDP) account for the largest share of revenues. Import-related taxes, including customs duties (0.8 percent of GDP), VAT on imports (0.8 percent of GDP), and the surtax on imports (0.3 percent of GDP), represent a significant portion of trade-related revenues. Domestic consumption taxes include VAT (1.2 percent of GDP) and excise duties (0.4 percent of GDP).

Figure 2. Ethiopia and Sub-Saharan African Countries: Tax Structure



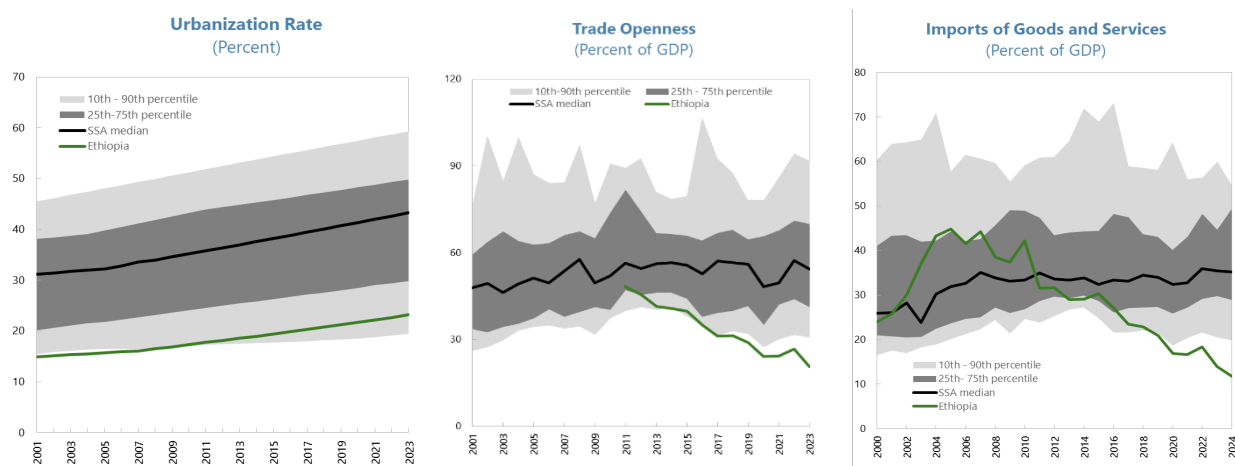
Source: WEO database and Ministry of Finance. IMF Staff Calculations.

10. Unlike most SSA economies, Ethiopia has not seen a structural increase in income and consumption taxes, despite experiencing a relatively fast pace of urbanization. Across most economies, income and goods and services taxes have generally increased as economies urbanized and formalized. Ethiopia, while still having one of the lowest urbanization rates in the region, has been urbanizing at a faster pace than the SSA average, though it remains well below the regional median (Figure 4, left). However, this shift has not translated into higher tax collection. Until 2019, tax revenues from income, profits, and capital gains remained near the SSA median but have since declined, diverging from regional trends. While the SSA median increased to 5 percent of GDP, Ethiopia's income tax revenue fell to 2.9 percent of GDP in 2024 (Figure 3, left). Similarly, Ethiopia's revenue from goods and services taxes has been consistently weak, hovering around the 25th percentile between 2000–19 before falling below the 10th percentile in 2024 (Figure 3, middle).

Figure 3. Ethiopia and Sub-Saharan African Countries: General Government Taxes

Sources: WEO database. IMF Staff Calculations.

11. Taxes on international trade and transactions have seen a sharp and sustained decline, mirroring Ethiopia's shrinking trade openness rather than changes in tax policy or enforcement efficiency. Trade-related tax revenues peaked at 6 percent of GDP in 2005, placing Ethiopia above the 90th percentile in SSA. However, this share has since declined to 1.5 percent of GDP in 2024—slightly below the SSA median reflecting the sharp contraction in trade openness (Figure 3, right and Figure 4, middle). This downward trend shows Ethiopia's structural shift in external trade dynamics, driven by a significant reduction in imports. Ethiopia's import-to-GDP ratio, which was above the 75th percentile in SSA between 2005–07, has fallen dramatically to below the 10th percentile by 2024 (Figure 4, right). Yet, trade tax revenues have declined less proportionally, suggesting a relatively strong collection performance in this category despite the shrinking trade base.

Figure 4. Ethiopia and Sub-Saharan African Countries: Selected Indicators

Sources: WEO and WDI databases. IMF Staff Calculations.

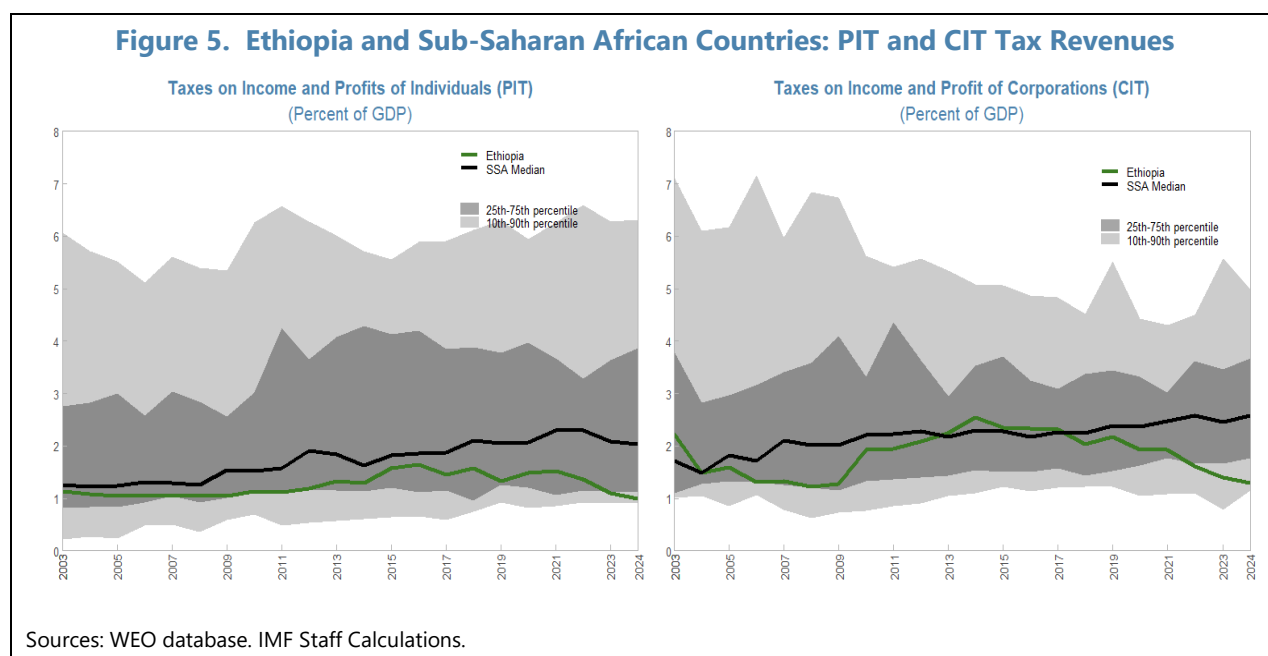
Notes: Urbanization rate measures the share of population living in urban areas. Trade openness measures total trade (Exports plus imports) as a share of GDP

C. Tax Policy and Revenue Performance

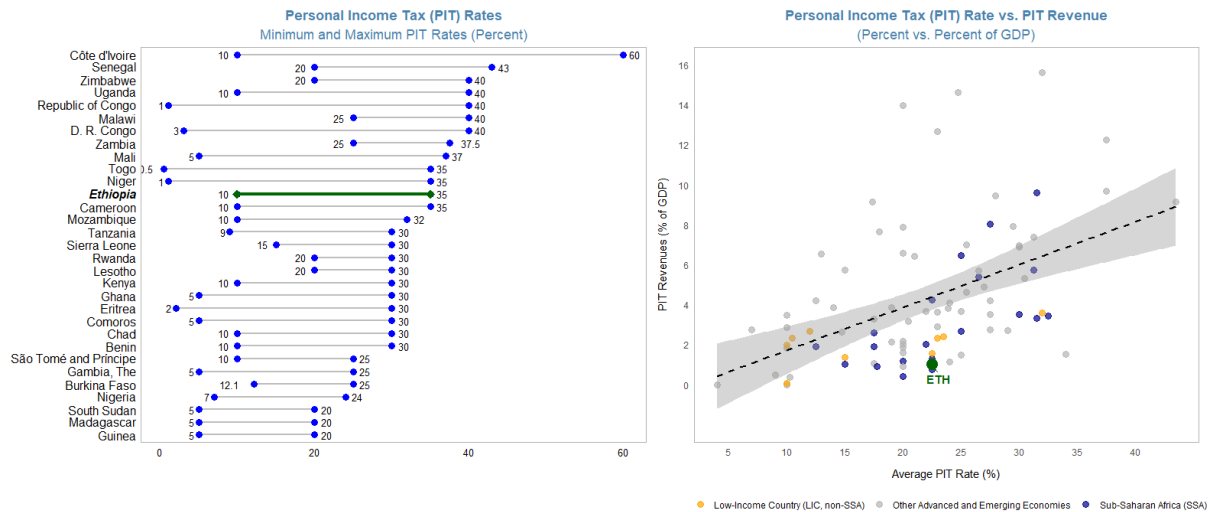
12. Ethiopia's tax system comprises three major revenue sources—personal income tax (PIT), corporate income tax (CIT), and value-added tax (VAT)—with notable gaps in efficiency and collection. Despite having statutory tax rates comparable to regional peers, Ethiopia's revenue mobilization from these taxes remains among the lowest in SSA. The analysis of PIT, CIT, and VAT highlights structural inefficiencies, compliance challenges, and policy gaps that constrain tax revenue performance.

Personal Income Tax (PIT)

13. Average personal income tax (PIT) rates in Ethiopia are near the regional median, but revenue collection remains among the lowest percentiles. The PIT system features a progressive rate structure, with rates ranging from 10 to 35 percent (excluding exemptions), positioning it close to the median of low-income SSA economies (Figure 6, left). Despite this, PIT revenue as a share of GDP falls in the 25th percentile among low-income SSA countries, indicating a significant gap between tax policy design and actual revenue outcomes (Figure 5, left; Figure 6, top right).



14. This revenue underperformance may in part reflect distributional issues within the PIT design. The threshold for the zero rate is low, and the top marginal rate applies at relatively modest income levels. As a result, a large share of formal wages is taxed at the highest rate, which may undermine perceptions of fairness and weaken incentives for compliance. In turn, this perceived inequity—combined with high effective tax rates at low-income levels—may discourage formalization, pushing firms and workers to remain in the informal sector and further eroding the tax base.

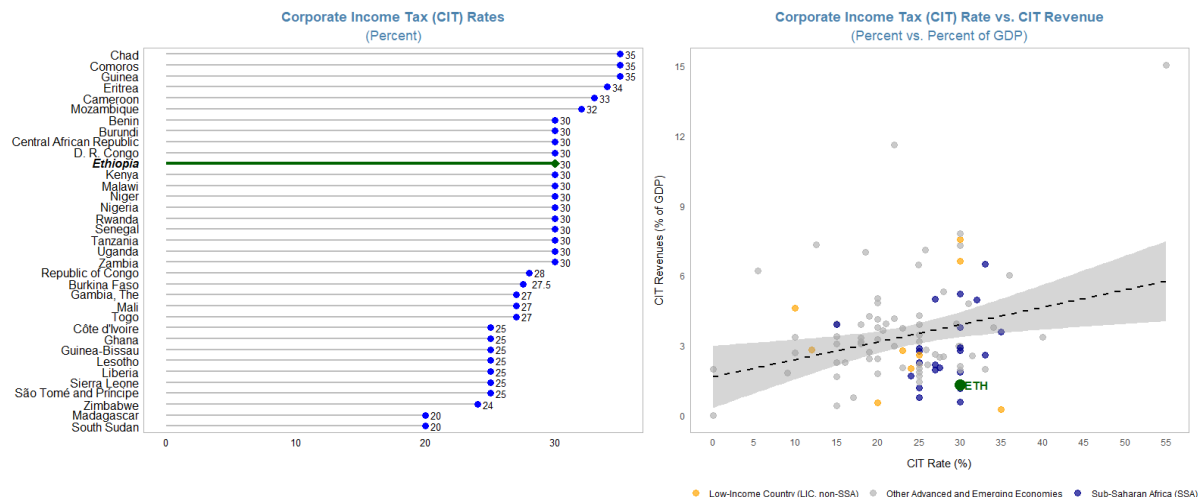
Figure 6. Ethiopia and Sub-Saharan Africa: Personal Income Tax (PIT)

Sources: E&Y, KPMG, PwC, IBFD. WEO and WoRLD databases. IMF Staff Calculations.

Notes: (1) The lower bound in the left chart represents the lowest non-zero statutory rate, excluding the exempted bracket. (2) The average PIT rate in the right chart is calculated as the mean of the top statutory rate and the lowest non-zero rate.

Corporate Income Tax (CIT)

15. The corporate income tax (CIT) rate is above the SSA low-income countries (LICs) median and on par with its closest geographic neighbors, but revenues remain weak. At 30 percent, Ethiopia's CIT rate is higher than the median for low-income SSA economies (Figure 7, left). However, actual CIT revenue collection is among the lowest in the region, placing Ethiopia between the 10th and 25th percentile (Figure 5, right). This indicates a substantial gap between statutory rates and realized revenues (Figure 7, right).

Figure 7. Ethiopia and Sub-Saharan Africa: Corporate Income Tax (CIT)

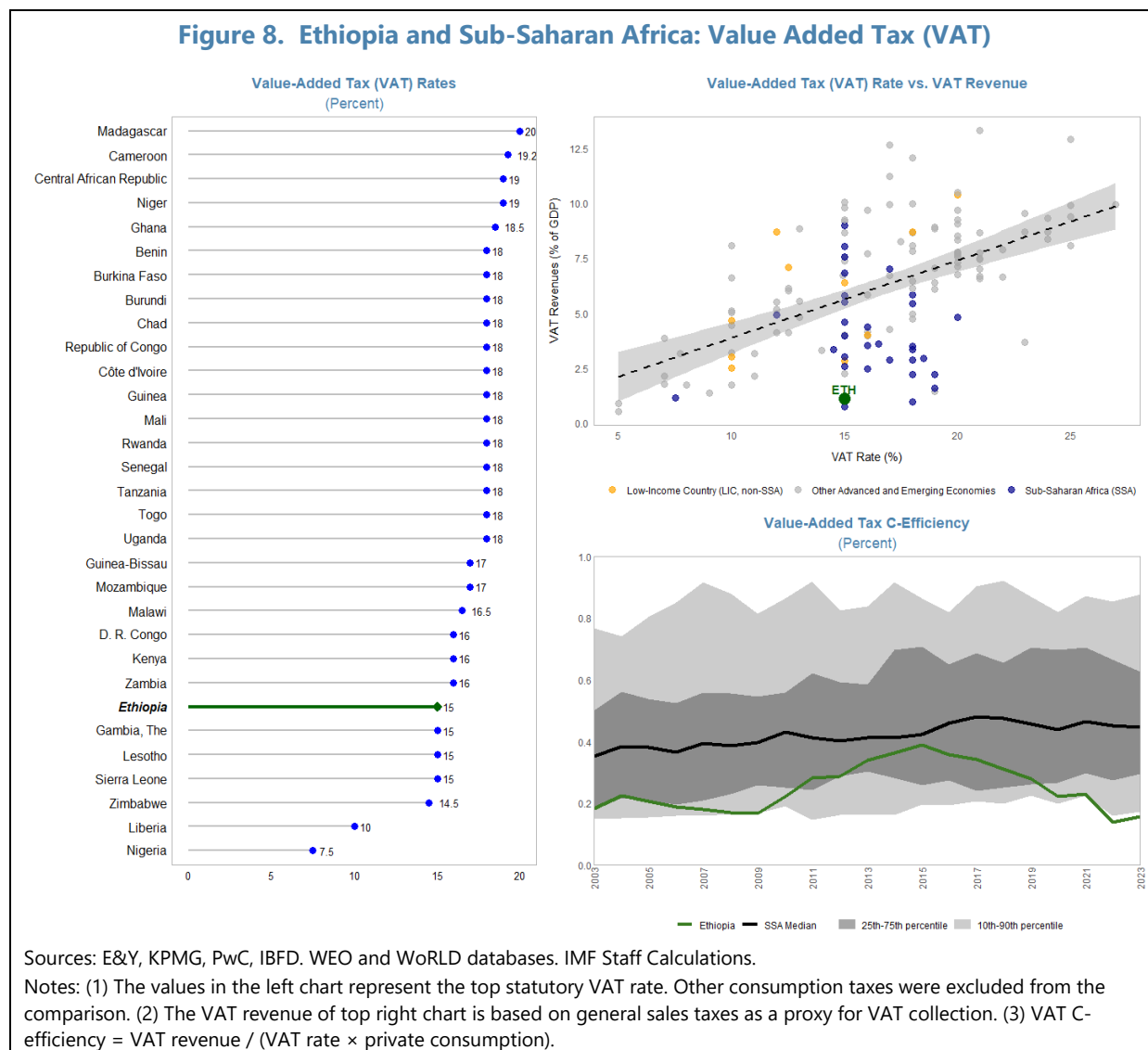
Sources: E&Y, KPMG, PwC, IBFD. WEO and WoRLD databases. IMF Staff Calculations

Note: The values in the left chart represent the top statutory CIT rate.

Value-Added Tax (VAT)

16. Value-added tax (VAT) rate is among the lowest in SSA low-income countries, with revenue collection significantly below peers. The standard VAT rate of 15 percent places Ethiopia near the lower end of SSA's low-income economies (Figure 8, left). Moreover, even among countries applying a similar VAT rate, Ethiopia collects substantially less VAT revenue as a share of GDP, suggesting underperformance in VAT administration and compliance (Figure 8, top right).

Figure 8. Ethiopia and Sub-Saharan Africa: Value Added Tax (VAT)



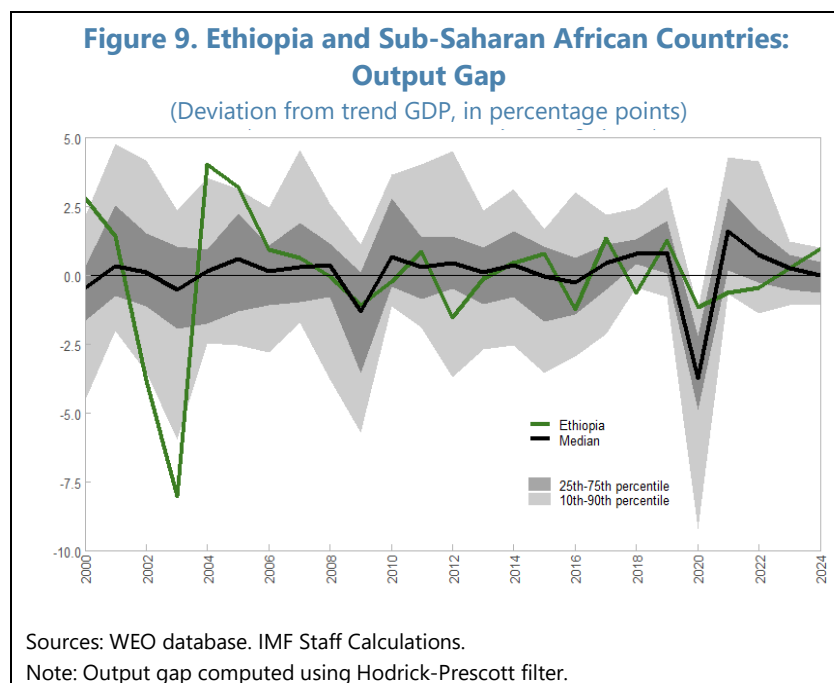
17. VAT efficiency has historically been low, with a declining trend in recent years. The VAT C-efficiency ratio — which measures how effectively VAT revenue is collected relative to the standard VAT rate and the potential tax base — has consistently ranked among the lowest in Sub-Saharan Africa (SSA), fluctuating around the 25th percentile. From 2010 to 2015, efficiency improved, nearing the SSA median, but it has since declined steadily and currently stands near the 10th percentile (Figure 8, bottom right). Changes in VAT revenue as a share of GDP can be

attributed to three factors: adjustments in the standard VAT rate, shifts in the share of private consumption in GDP, and variations in the C-efficiency ratio itself. The persistent weakness in Ethiopia's C-efficiency suggests significant revenue leakage, likely driven by policy gaps (such as exemptions), compliance challenges, widespread informality, and weak enforcement mechanisms.

D. Tax Revenue Elasticities and the Business Cycle

18. Ethiopia's output gap turned positive in 2023 after years of economic disruptions, with implications for tax revenue performance.²

The economy faced significant shocks, including the COVID-19 pandemic and internal conflicts, which constrained growth and weighed on tax collections (Figure 9). As economic activity recovers, the responsiveness of different tax categories to the business cycle—measured by their elasticity to the output gap—offers insights into the country's tax revenue system.



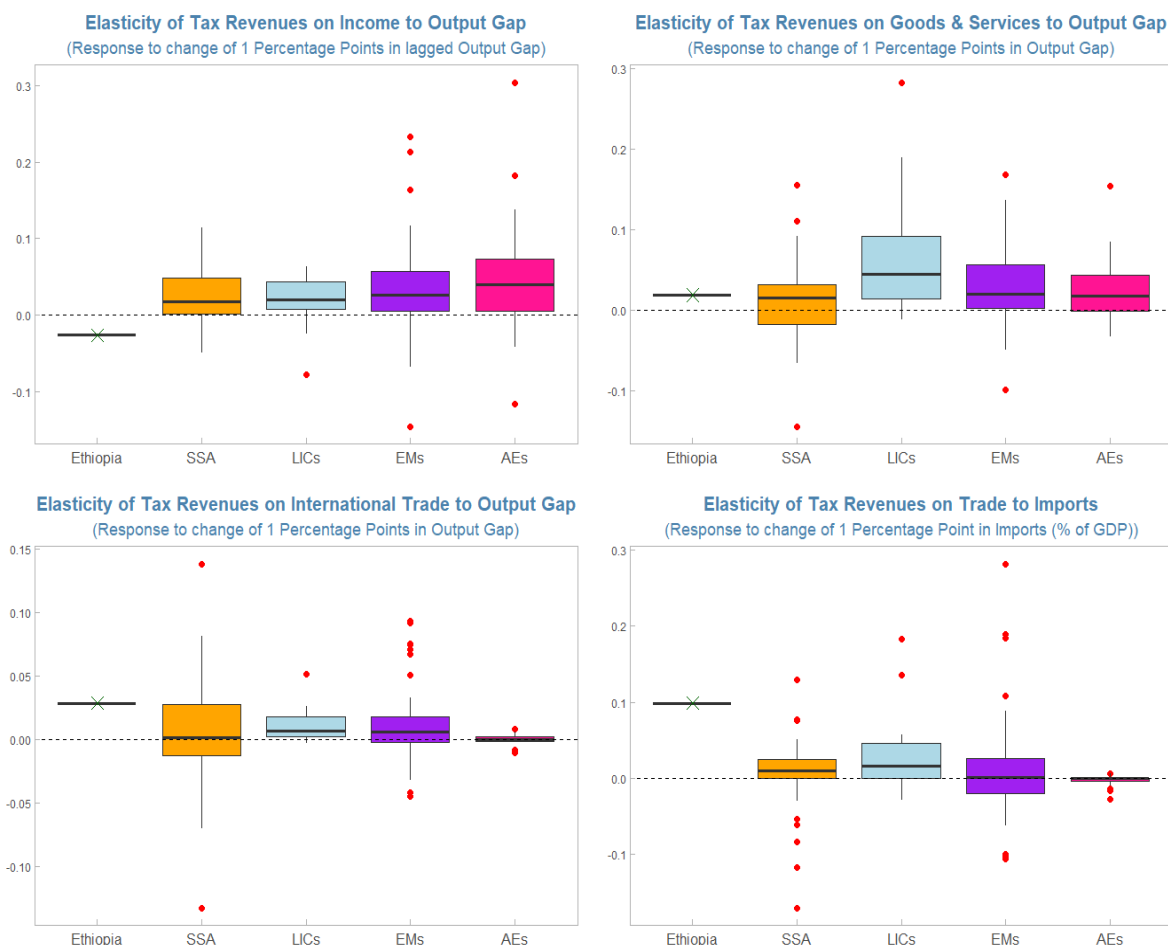
19. Personal and corporate income tax revenues exhibit weak responsiveness to economic fluctuations, diverging from other country groups. In most economies, income and profit taxes are procyclical, meaning they increase as economic activity expands. However, Ethiopia's elasticity of tax revenues from income, profits, and capital gains is negative, although not statistically significantly different from zero (Figure 10, top left). This contrasts with all benchmark country groups, where income tax elasticity is generally positive. This matters especially for Ethiopia, where strong economic growth in recent years has not translated into commensurate income tax revenues, highlighting missed fiscal dividends that a more responsive tax system could have captured without the need to raise rates.

20. Consumption taxes exhibit a positive correlation with the business cycle, yet Ethiopia's collections on goods and services remain below potential. The elasticity of tax revenues on goods and services to the output gap is broadly in line with other country averages (Figure 10, top right), indicating that these revenues tend to rise during economic expansions. However, despite this

² The output gap is measured as the deviation from the short-term trend, using the univariate Hodrick-Prescott (HP) filter. While various methodologies exist for estimating the output gap—including univariate filters, multivariate approaches, and structural models—the HP filter was selected in this case due to its flexibility and consistent applicability across a wide range of countries, facilitating homogeneous comparisons between different economies.

positive correlation, Ethiopia's VAT and excise tax collections remain structurally low, as highlighted in previous sections. The limited revenue mobilization potential of consumption taxes may be attributed to policy choices, including exemptions, compliance challenges, and high informality.

Figure 10. Ethiopia and Other Economies: Estimated Elasticities of Tax Revenues to Business Cycles



Sources: WEO database. IMF Staff Calculations.

Note: Boxplots show estimated elasticities of tax revenues to economic indicators using OLS regression. The boxes represent the interquartile range, whiskers extend to 1.5 times the IQR, and red dots indicate outliers. Ethiopia's estimates are marked with a green cross.

21. International trade-related tax revenues are the most responsive to economic activity but have declined due to Ethiopia's shrinking trade openness. Tax revenues from international trade and transactions exhibit the highest elasticity to both the output gap and import fluctuations (Figure 10, bottom) exceeding that of other country groups. This strong correlation confirms that trade taxes have historically been an important and efficient revenue source. It also highlights the country's effectiveness in collecting these revenues, as Ethiopia continues to generate above-median trade tax revenues despite having one of the lowest levels of trade openness among SSA countries.

22. Improving tax responsiveness and efficiency is critical to strengthening Ethiopia's revenue mobilization capacity. Ethiopia's tax system exhibits uneven responsiveness to economic fluctuations, with trade and consumption taxes displaying high cyclical, while income taxes remain structurally constrained. Enhancing revenue performance also requires strengthening the country's ability to mobilize revenues more effectively across different phases of the business cycle.

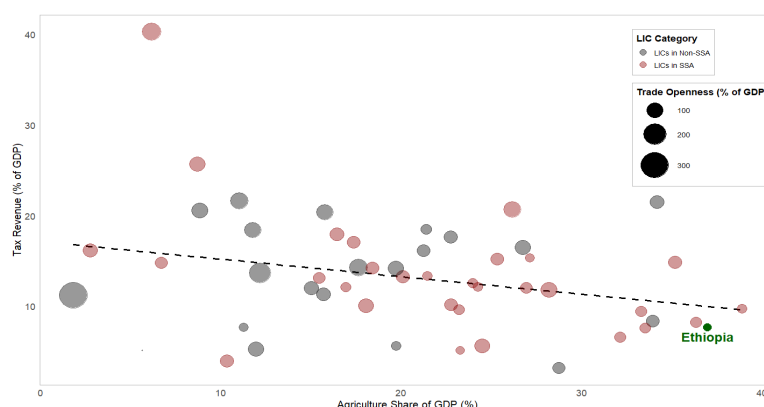
E. Revenue Potential and Tax Gaps

23. Ethiopia's tax revenue collections remain well below their estimated potential, highlighting scope for improving revenue mobilization. Differences in tax mobilization across countries reflect structural economic characteristics and institutional settings. One approach to assessing Ethiopia's revenue potential is to compare its tax-to-GDP ratio with that of countries with similar economic and institutional characteristics. This allows for the estimation of a tax frontier—representing the highest level of tax revenue a country can achieve given its macroeconomic and institutional conditions. The gap between Ethiopia's actual tax collection and this estimated tax frontier defines the tax gap, which represents additional revenues that could be mobilized through improvements in tax efficiency and policy measures.

24. Structural economic factors, including Ethiopia's large agricultural sector and low trade openness, constrain its tax revenue potential. Countries with a high share of agriculture in GDP typically experience lower tax collection due to the sector's informality, fragmented production, and difficulty in enforcement (Fenochietto and Pessino, 2013). Ethiopia has one of the highest agricultural shares of GDP among low-income SSA economies with presence of many small producers, which limits its taxable base. Similarly, trade openness is positively correlated with tax revenues, as economies with greater trade flows tend to generate higher customs duties, VAT on imports, and excise revenues (Cevik et al. 2019 and Bacchetta et al. 2021). However, Ethiopia's trade openness is among the lowest in SSA, further restricting tax capacity (Figure 11). While Ethiopia collects trade taxes relatively efficiently compared to the size of its trade sector, the limited volume of imports and exports constrains the overall contribution of trade taxes to total revenue.

25. Institutional quality and governance effectiveness play a critical role in tax mobilization, with Ethiopia performing above LIC averages but below emerging and advanced economies. International evidence suggests that better governance, stronger rule of

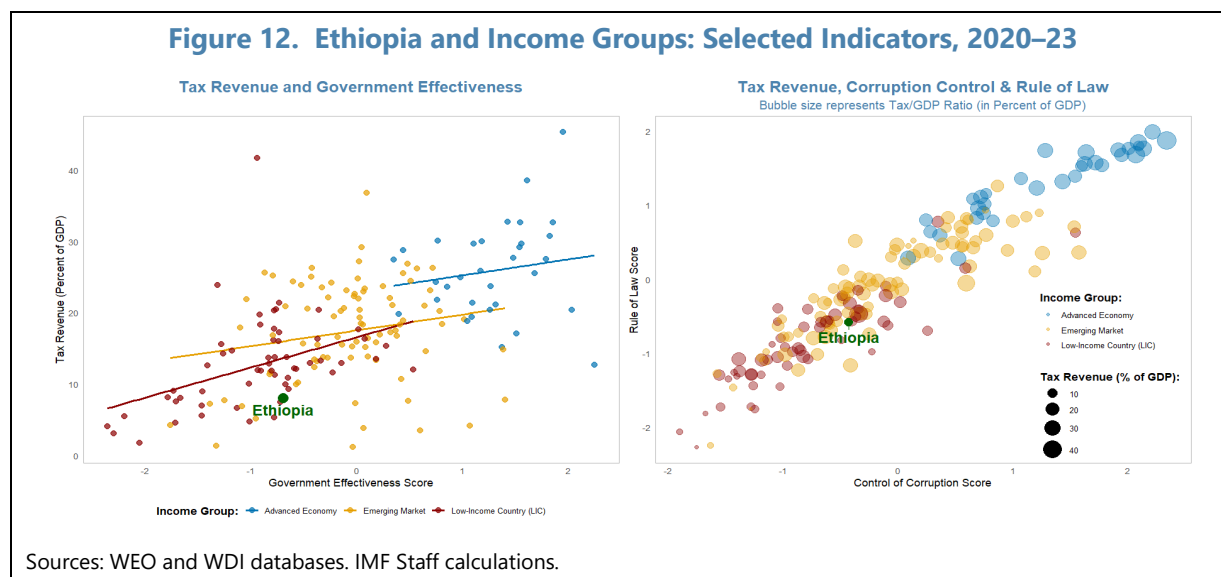
Figure 11. Ethiopia and Low-Income Countries (LICs): Trade Openness, Agriculture, and Tax Revenue



Sources: WEO and WDI databases. IMF Staff calculations

Note: Bubble size represents Trade Openness (Percent of GDP), dashed line shows trend.

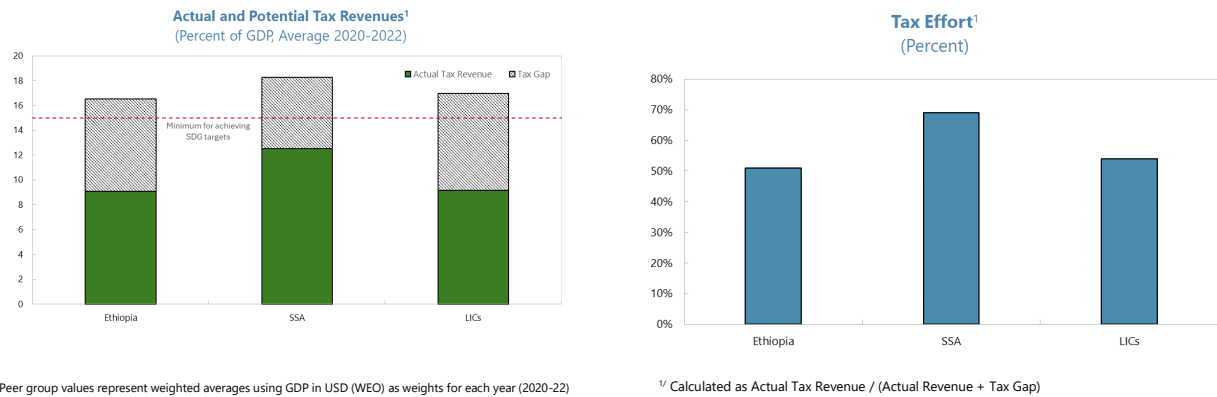
law, and reduced corruption are associated with higher tax revenues. Ethiopia ranks above the LIC average in government effectiveness and corruption control indicators but remains significantly below emerging and advanced economies (Figure 12). Enhancing governance and public sector efficiency could strengthen tax compliance, enforcement, and overall revenue performance (Cevik et al. 2019 and Baum et al. 2017).



26. Econometric estimates suggest that Ethiopia’s tax revenue potential exceeds current collections by a substantial margin. The results from the Stochastic Frontier Analysis model (Box 1) indicate that Ethiopia could achieve a tax-to-GDP ratio of about 17 percent, well above the average level of approximately 8 percent, implying a tax gap of around 9 percentage points of GDP (Figure 13, left). This gap suggests significant room for improving tax collection through better efficiency in administration and compliance.

27. Meeting the minimum tax-to-GDP threshold is essential for sustainable growth. Previous IMF research identifies a 15 percent tax-to-GDP benchmark as a critical threshold for accelerating growth and development (Gaspar et al., 2016). Ethiopia’s average tax-to-GDP ratio of about 8 percent remains well below this level (Figure 13, left), constraining its capacity to finance essential services and achieve the Sustainable Development Goals (SDGs). Closing this gap is vital for enhancing fiscal sustainability and supporting long-term economic progress.

28. Tax effort remains low and broadly aligned with regional peers, highlighting substantial untapped revenue potential in both Sub-Saharan Africa and low-income countries. Tax effort, defined as the ratio of actual to potential tax revenue, provides a measure of the efficiency and intensity of revenue collection relative to a country’s capacity. Ethiopia’s tax effort is estimated at 51 percent, broadly in line with the LIC average but below the SSA average (Figure 13, right). This suggests that Ethiopia is collecting only about half of its potential tax revenues, underscoring the importance of both policy and administrative reforms to strengthen domestic revenue mobilization.

Figure 13. Ethiopia and Peers: Tax Revenue Potential and Tax Effort, 2022

¹/ Peer group values represent weighted averages using GDP in USD (WEO) as weights for each year (2020-22)

¹/ Calculated as Actual Tax Revenue / (Actual Revenue + Tax Gap)

Sources: WEO, WoRLD, WDI, and VDEM databases. IMF Staff Calculations.

Box 1. Stochastic Frontier Analysis: Estimating Ethiopia's Tax Potential

Stochastic Frontier Analysis (SFA) is used to estimate Ethiopia's tax potential by modeling the relationship between tax revenue and structural determinants while accounting for inefficiencies in collection. Unlike traditional regression models, which assume symmetrical deviations from predicted values, SFA assumes that deviations from the tax frontier are one-sided, meaning that countries only underperform due to tax policy and administrative inefficiencies (Benitez et al., 2023; IMF, 2022). The estimated equation follows:

$$\ln(y_{it}) = \alpha_i + \sum \beta \ln(x_{it}) + v_{it} - u_{it}$$

In this model, y_{it} represents the tax-to-GDP ratio for country i in year t . The explanatory variables, x_{it} include key structural determinants such as GDP per capita, GDP per capita squared, the share of agriculture in GDP, trade openness, and governance indicators, including corruption control and government effectiveness. The u_{it} represents tax inefficiencies, modeled as a one-sided truncated normal distribution, reflecting deviations from the estimated tax frontier due to weaknesses in tax policy and administration, while term v_{it} captures random shocks to tax collection, assumed to be normally distributed and independent of the inefficiency.

The efficiency score, which measures how effectively tax revenues are mobilized given structural determinants, is estimated as:

$$Efficiency_{it} = \exp(-u_{it})$$

$Efficiency_{it}$ score approximates tax effort - the extent to which a country collects taxes relative to its estimated potential. The estimation method in this paper uses time-varying true fixed effects model (Greene, 2008) that accounts for country level unobserved heterogeneities, as captured by α_i in the first equation. Finally, the tax potential is computed as:

$$Tax\ Potential = y_{it} / \exp(-u_{it}), \text{ where,}$$

the tax gap is defined as the difference between estimated tax potential and actual tax revenue. The tax effort can also be defined as the ratio between the estimated tax potential and the actual tax revenue level.

The data used to estimate the stochastic frontier model are collected from the WEO, WoRLD, VDEM, and WDI databases. These data cover the period 1990–2022 and include 191 countries.

F. Policy Actions and Revenue Mobilization Under the ECF-Supported Program

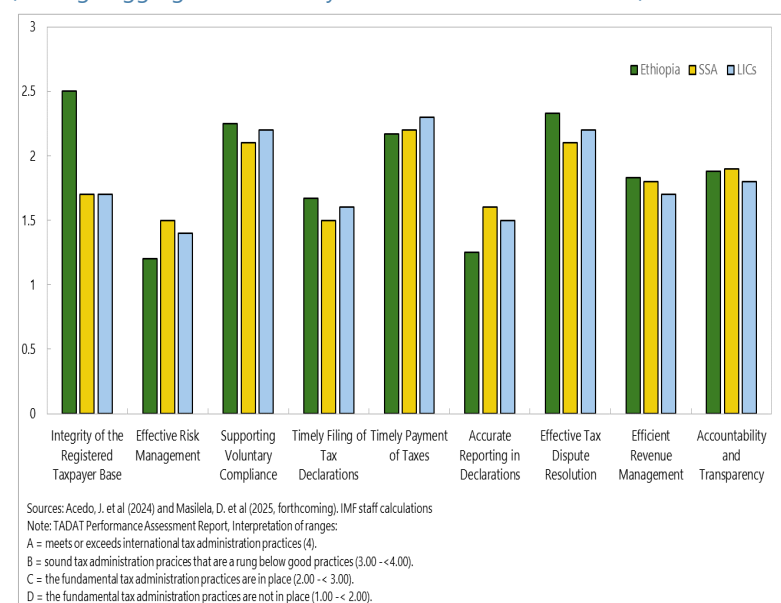
29. The Ethiopian authorities are implementing ambitious reforms to address macroeconomic imbalances and enhance revenue mobilization. The Homegrown Economic Reform Agenda (HGER), supported by the IMF Extended Credit Facility (ECF) program approved in July 2024, aims to strengthen fiscal sustainability and promote economic stability. A key pillar of the fiscal strategy is the National Medium-Term Revenue Strategy (NMTRS), which provides a comprehensive framework for improving tax policy and administration.

30. Recent tax policy measures are designed to broaden the tax base and enhance compliance. The NMTRS prioritizes reforms in VAT, excise, corporate income tax, presumptive income taxes, and property taxation. Notably, the new VAT Proclamation, approved in July 2024, introduces significant changes, including reducing exemptions, limiting zero-rating to exports, expanding voluntary registration, and clarifying federal and regional tax mandates. Additionally, revised excise duties on alcohol and tobacco, alongside stricter enforcement of the excise stamp regime, are expected to boost domestic revenue. Import duty collections have also strengthened following adjustments to align customs declarations with daily exchange rate fluctuations.

31. Ethiopia has made significant progress in tax administration, closing gaps with peer countries, though further improvements are needed to align with international best practices. The 2024 TADAT assessment reflects a marked improvement over the 2016 evaluation, when Ethiopia received predominantly very low scores. Ethiopia has now narrowed gaps across various tax administration performance areas and is more aligned with peer countries, even surpassing them in some evaluated metrics. The latest assessment shows notable advancements in key areas such as dispute resolution, taxpayer registration, and voluntary compliance. These gains underscore the impact of recent investments in revenue administration. Nonetheless, despite this progress, Ethiopia still falls short of international top standards in some areas, particularly in accurate reporting and risk management, signaling the need for continued reforms (Figure 14).

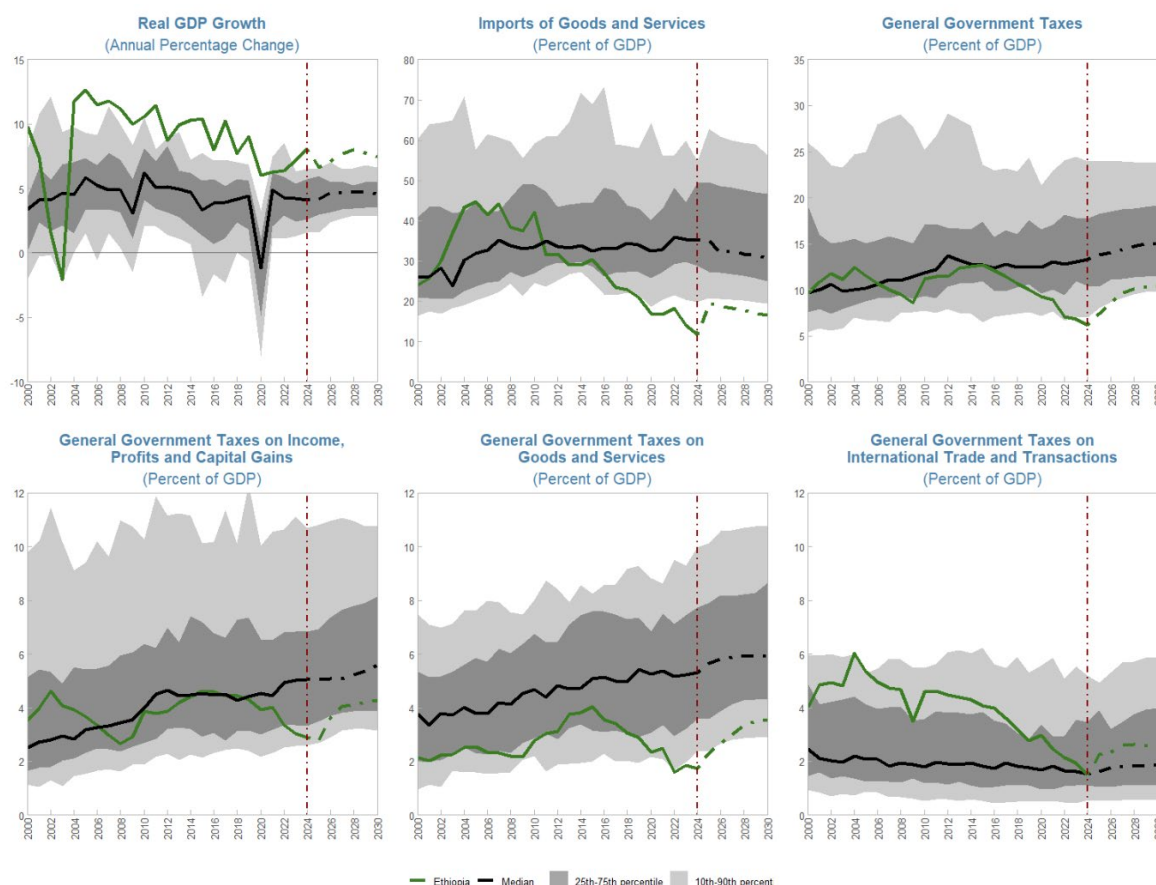
Figure 14. Ethiopia: Tax Administration Performance Comparison

(Average aggregated scores by Performance Outcome Area)



32. Despite ongoing reforms, Ethiopia's revenue projections indicate a gradual recovery but remain below the tax-to-GDP threshold for sustainable development. Projections suggest increases across all major tax categories, supported by policy measures and administrative improvements. However, total tax revenue is expected to remain below the 15 percent tax-to-GDP benchmark identified as necessary to support long-term economic growth and achieve the Sustainable Development Goals (SDGs) (Figure 15). Further policy and institutional enhancements will be required to sustain revenue mobilization efforts and reach this critical threshold.

Figure 15. Ethiopia and Sub-Saharan African Countries: Selected Indicators Projections



Sources: WEO database. IMF Staff Calculations.

G. Conclusion

33. Ethiopia's tax revenue performance remains below its potential, with the tax-to-GDP ratio among the lowest in Sub-Saharan Africa. Despite having statutory tax rates broadly aligned with regional peers, actual revenue collection is constrained by structural factors, including a narrow tax base, high informality, and administrative challenges, including those linked to the distinct features of Ethiopia's intergovernmental tax system. Compared to similar economies, Ethiopia's tax effort is among the lowest, indicating considerable scope to enhance revenue mobilization through improved efficiency and policy adjustments.

34. A closer comparison with peer countries highlights key areas for improvement. While income and profit tax rates are relatively high, their contribution to total revenue remains limited, reflecting challenges and need to reform. VAT revenues, though a crucial source of indirect taxation, are significantly lower than in peer economies, pointing to administrative inefficiencies and exemptions that narrow the tax base. Trade taxes, historically an important revenue stream, have declined as Ethiopia's trade openness has contracted, further underscoring the need for policies that support a more robust and diversified tax system.

35. The authorities are implementing a revenue-led strategy guided by the NMTRS, aiming to restore long-term fiscal stability. A National Tax Reform Taskforce has been established to steer this agenda and ensure comprehensive implementation and monitoring of both tax policy and tax administration reforms, including reflecting the findings of the recent TADAT assessment. These efforts seek not only to boost revenue but also to improve fairness, transparency, and efficiency across the system. The authorities will continue to rely on technical assistance from the IMF, World Bank, and other development partners to support the design and effective implementation of these reforms.

36. Addressing these challenges will require a combination of tax policy refinements and strengthened administration. Broadening the tax base, formalizing the economy, improving compliance, and enhancing governance will be essential to aligning Ethiopia's revenue performance with its economic potential. A well-functioning tax system is critical for long-term fiscal sustainability and economic development, ensuring the necessary resources to support infrastructure, social programs, and inclusive and sustainable growth.

Annex I. Stochastic Frontier Model

Stochastic Frontier Model Estimation Results TRE with Half-Normal Inefficiency	
	Tax Revenue
GDP per capita	2.060*** (0.368)
GDP per capita sq.	-0.103*** (0.021)
Agriculture share in GDP	-0.087** (0.032)
Trade share in GDP	0.102*** (0.031)
Public Sector Corruption	-0.032*** (0.011)
Constant	-16.885*** (1.476)
Usigma	-0.776** (0.330)
Vsigma	-4.838*** (0.715)
Theta	1.102*** (0.033)
Obs.	3025.000
Log-Likelihood	943.828
AIC	-1881.657
BIC	-1863.613
Standard errors in parentheses	
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$	

References

- Acedo, J., Kidd, M., Mopa, M., and Nyanga, M., 2024, "10 Years of Assessing Tax Administrations Globally: Developments, Achievements, and Remaining Challenges"; International Monetary Fund, Washington, D.C.
- Adan, H., Atsebi, J.-M. B., Gueorguiev, N., Honda, J., and Nose, M., 2023, "Quantifying the Revenue Yields from Tax Administration Reforms"; Working Paper No. 2023/231, International Monetary Fund, Washington, D.C.
- Bacchetta, M., Cerra, V., Piermartini, R., and Smeets, M., "Trade and Inclusive Growth"; IMF Working Paper No. 2021/74, International Monetary Fund, Washington, D.C.
- Baum, A., Gupta, S., Kimani, E., Tapsoba, S.J., "Corruption, Taxes, and Compliance"; IMF Working Paper No. 2017/255, International Monetary Fund, Washington, D.C.
- Benedek, D., Benitez, J. C., and Vellutini, C. "Progress of the Personal Income Tax in Emerging and Developing Countries"; IMF Working Paper No. 2022/20, International Monetary Fund, Washington, D.C.
- Benitez, J. C., Mansour, M., Pecho, M., and Vellutini, C., 2023, "Building Tax Capacity in Developing Countries"; Staff Discussion Notes No. 2023/006, International Monetary Fund, Washington, D.C.
- Cevik, S., Gottschalk, J., Hutton, E., Jaramillo, L., Karnane, P., and Sow, M. "Structural Transformation and Tax Efficiency"; IMF Working Paper No. 2019/30, International Monetary Fund, Washington, D.C.
- Ethiopian Statistical Service (ESS) and World Bank, 2024. "Taxes on Individuals, Households, and Non-Farm Enterprises: Findings of the 2018/19 and 2021/22 Ethiopia Socioeconomic Panel Survey".
- FDRE (2024). "National Medium-Term Revenue Strategy-FY 2024/25 to FY 2027/28"; Ministry of Finance, Addis Ababa.
- Fenochietto, R., and Pessino, C. "Understanding Countries' Tax Effort"; IMF Working Paper No. 2013/244, International Monetary Fund, Washington, D.C.
- Gaspar, V., Jaramillo, L., and Wingender, P., 2016, "Tax Capacity and Growth: Is there a Tipping Point?"; IMF Working Papers 2016/234, International Monetary Fund, Washington, D.C.
- Greene, W. H. (2008), "Fixed and Random Effects in Stochastic Frontier Models"; *Journal of Productivity Analysis* 30(3), 239–250.
- International Monetary Fund (IMF), 2022a. "Tax Potential and Options for Domestic Revenue Mobilization"; IMF Country Reports, 22/246, International Monetary Fund, Washington, D.C.
- International Monetary Fund (IMF), 2024, "How to Design and Implement Property Tax Reforms"; How-To Notes, No 2024/006, International Monetary Fund, Washington, D.C.

International Monetary Fund (IMF), 2024b. "Reform Amid Great Expectations"; International Monetary Fund, Washington, DC.

Masilela, D., Khan, S., Mazani, F., Masaire, R. Martens, P., and Wiezel, P., (2025), "Ethiopia: Tax Administration Diagnostic Assessment Tool—TADAT"; IMF Technical Report; International Monetary Fund, Washington, DC. (*Forthcoming*)

Ueda, J., "The Evolution of Potential VAT Revenues and C-Efficiency in Advanced Economies"; IMF Working Paper No. 2017/158, International Monetary Fund, Washington, D.C.