GROUP OF TWENTY

G20 BACKGROUND NOTE ON ENHANCING DOMESTIC REVENUE MOBILIZATION THROUGH STRENGTHENING REVENUE ADMINISTRATION

2025

Prepared by Staff of the

INTERNATIONAL MONETARY FUND*

* Does not necessarily reflect the views of the IMF Executive Board.

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CONTENTS

Acronyms

AEs	Advanced Economies
AI	Artificial Intelligence
CD	Capacity Development
CIAT	Inter-American Center of Tax Administration
CIT	Corporate Income Tax
CRM	Compliance Risk Management
DRM	Domestic Revenue Mobilization
EMEs	Emerging Market Economies
FITAS	Framework for International Tax Administrative Strengthening
FCS	Fragile and Conflict-Affected States
GDP	Gross Domestic Product
GPFP	Global Public Finance Partnership
ICT	Information Communication Technology
IOTA	Intra-European Organization of Tax Administrations
ISORA	International Survey on Revenue Administration
JDRMI	Joint Domestic Resource Mobilization Initiative
LIDC	Low-Income Developing Countries
OECD	Organisation for Economic Co-operation and Development
MTRS	Medium-Term Revenue Strategy
PCT	Platform for Collaboration on Tax
PIT	Personal Income Tax
POA	Performance Outcome Area
RA	Revenue Administration (the agency)
RA GAP	Revenue Administration Gap Analysis Program
ROI	Return on Investment
TADAT	Tax Administration Diagnostic Assessment Tool
TAYAT	Tax Administration Yield and Assessment Tool
SDS	Small Developing States
VAT	Value-Added Tax
VITARA	Virtual Training to Advance Revenue Administration

EXECUTIVE SUMMARY

This report has been prepared in response to a request from the G20 for the IMF to examine how revenue mobilization in developing countries can be enhanced through improvements in revenue administration.[1] This is in the context of the significant financing needs for development and the critical role of domestic revenue mobilization therein. Building on the IMF's 2024 report to the G20, *"Alternate Options for Revenue Mobilization,"* this report provides a more in-depth analysis and evaluation of revenue administration options. It has benefited from consultations with our partners in the Platform for Collaboration on Tax— the Organisation for Economic Co-operation and Development, World Bank, and United Nations—as well as with the South African G20 Presidency. We also acknowledge the companion report for the G20 on capacity development in domestic revenue mobilization, jointly prepared with our partners of the Platform.

Revenue administration is an essential pillar of the tax system, along with tax policy design and the tax legal framework. Baer and others (forthcoming 2025) elaborate on how a country's tax capacity can foster economic growth and development through enabling state capacity and by boosting development spending. The report highlights that emerging market economies and low-income developing countries can raise around five percent of GDP in additional revenue over the medium term through a combination of tax policy and administration reforms. Moreover, it emphasizes that these reforms are mutually reinforcing. Strengthening revenue administration is not only critical for boosting domestic revenue mobilization, but to also eliminate inequities and economic distortions from tax non-compliance, as well as to reduce compliance costs that can harm productivity and investment.

Effective and efficient revenue administration integrates core compliance functions with several foundational hallmarks: hence, there is no single "silver bullet" for improving revenue collection through revenue administration reform. Core compliance functions include initiatives that promote voluntary compliance and build trust, reinforced by credible enforcement, a modern approach to compliance risk management, and accessible service channels. The enabling environment is shaped by essential hallmarks such as a robust legal framework, sound organizational structures and governance, a well-trained and competent workforce, and modern digital infrastructure, underpinned by appropriate funding. This system is equally relevant for both tax and customs administration – the latter being responsible for more than one-third of revenue collection in low-income countries. The system must be agile, allowing the tax and customs agencies, herein referred to as the revenue administrations, to adapt to the rapid and ongoing changes in the global, social, digital, political, and economic landscape.

A thorough assessment of comparative strengths and weaknesses helps shape successful reform agendas. Significant progress has been made over the past decade in measuring,

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[1] Prepared under the supervision of Ruud de Mooij by a team led by Margaret Cotton comprising Michael Hardy, Paulo Paz, Chenghong Wang and supported by IMF Fiscal Affairs Department colleagues: Jimena Acedo, Debra Adams, Jean-Marc Atsebi, Patricio Barra, Thomas Cantens, Elizabeth Gavin, Mohammad Ehteshamul Hoque, Lucienne Julian, Andrea Lemgruber, John McAlister, Zhaoqing Liu, Augusto Azael Pérez Azcárraga and Shan Zhong. With special thanks to Platform for Collaboration on Tax (PCT) partners, and Katherine Baer, Vitor Gaspar, Michael Keen, Victoria Perry and Juan Toro who also provided guidance.

evaluating, and analyzing revenue administration performance. This report provides a high-level summary of these efforts, along with references to more detailed analyses. The analysis reveals that VAT compliance gaps in low-income countries often exceed 40 percent of potential revenue, equivalent to around three percent of GDP on average. Administrative weaknesses that could explain this occur across the board, both in core functions such as registration, filing, correct reporting and payment, and the enabling factors such as governance, digital technology and human resources—most notably in fragile and conflict-affected states and small developing states. New IMF research shows that comprehensive revenue administration reform that improves the system across the board can increase revenue by between one and three percent over the medium term. Hence, investing in revenue administrations can pay off. Evidence from advanced economies indicates that an adequate investment can yield a fiscal return of more than ten times its cost. However, research also shows that reforms can take several years before the gains are fully realized and that returns depend on the strength of enabling factors.

While reforms should be tailored to the unique circumstances and capacity of countries, some general principles apply. In the short term, governments can achieve quick wins through targeted compliance measures, ranging from segmentation, expanding third-party reporting, advancing risk-based enforcement, and enhancing digital processes and human resource capacity. Over the medium term, more substantial and sustained improvements are achievable through a structured reform process. This should start with a comprehensive diagnostic assessment, followed by a medium-term revenue strategy. Swift and committed implementation is key. Finally, ongoing monitoring and evaluation creates a continuous improvement cycle. The reform strategy should be comprehensive, appropriately sequenced, integrated with, and alert to, other government initiatives—particularly policy and legal reforms. Common priorities, most notably for fragile and conflict-affected states and small developing states, are governance, human resource development and digitalization. Successful structural reform cases discussed in the paper appear to be underpinned by strong leadership with sustained commitment to strategic and operational initiatives, inclusive stakeholder consultation, effective communication, adequate resources, and a culture of integrity where ethical behavior, transparency, and accountability are the norm.

INTRODUCTION

1. Developing countries face large financing gaps for growth and development. The financing gap to achieve the Sustainable Development Goals in the context of the Fourth Financing for Development conference has been estimated at $4 trillion per year (UN 2025). Financing needs are particularly large for low-income developing countries (LIDCs) and fragile and conflict-affected states (FCS) (Carapella and others 2023). Many of these countries also face significant debt distress and major short-term liquidity challenges, as well as a need to rebuild buffers to increase resilience against shocks (IMF 2025). Several financing sources exist but are insufficient. For instance, official development assistance has been declining in recent years (UNCTAD 2025; OECD 2025). Spending efficiency could often be enhanced through improved public financial management (e.g., budget, treasury and public investment management), which is by itself important for development. Developing domestic sovereign bond markets to support borrowing is another source of finance. Whilst complementary, it is clear that these financing sources will have to be accompanied by improved domestic revenue mobilization.

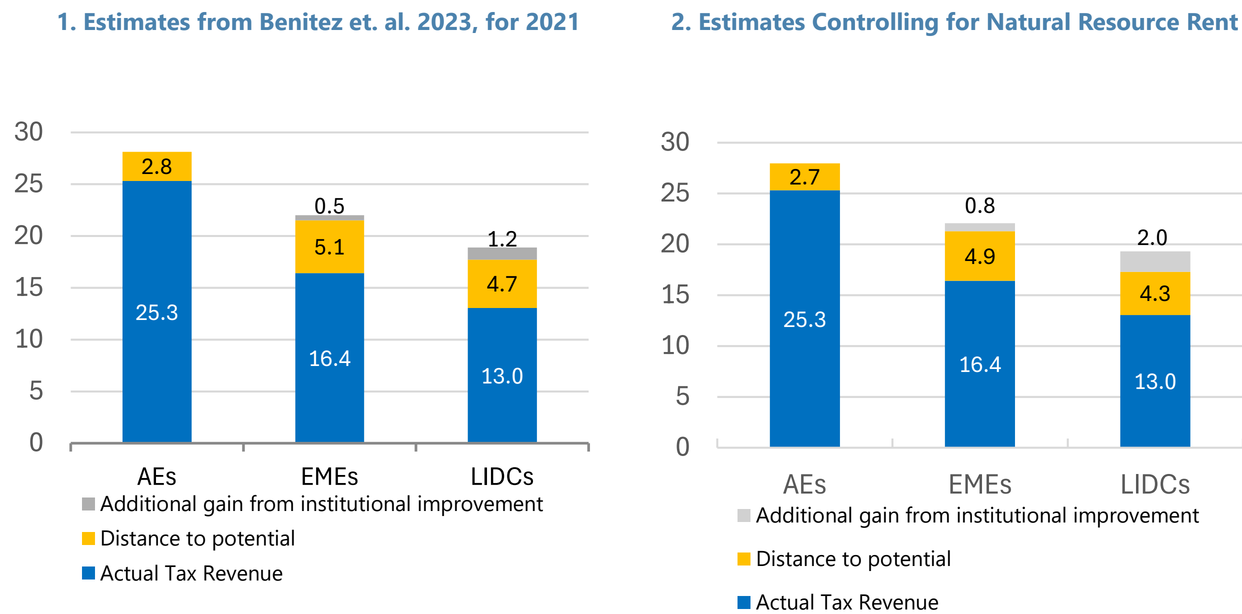
2. A significant share of the financing will have to come from domestic revenue mobilization (DRM).[2] Tax revenue could be increased through international tax cooperation initiatives, such as those led by the G20/OECD or the UN and discussed in the IMF's report for the G20 in 2024, *"Alternate Options for Revenue Mobilization"*. However, that report concludes that the revenue that might reasonably be expected from international tax cooperation will only be a small fraction of what is needed. DRM from improved national tax systems, including its institutions, thus remains imperative for growth and development.

3. There is considerable untapped tax revenue potential in developing countries. Using the IMF's recently launched WoRLD database, Baer and others (forthcoming 2025) estimate countries' tax potential, i.e. the maximum revenue countries could mobilize, given their level of income, economic structure, openness to trade, and institutional quality. The results suggest that emerging market economies (EMEs) and LIDCs have the potential to raise on average around five percent of GDP in additional revenue (Figure 1) in the medium term through comprehensive tax system reform.[3] Especially for countries below a 15 percent tax-to-GDP ratio threshold—as enshrined in the *Compromiso de Sevilla*, adopted at the Fourth Financing for Development Conference in July this year—expanding revenue can be critical for supporting growth and development.

[2] This report uses DRM to refer to domestic revenue mobilization. This is narrower than domestic resource mobilization, which encompasses also other financing sources, such as borrowing in domestic sovereign debt markets and improved spending efficiency. The joint domestic resource mobilization initiative by the IMF and the World Bank covers all these areas (see IMF and World Bank 2024).

[3] The results depend on the control variables included in the analysis. More generally, estimates of tax potential are sensitive to the specification and data coverage, see e.g. Benitez and others (2023). Tax potential itself could be increased by institutional reform (reflected by institutional variables in the regression and presented as an additional gain in Figure 1).

Figure 1. Tax Gap and Tax Potential (Percent of GDP)



Source: Baer and others (forthcoming 2025), using a stochastic frontier analysis.

4. A combination of reforms in tax policy, the tax legal framework and revenue administration is key for effective DRM. The IMF's G20 note of 2024, "Alternate Options for Revenue Mobilization," discusses several tax policy options and briefly touches upon revenue administration reforms, the topic of this paper. Note, however that tax policy, tax law and revenue administration are inherently intertwined, and all part of the overall tax system.[4] Administrative capacity determines, for instance, the opportunities for refining tax design: indeed, no matter how well a tax is designed, revenue collection can only be as good as the revenue administration's (RA) ability to implement and enforce the law.[5] Reforms in tax policy and revenue administration can therefore serve as complements, e.g. a simpler tax design with a broad tax base can expand revenue directly, but also indirectly as it is easier to administer and comply with.

5. An effective and efficient revenue administration system is not only essential for DRM, but also for creating tax fairness and building trust in the social contract between the state and its citizens. Revenue administration is not just a technical function but a critical component of how tax laws operate in practice. Sound and consistent implementation and enforcement of tax laws

[4] The approach emphasizing the relationship between tax policy and revenue administration is sometimes referred to as the 'tax system approach' see Slemrod and Gillitzer (2014).
[5] The acronym RA is used to represent the tax and customs organizations or joint organization. Where we use the term revenue administration in full, it represents the functions fulfilled by those organizations or others on their behalf. The paper does not consider the administration of non-tax revenue, such as (local) fees and levies.

is vital for DRM, as well as the neutrality and the perceived fairness of the tax system as a whole—which ultimately determines its legitimacy. Good revenue administration fosters voluntary tax compliance at low costs of collection and administration. Reliability, good governance, and perceived fairness of the revenue administration system is also essential for a good tax morale (OECD 2019), while tax certainty builds taxpayers' trust (IMF and OECD 2019). However, weaknesses across the revenue administration system in many developing countries impose a significant limitation on effective, efficient, and equitable taxation and comes with costs in firm productivity and investment.

6. This report outlines broad directions for reforming revenue administration in developing countries to support tax compliance, improve DRM outcomes and mitigate inequities and inefficiencies. Over the last decade, a suite of tools has been developed to measure, assess, and explore the effectiveness and efficiency of revenue administration (see section III). This report uses insights from these tools to identify weaknesses, determine priorities, and guide broad reform strategies. The high-level analysis in this report serves as a reader's guide for a wide audience, with multiple references to more detailed guidance and analysis for those interested in more specific advice.

7. In this document, revenue administration covers both tax and customs administration. Box 1 discusses the importance of customs administration for DRM in developing countries, reflecting that collections by customs represent on average 37 percent of total revenue collection in LIDCs, inclusive of import VAT.

8. The report is organized as follows. Section II discusses the hallmarks of effective and efficient revenue administration. Section III assesses the effectiveness and efficiency of revenue administration, based on the latest data, measurement tools, and research. Section IV discusses how countries can design and implement reforms to strengthen revenue administration.

HALLMARKS OF EFFECTIVE AND EFFICIENT REVENUE ADMINISTRATION

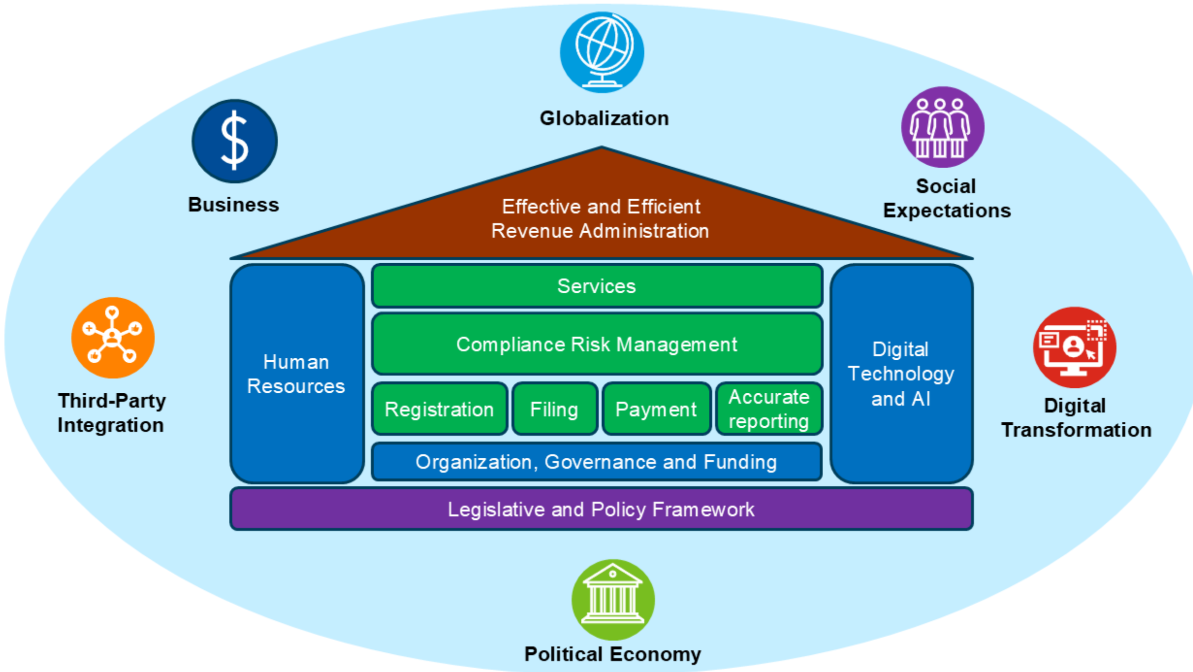
This section starts by discussing the hallmarks of effective and efficient revenue administration as depicted in Figure 2. At its core, effective and efficient revenue administration comprises the registration, filing, payment, and reporting functions, backed by a comprehensive compliance risk management (CRM) strategy and facilitated by efficient taxpayer services (green central part in Figure 2). These core functions are supported by an enabling framework: legislation and policy; organization, governance, and funding (at the bottom in Figure 2) and two pillars for human resources and digital technology (left and right-hand sides in Figure 2). While the overall framework is generally applicable, RAs must operate in a rapidly changing environment (the outer circle of Figure 2), which calls for continuous and agile improvement of the inner components.

9. Revenue administration is effective when it attains high and consistent taxpayer compliance with the tax law obligations. Tax non-compliance not only undermines revenue mobilization but also creates distortions by putting compliant taxpayers at a competitive disadvantage. It can harm equity and the perceived fairness of taxation, thereby undermining the integrity and legitimacy of the tax system and, ultimately, the state itself. In the case of customs, the compliance obligation extends beyond revenue collection to other objectives such as border security and trade facilitation.

10. Efficiency of revenue administration means that compliance obligations and administration functions are achieved at the lowest reasonable cost. These costs refer first and foremost to the administrative costs for the government and compliance costs for taxpayers, such as the time, effort, and resources to meet their legal obligations. Costs may also include the economic distortions and inequities induced by non-compliance. Dabla-Norris and others (2020) find, for instance, that better tax administration attenuates the productivity gap of small and young firms relative to larger and older firms so that better revenue administration can raise productivity and growth. Moreover, tax uncertainty caused by unpredictable and non-transparent administrative practices can increase compliance costs for taxpayers and deter investment (IMF and OECD 2019). Efficiency requires prioritizing the allocation of the available resources to where the highest net revenue is collected, thereby accepting that extra enforcement efforts might lead to diminishing returns and, from a certain point, are not worth pursuing.[6]

[6] Keen and Slemrod (2017) derive a condition for the optimal enforcement and the optimal compliance gap.

Figure 2. Hallmarks of Effective and Efficient Revenue Administration in a Changing Environment



A. Core Functions

11. A RA performs its core functions through processes that effectively and efficiently manage compliance and collect the taxes due (Cotton and Dark 2017). To achieve this, most RAs rely heavily on promoting voluntary compliance in the taxpayers' four key tax obligations: registration, filing, payment and accurate reporting. This is backed by tailored taxpayer services and effective deterrence through verification activities such as tax audits and data matching (see Figure 2).

12. Voluntary compliance is the most cost-effective approach, reducing the need for extensive and expensive enforcement and fostering better government-taxpayer relationships and trust. To support voluntary compliance, RAs usually offer tailored education and assistance, and streamlined systems for registration, filing, and payment. Other methods such as tax withholding by third parties, simplified tax forms for small businesses, and pre-filled returns are also good practice, as they limit the number of collection points and reduce the costs of compliance and administration. Third-party reporting can encourage compliance by increasing the probability of detecting false reporting. Where taxpayers do not voluntarily comply with their tax obligations, the RA needs to credibly enforce their compliance.

13. CRM is the principal method used to encourage and enforce compliance. The CRM process model published by the OECD (2004) is a structured and transparent methodology to manage risks and enhance voluntary compliance through a comprehensive approach—comprising one or more of education, service improvement, legislative change, and enforcement. Identifying the major revenue risks allows RAs to review and prioritize resources to address noncompliance in areas where the potential revenue is greatest and promote higher voluntary compliance where enhanced services can help. CRM is especially useful since it is scalable and can be tailored to the needs of AEs, EMEs, LIDCs, and FCS, as discussed in more detail in Brondolo and others (2022) and Betts (2022).[7]

14. Customs administrations also use CRM approaches across their revenue collection, border security, and trade facilitation functions (Pérez Azcárraga and others 2025).[8] Compliance risks loom large in customs, as new business and trade models require simplified and expedited clearance procedures to avoid congestion in ports, delays, increased costs, and opportunities for corruption. CRM in customs includes segmenting traders pre- and post-clearance according to the total value and volume of their transactions, risk levels, and type of goods; identifying the cause of risks by assessing core customs processes or workstreams; and defining and implementing tailored treatment measures to mitigate the risks.

B. Enabling Framework

15. The RA's core functions should be embedded within a sound enabling framework. This framework, the elements of which are all interconnected, should not only support the RA's core functions and enable it to address compliance risks but also seek to properly manage human capital and other enterprise risks.[9]

- **Legislation and policy framework:** Clear and transparent rules improve tax certainty, ensure consistency of procedures across tax types, reduce discretionary powers of officials, and mitigate compliance costs (Aw and others 2025). The legislation should ensure that data can be routinely obtained from third parties (including financial institutions without resorting to court orders and from exporters to support timely end-to-end cargo traceability and security), digital innovations can be introduced without further legislative change (such as electronic data exchange, digital signatures, electronic service channels, electronic documents with legal power, electronic invoicing), and modern tax debt collection practices and robust enforcement provisions are in place (including prosecution for the most egregious cases and certainty on penalties and other sanctions). The legal framework should also deter corruption and foster trust as discussed in Sofrona and others (2025).

- **Digital technology and emerging Artificial Intelligence (AI):** Given the criticality of adequate and timely information, digitalization is essential for revenue administration effectiveness.[10] Digitalization is key to improving governance, as it increases transparency and traceability (Amaglobeli and others 2023). New digitalization initiatives should be tailored to the local

[7] Aslett and others (2024; 2025) presents the analytics of CRM and the use of artificial intelligence (AI) as tax administrations become more advanced and digitalized.

[8] In literature on customs administration, this is sometimes called Integrated Risk Management (IRM), but CRM will be used in this paper for ease of consistency.

[9] For information on enterprise risk management, see Brondolo and others (2020)

[10] See also: OECD (2020), Tax Administration 3.0: The Digital Transformation of Tax Administration, OECD, Paris

reality, such as the degree of internet access and digital literacy in the community and should also guard against cyber risk, data security, and technical failure. With these conditions met, more advanced applications are possible, including the use of artificial intelligence (AI). AI tools can be "game changing" for data analysis that is at the heart of revenue administration (Aslett and others 2024).

- **Funding:** Funding must be adequate to cover the costs of a professional skilled workforce, implementing and maintaining digital technology, deploying headquarters and field operations to address known risks, and supporting continuous innovation and change. Funding can also be tied to return on investment from compliance improvement initiatives.

- **Governance:** Good governance is characterized by a culture of integrity, autonomy, transparency, and performance reporting to help maintain independence and secure trust from society. A culture of integrity has defined and published standards of behavior and ethics, regular promotion of the standards, monitoring of adherence to the standards, a process to correct lapses, and transparent reporting.[11] Organizational autonomy should ensure apolitical and impartial decisions. Transparency is supported by publishing organizational goals, plans, efforts, and outcomes (Crandall and Kidd 2010).

- **Human resources:** Investment in sufficient staff with the right skills in the right roles and with sufficient tenure is critical to sustain a capable and ethical workforce that can address emerging compliance risks.

- **Organization:** The organizational model should be agile and feature a strong headquarters separate from field operations; function-based organizational design; minimal management layers with manageable spans of control; streamlined field operations aligned to key taxpayer segments (such as large businesses, small and medium enterprises, and low-risk importers); and sufficient staff numbers assigned to each level of the organization and each function.[12]

C. A Rapidly Changing Environment

16. Although the hallmarks of effective revenue administration remain similar over the years, the environment in which RAs operate is fast-changing, necessitating refinement, adjustment, and redirection of processes, tools, and skills. Globalization is transforming RAs, not only because of the greater importance of multinational enterprises, but also in the light of enhanced administrative cooperation between countries. To accommodate cross-border transactions, for instance, RAs are spurred to using more advanced technologies to track financial flows and improve taxpayer services. Digitalization and changing business models (such as highly digitalized multinationals with ample intangible assets, the gig and sharing economy, digital nomads) are revolutionizing the economy and call for comprehensive adjustment in organization, skills, and technology in RAs. New opportunities also arise, for example new forms of third-party

[11] See also: *VITARA Reference Guide: Human Resource Management (2024)*, see Box 3 for reference.

[12] The choice of a semi-autonomous revenue authority or department will also need to be considered. For a discussion, see e.g. Crandall and others (2024).

reporting like digital platforms or crypto exchanges. Social expectations to engage with the RA are also changing, as is the social tolerance for tax evasion and avoidance and for poor taxpayer services. Notably, there is a growing demand for integrated "whole-of-government" services that utilize single digital identities and share information, thus reducing the compliance burden for taxpayers. RAs also need to remain cognizant of the aging taxpayer population and the digitally disadvantaged, which may necessitate costly dual delivery channels for some time.

ASSESSING REVENUE ADMINISTRATION PERFORMANCE

This section discusses revenue administration performance across various dimensions, based on a wealth of data that has been developed and collected in recent years. It identifies key institutional gaps commonly found in developing countries and elaborates on the measurement of the 'tax compliance gap'. It also discusses insights from recent empirical research to understand the potential revenue gains from administrative reforms and compliance improvement initiatives.

17. Numerous tools are now available to measure revenue administration performance. International institutions, such as the IMF, routinely measure tax compliance gaps, conduct standardized assessments that produce comparable information about relative performance against international good practices, and collect survey data on institutions and revenue administration outcomes. In academia and the applied research community, a revolution in empirical work has taken place in the use of administrative data to conduct ex-post impact evaluations, using experimental and quasi-experimental research designs. These insights can help RAs shape reform agendas and raise tax compliance.[13]

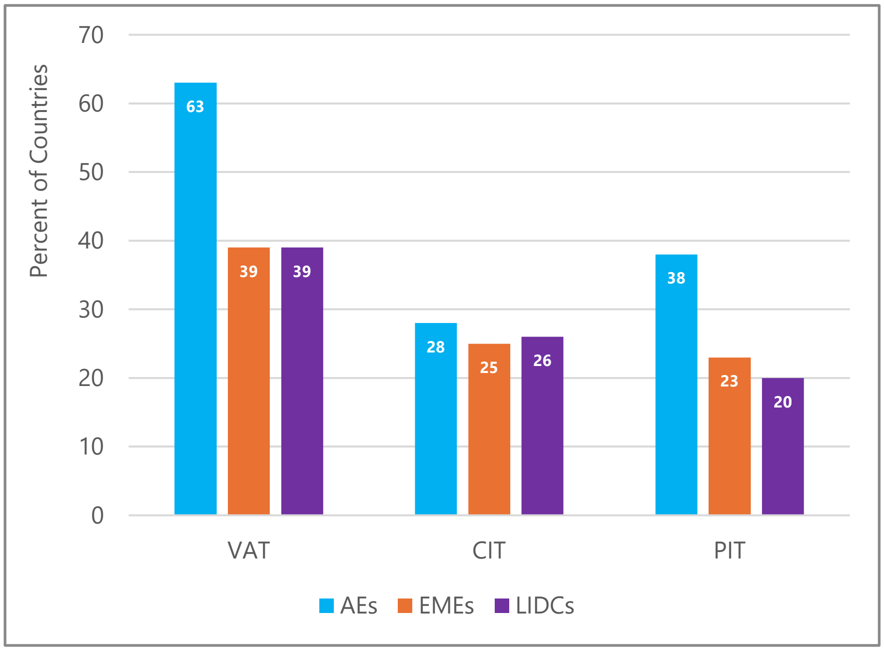
A. Tax Compliance Gaps[14]

18. The extent of tax noncompliance is commonly measured by so-called tax compliance gaps.[15] They are defined as the difference between the revenue that would be collected under current law if compliance were perfect, and the revenue that is actually collected.[16] The former is usually estimated, using either bottom-up or top-down approaches, depending on the data that is being used. Estimation of compliance gaps to inform tax compliance strategies has become increasingly common, although it is markedly more prevalent in AEs than elsewhere, which is largely explained by limited data availability and human capacity (Figure 3). Most common is the estimation

[13] The G20 report by the PCT (2025) also discusses tools developed by other international organizations as well as applied research groups such as CERDI, ICTD, UNU-Wider and the EU Tax Observatory.
[14] The IMF's RA-Gap program offers support to countries in estimating tax compliance gaps in VAT (Hutton 2017), CIT (Ueda 2018), excise duty (Thackray 2017), and PIT (Thackray and others 2021).
[15] There is a relationship between tax noncompliance and informality. However, common measures of the informal sector are not particularly informative of the extent of tax noncompliance. For instance, the informal sector usually comprises many small informal businesses that have no legal liability to remit taxes. At the same time, some forms of noncompliance are not reflected by informality, such as offshore tax evasion. For further elaboration, see IMF (2015).
[16] There is also the tax policy gap - the revenue foregone due to provisions in the law relative to a benchmark system without such provisions. On the measurement and evaluation of these tax expenditures, see e.g. Heady and Mansour (2019) and Beer and others (2022). A database of tax expenditures is available at GTED Global Tax Expenditures Database - GTED. The delineation of the policy and compliance gap for VAT is discussed in Keen (2013).

of the VAT compliance gap (both domestic and import), although gaps in CIT and PIT are also being estimated.

Figure 3. Countries Estimating Tax Gaps



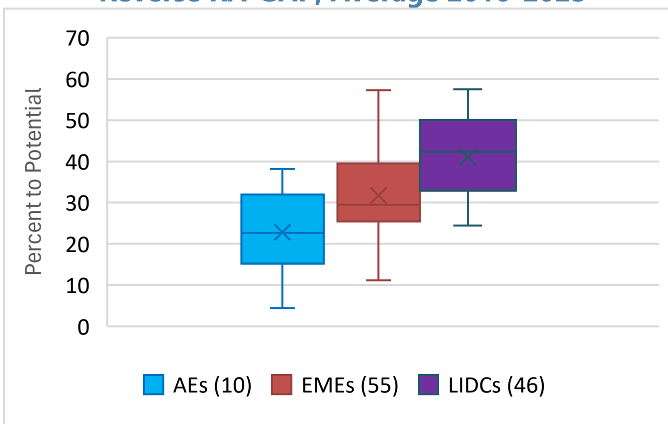
Source: ISORA 2023.

19. Reducing tax compliance gaps can significantly boost revenue mobilization. Baer and others (2025) use top-down estimates to assess VAT compliance gaps in over 110 countries between 2010 and 2023.[17] They find that, while these gaps have decreased somewhat over time, they remain substantial, particularly in EMEs and LIDCs. For instance, in 2023, the VAT compliance gap in LIDCs represents a loss of 40 percent of collectible potential VAT revenue; in EMEs, this figure is around 31 percent, while in AEs it is around 21 percent (Figure 4). On average, LIDCs lose over three percent of GDP due to VAT non-compliance, with the largest loss reaching 4.7 percent of GDP.

[17] A top-down gap estimate uses aggregate data—like GDP, trade volumes, or sectoral outputs—rather than detailed taxpayer-level data to assess the difference between a country's current revenue performance and its potential revenue capacity. There may be uncertainty associated with top-down estimates, depending upon the accuracy and sufficiency of the aggregate data.

20. Gap measurement can identify the main sources of non-compliance and guide where administrative efforts could yield the highest return.[18] For instance, using the IMF's methodology, VAT gap estimates indicate the sectors with largest compliance risks, such as agriculture, construction, retail trade, and hospitality (Hutton 2017). For income tax, studies find that the tax compliance gap for the self-employed is usually much larger than for employees, which points to the impact of withholding or third-party reporting by firms on salaries. Indeed, whereas compliance gaps for employees in AEs are often small, for the self-employed they often exceed 30 percent (Slemrod 2019).

Figure 4. VAT Compliance Gap by Income, Reverse RA-GAP, Average 2010-2023



Source: Baer and others (2025).

B. Performance Outcomes – TADAT[19]

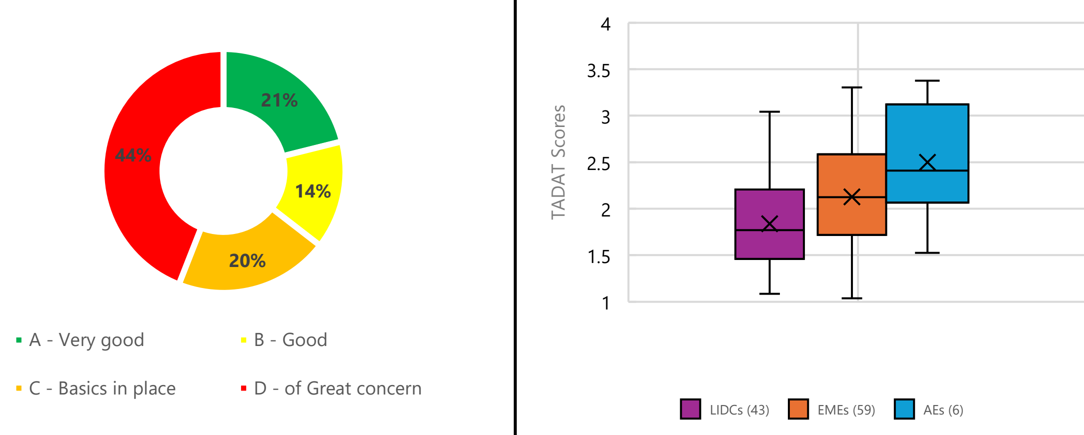
21. Results from 10 years of standardized Tax Administration Diagnostic Assessment Tool (TADAT) assessments allow for comparing the relative performance of tax administrations across the world. TADAT distinguishes nine performance outcome areas (POAs) using 32 indicators and 55 dimensions (collectively, 'aspects') that are scored by certified assessors on a scale from 'A' (strongest = 4) to 'D' (weakest = 1). Figure 5 shows the distribution of average TADAT scores, based on nearly 200 assessments undertaken in more than 100 different countries over the past decade—mostly developing countries. It shows that in 44 percent of scored aspects basic practices are absent (score 'D'). Only 35 percent of the scores represent sound practice or better (score 'A' or 'B'). There is a strong relationship between these scores and income levels, with AEs having better overall scores across all aspects.

[18] See, for example, D'Agosto and others (2025)

[19] Box 2 provides a brief description of TADAT including the nine performance outcome areas (POAs).

Figure 5. TADAT Scores From Nearly 200 Assessments

a. TADAT Scores for National Assessments | **b. TADAT Scores by Income Groups**



Source: TADAT Secretariat calculations. The number of countries in Figure 5b. is smaller than 200 due to repeat TADAT assessments and assessments of sub-national tax administrations.

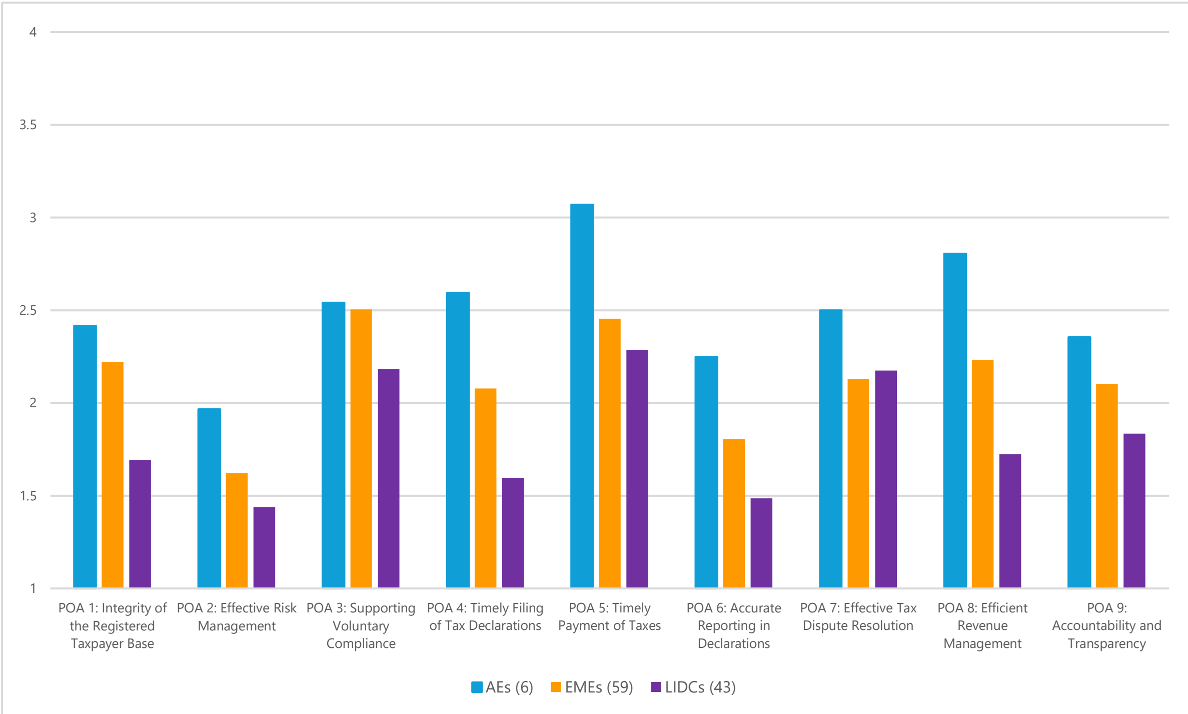
22. TADAT data show clear weaknesses that should be addressed (Figure 6). Many countries lack a complete and accurate national taxpayer register to assure that all taxpayers are registered for relevant tax types. Countries also lack efficient e-filing and e-payment channels, debt management, or accurate reporting and monitoring frameworks. Outdated legacy technology is often not integrated across tax types, does not record taxpayer return data, and does not permit crosschecking with third-party data sources. Risk management gives the weakest score across all the POAs, reflecting weaknesses in compliance, operational, and human capital risk management.[20,21] Weaknesses in human capital risk management primarily reflect the inability of tax administrations to recruit and retain skilled staff. Weaknesses in the institutional and legal framework reflect poor tax laws or outdated tax procedural laws, inadequate governance structures, and the absence of culture of compliance and integrity.[22] FCS show the weakest scores relative to international good practice, and most notably in the integrity of the registration data, effective risk management, timely filing and payment (especially by large taxpayers), and accountability and transparency. FCS performance is discussed further in Box 3.

[20] Operational risk management includes business continuity planning, which importance became clear during the pandemic (Brondolo and others 2020).

[21] The TADAT methodology defines "Human Capital Risk" as the inability to maximize tax administration effectiveness on account of absence of capability, capacity, compliance, cost and connection (engagement) gaps of and by its employees.

[22] Weaknesses in the legal framework that impact procedures may include limits on the type of audits that can be conducted, data sharing, lengthy periods for refund payment, and dispute resolution outside good practice standards.

Figure 6. Global Average TADAT Scores for Each POA by Income Groups



Source: TADAT Secretariat calculations.

23. TADAT data also reveal some good practices globally, mainly in providing measures that support voluntary compliance. [23] This includes, for example, the implementation of tax withholding systems to enhance payment efficiency, providing information and structures for resolving disputes, and processes for reconciling government revenue.

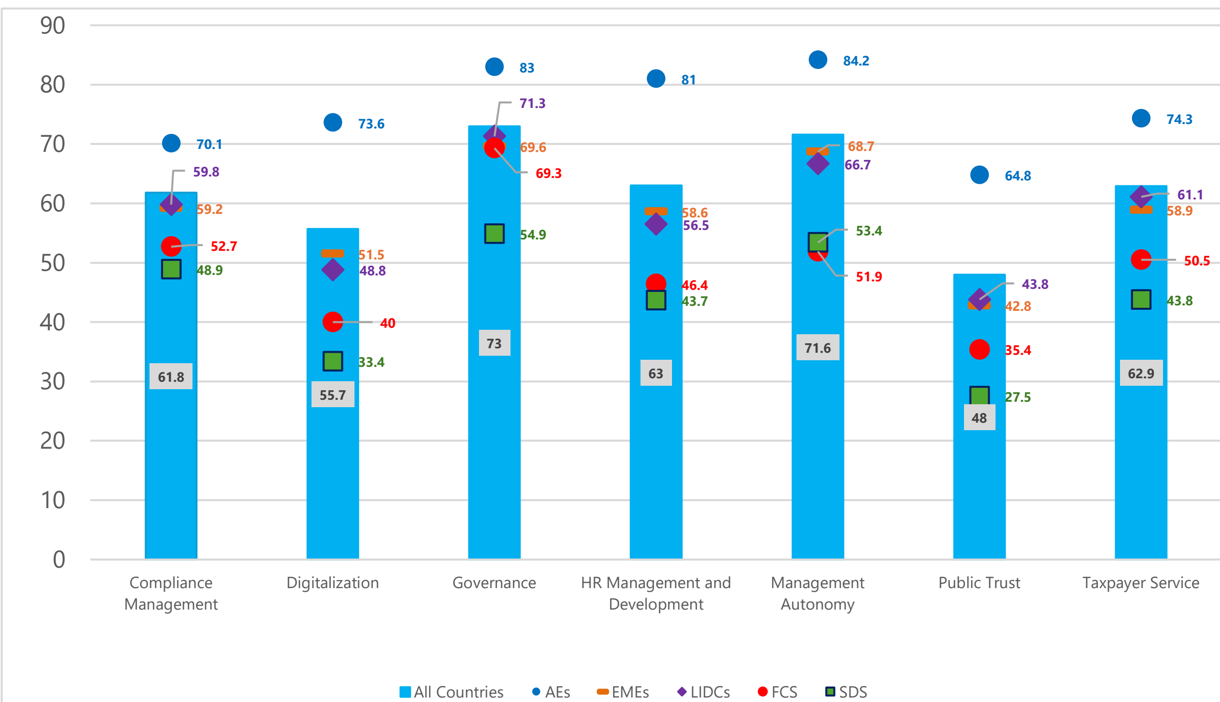
24. Countries that used the TADAT results to drive reforms and subsequently undertook repeat TADAT assessments show progress over time. Repeat assessments took place in 36 countries and happened between four and eight years after the initial assessment. Scores improved in 90 percent of the countries, with the average increasing from C to C+ (or from 2.0 to 2.3), demonstrating that building reform plans based on TADAT findings helped build tax capacity. Notably, while progress occurred in all countries undertaking repeat assessments, the strongest progress was in supporting voluntary compliance and revenue management, whereas the least progress was in managing timely tax payments – a critical aspect of revenue collection. LIDCs, having the most to gain on average, have shown the most improvement following repeat assessments (Acedo and others 2024).

[23] While tax compliance is mandatory, the term voluntary compliance is used when taxpayers meet their obligations (registering, filing, reporting correctly, and paying) without strong administrative intervention. This can be because taxpayers are supported with the necessary information and the costs of compliance are reasonable (See also: TADAT Performance Outcome Area 3).

C. Operational Effectiveness – ISORA

25. Data from ISORA – a survey of 180 tax or joint tax and customs administrations, see Box 2 – reveals significant differences in the organizational strength of the hallmarks of effective tax administrations between country groups. ISORA contains a wider and complementary set of measures across more countries and includes some measures of the revenue administration enabling framework not contained in the TADAT assessments. Figure 7 shows the average scores from ISORA for seven selected indices across AEs, EMEs, and LIDCs, as well as for FCS and Small Developing States (SDS). Whilst scores are considerably lower in EMEs and LIDCs compared to AEs, the difference between EMEs and LIDCs is relatively minor. Scores are by far the lowest in FCS and SDS, even when compared to LIDCs. These weaknesses occur across all seven indices, with the weakest areas being in digitalization, human resources, and public trust, all critical enablers of effective revenue administration. Underlying scores in each of these indices provide more granular information on these weaknesses.

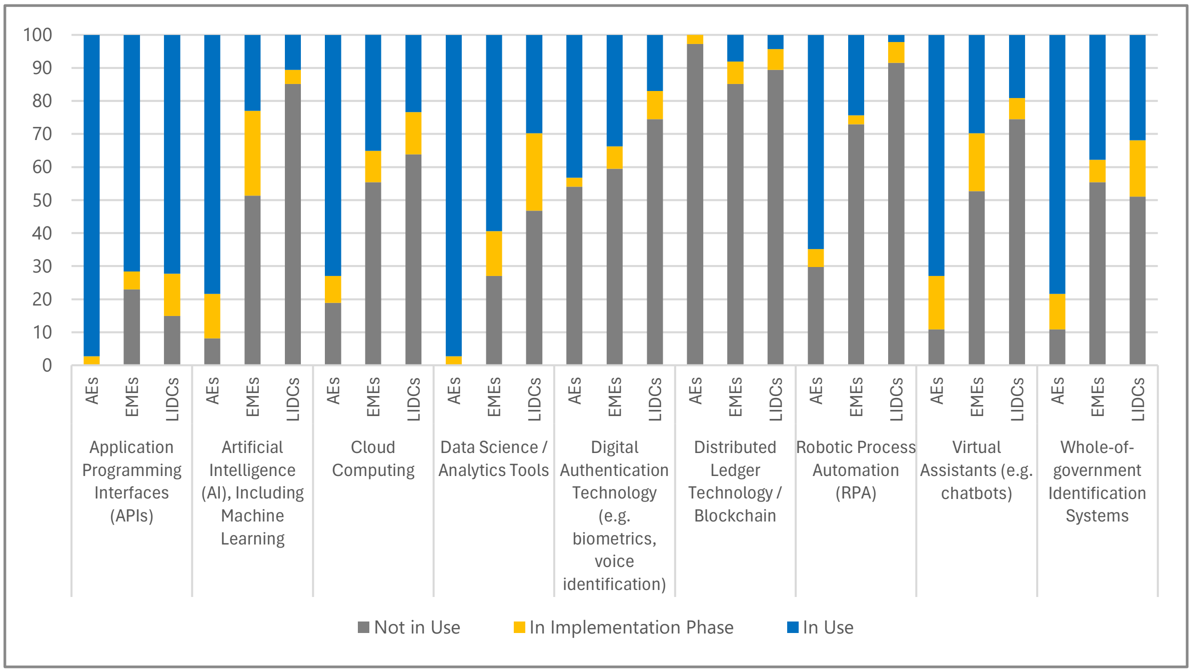
Figure 7. Average Scores for ISORA 2022 Indices



Source: ISORA 2023.
Note: Scores are expressed as a percentage of the maximum achievable score per category. The maximum score is based on a list of survey questions, where weights are assigned to each question to reflect its relative importance.

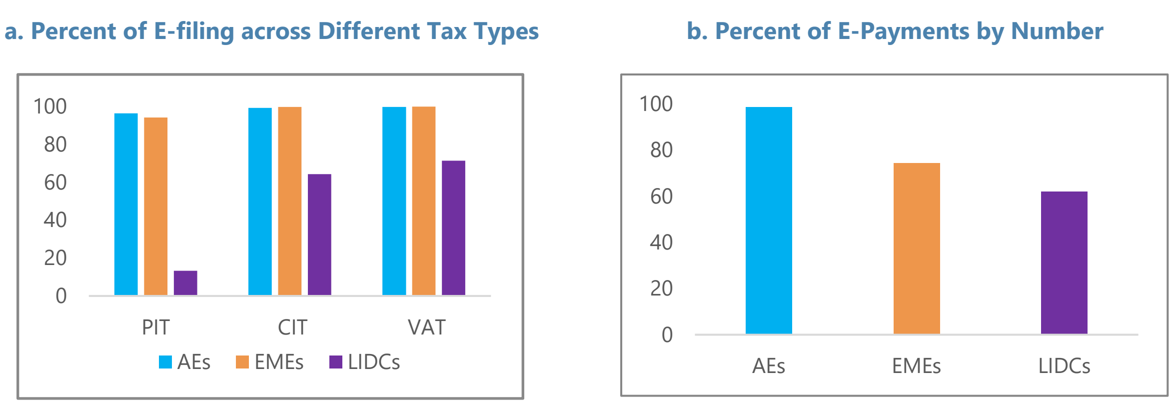
- **Digitalization:** ISORA data shows significant gaps in digitalization between AEs and LIDCs, and with FCS and SDS lagging well behind (see Figure 7) despite LIDCs making substantial progress in digitalization between 2015 and 2022 (Atsebi and others 2025). AEs, particularly, are adopting digital technologies, such as AI, cloud computing, data analytics, digital mapping tools, and satellite imageries analysis to facilitate property taxation, and robotics and virtual assistants (Figure 8)—moving closer to the OECD's vision of digital transformation of tax administration (OECD 2020, 2022). Well-established digital tools can help improve compliance, especially with basic filing and payment obligations. The tools can be relatively easy to adopt, even for SDS and FCS, which have low rates of e-filing and e-payment (Figure 9).

Figure 8. Use of Innovative Technology by Income Groups in 2023



Source: ISORA 2024.

Figure 9. Percent of E-filing and E-payments, Median over 2018-2023



Source: ISORA 2024.

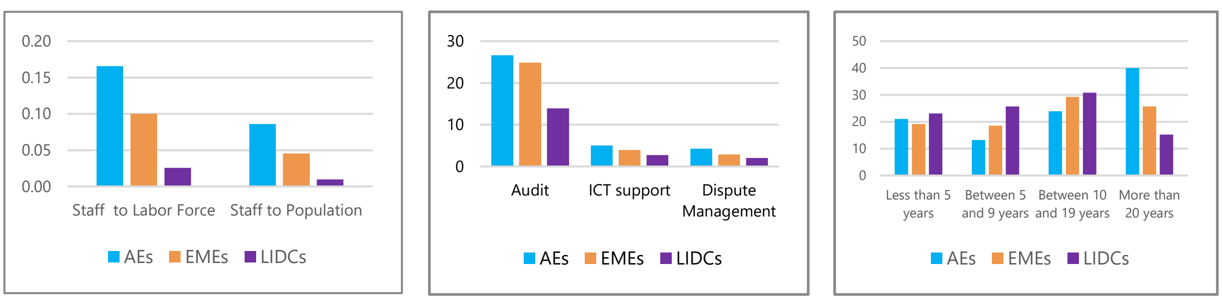
- **Human resources:** this ISORA indicator reflects the extent to which modern human resource[24] practices support effective tax administration. Compared to an overall score in AEs above 80 percent (of the maximum achievable score), human resource practices in LIDCs score much weaker at below 60 percent, while FCS and SDS score well below 50 percent (Figure 7). Figure 10 reveals selected human resource challenges facing EMEs and LIDCs. For example, the median ratio of staff in the tax administration to the labor force is around 0.17 percent in AEs, but only 0.1 in EMEs and 0.03 in LIDCs (Figure 10a). Moreover, AEs heavily deploy human resources in critical functions such as audit, information communication technology (ICT) support, and dispute management, while the allocation of staff to these functions in LIDCs is much lower (Figure 10b). This showcases the linkages between human resources and digitalization. For example, in LIDCs, digitalization initiatives such as e-filing and e-payment would free up staff from high-volume, low-value routine and manual processing activities, allowing staff to be retrained and redeployed to higher-value and higher-skilled enforcement activities. Finally, the median staff tenure in AEs tends to be considerably longer than in LIDCs, which could point to LIDCs having an under-skilled workforce or facing a constant loss in specialized skills, thus eroding institutional expertise (Figure 10c).

Figure 10. Human Resource Challenges in EMEs and LIDCs (Percent)

a. Staff to Labor Force and Population, Median over 2018-2023

b. Allocation of Staff in Revenue Administrations in 2023

c. Staff Experience in Revenue Administrations, Average 2018-2023



Source: ISORA 2024.

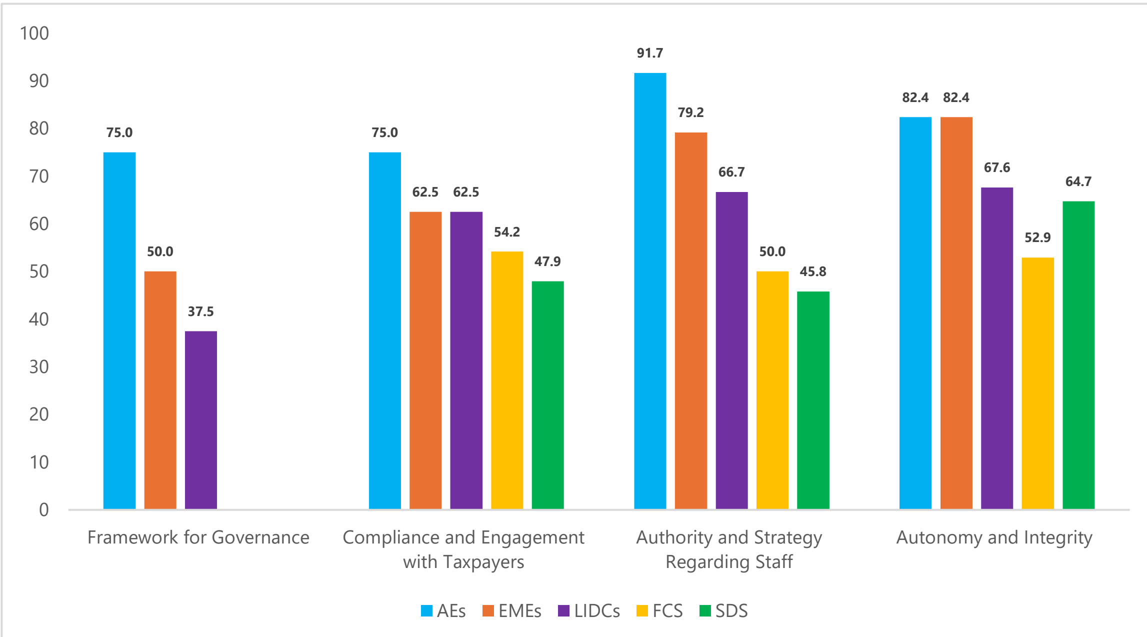
- **Public trust and governance:** these ISORA indices relate to transparency that enables public scrutiny of the tax administration and approaches to governance. The public trust indicator scores are the lowest of all the indices, including for AEs, but is particularly troublesome for SDS and FCS. On governance, SDS score much lower than even FCS or LIDCs. (Figure 7).[25] Delving further into the ISORA governance indicators shows EMEs and LIDCs make far less use of governance frameworks than AEs, and SDS and FCS score consistently lower than even LIDCs in

[24] The ISORA data on human resources covers numbers of staff, their disposition, skills and training, whereas TADAT measures cover human capital risk, i.e., the ability to achieve outcomes in the absence of staff and skills.

[25] IMF is currently piloting a new tool to identify vulnerabilities in governance – the Revenue administration governance and integrity assessment tool – see Box 2.

engagement with taxpayers, authority and strategy regarding staff,[26] and autonomy and integrity. (Figure 11).

Figure 11. ISORA Governance Indicators in 2022



Source: ISORA 2023.

D. Customs

26. While there is no tool comparable to TADAT or ISORA for customs administration, identified weaknesses are similar to those in tax administrations (Pérez Azcárraga 2022).[27] Specific customs performance outcome areas include for instance governance, trade facilitation and guidance (predictability, transparency and simplification); integrated risk management with tailored treatment for different trader segments, physical controls, post-clearance audits; end-to-end cargo traceability; and legal frameworks aligned with international trade needs. Short-term improvements can be obtained by leveraging digital tools to cross-check information with third parties such as harmonized system codes, declared values, tariff exemptions and special regime benefits, requiring timely electronic cargo manifests, providing more accurate public information about duty exemptions, and developing closer cooperation and data exchange with the tax administration. Sustained improvements require strengthening all hallmarks for effective customs administration (Montagnet-Rentier 2019).

[26] This indicator asks whether tax administration has the authority to create a staffing strategy, determine duties and roles, and to hire and promote staff within the organizational budget.

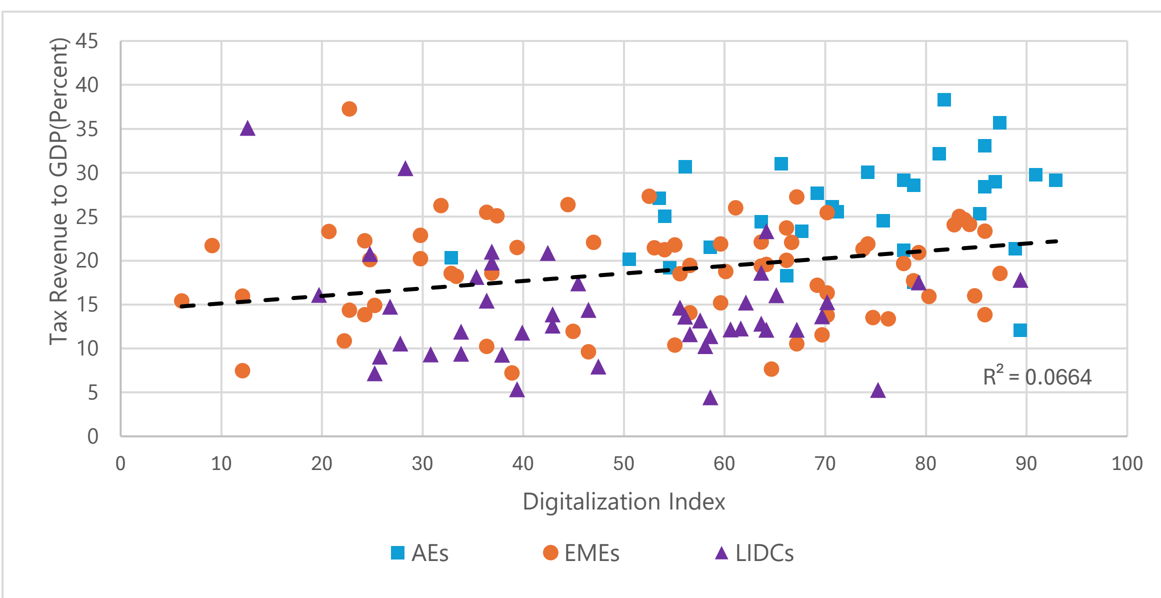
[27] IMF is currently piloting a new International Customs Administration Survey that will be launched early in 2026 (see Box 2). WCO (2025) has issued a Time Release Study Guide (Version 4) that could be used as a proxy for measuring customs efficiency.

E. Reform Impact Analyses

27. Recent research assesses the impact of revenue administration reforms on tax compliance, revenue, and taxpayer behavior. A fast-growing field of academic literature leverages anonymized taxpayer data and performs experiments to assess the ex-post impact of specific administrative interventions. These interventions include behavioral nudges (through letters and notifications), incentives to use credit cards, lotteries and rebates, digitalization efforts, pre-population of tax returns, and organizational structure changes such as establishing large taxpayer offices (Slemrod 2019, Okunogbe and Tourek 2024, and Keen 2025). This literature yields critical insights into the importance of, amongst others, information reporting, audits, and digitalization (see Box 4). However, results are usually country-specific, and it is not always clear to what extent they can be generalized or scaled up to infer macro revenue effects.

28. Macro analysis shows that digitalization can significantly boost revenue, if used as part of a comprehensive reform strategy. Figure 12 shows the positive correlation between an index for the degree of digitalization using ISORA data and tax to GDP ratios in AEs, EMEs, and LIDCs. Nose and Mengistu (2023) use a similar index to perform cross-country panel regressions, suggesting that adopting e-invoicing can improve revenue mobilization by 0.7 percent of GDP. However, the study also shows that these effects are only significant if important pre-conditions are met. For instance, without good governance, adequate staff and skills, and an appropriate ICT budget, effects are typically statistically insignificant. Hence, digital transformation can only be successful if it is part of a more comprehensive reform strategy.

Figure 12. Degree of Digitalization and Tax Revenue to GDP in 2022

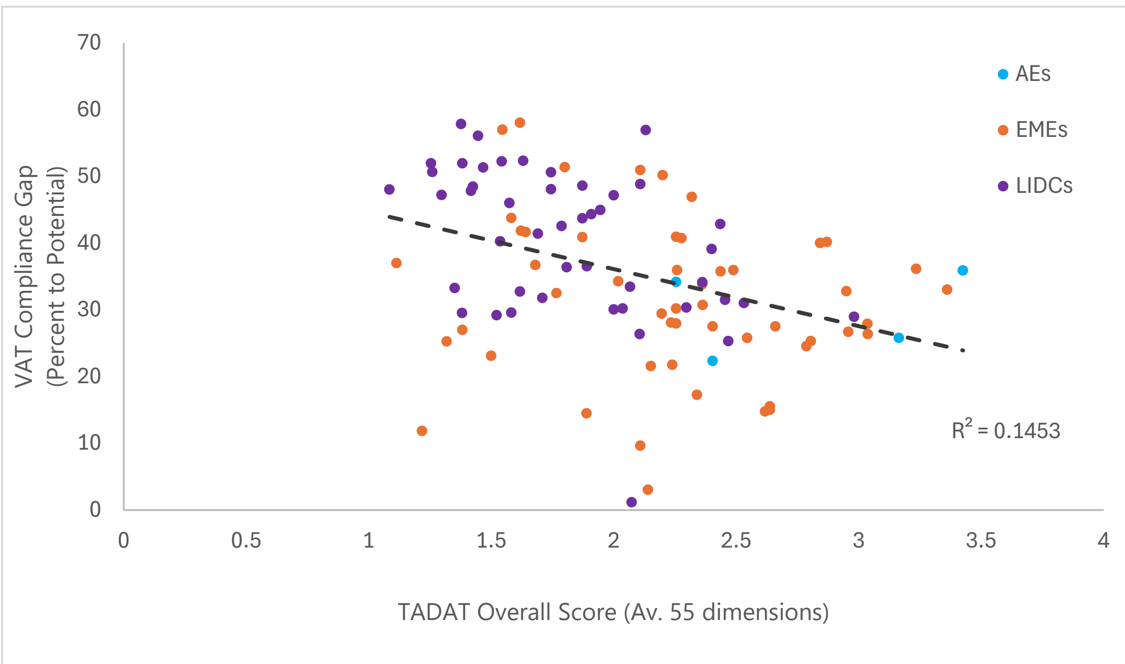


Source: ISORA 2023.

29. Positive effects are also found for digitalization in customs administration. Kitsios and others (2020) explore the effect of digitalization on trade misreporting. They find that if an importing country improves its technology use by 50 percent, it could expand revenue from tariffs, excises, and VAT on imports by more than 2 percent of GDP.

30. Improved TADAT scores are associated with higher VAT compliance. A recent study by Baer and others (2025) finds an inverse relationship between TADAT scores and VAT compliance gaps (Figure 13). These results provide a sense of the size of the impact on VAT compliance from improved tax administration. For instance, improving a tax administration's TADAT score from 1.85 to 2.32 (moving from around C- to C+) is associated with a 0.6 percentage point increase in VAT revenue as a share of GDP, due to a reduction in the VAT compliance gap.

Figure 13. VAT Compliance Gap and TADAT Scores (Year of TADAT Assessment)



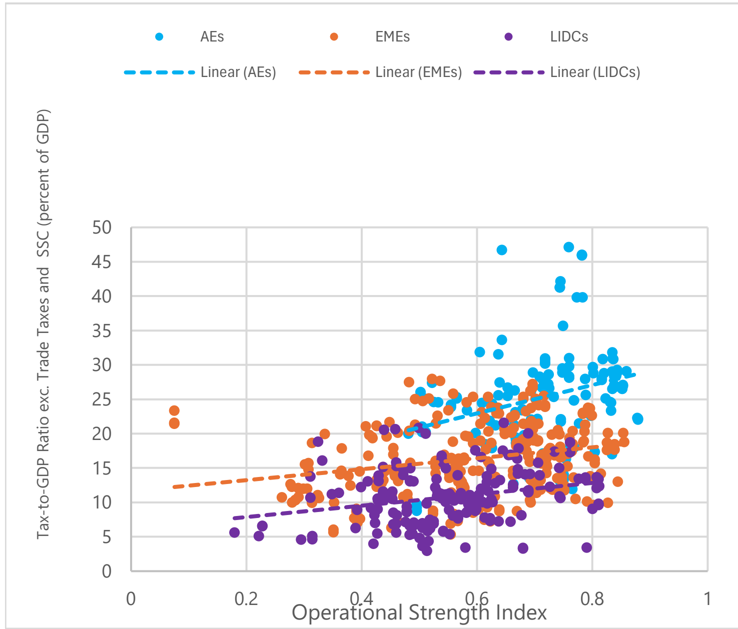
Source: Baer and others (2025).

31. Comprehensive improvements in operational strength of the RA can deliver substantial and lasting gains in revenue collection—especially in EMEs. Drawing on ISORA data, Chang and others (2020), Adan and others (2023), and Atsebi and others (2025, forthcoming) develop an operational strength index (OSI) to explore the potential gains from strengthening revenue administration. Figure 14 shows that the OSI used in Atsebi and others (2025)[28] is positively

[28]The OSI is based on nine ISORA sub-indices reflecting specific tax administration practices (both administrative and operational) as well as the structural foundations (laws, regulations and policies) that underpin those practices. The

correlated with tax-to-GDP ratios. This holds particularly in countries with strong institutions and governance; the correlation is weaker in countries with a large informal sector or where financial development is weak. Among the nine ISORA sub-indices, compliance risk management, digitalization, and third-party data show the strongest links to tax revenue. The analysis in the three studies suggests that countries that improve their OSI from the 40th to the 60th percentile—roughly covering three-quarters of the gap between the average OSI in low-income countries and advanced economies—can see tax revenue increase by 1–2 percentage points of GDP, with somewhat larger effects found for developing economies (Figure 15). Event studies for specific country reforms in Adan and others (2023) also reveal that comprehensive and sustained reforms yield rising revenue over time, up to 2-3 percent of GDP after the sixth year of implementation. It confirms that revenue administration reforms take time to bear fruit in terms of revenue mobilization, but the ultimate impact can be sizeable. In addition, these studies highlight that revenue administration reforms are most effective when implemented as part of a well-designed, properly sequenced, and integrated package.

Figure 14. Tax-to-GDP Ratio and Operational Strength Index (Years: 2015 to 2017, and 2022)

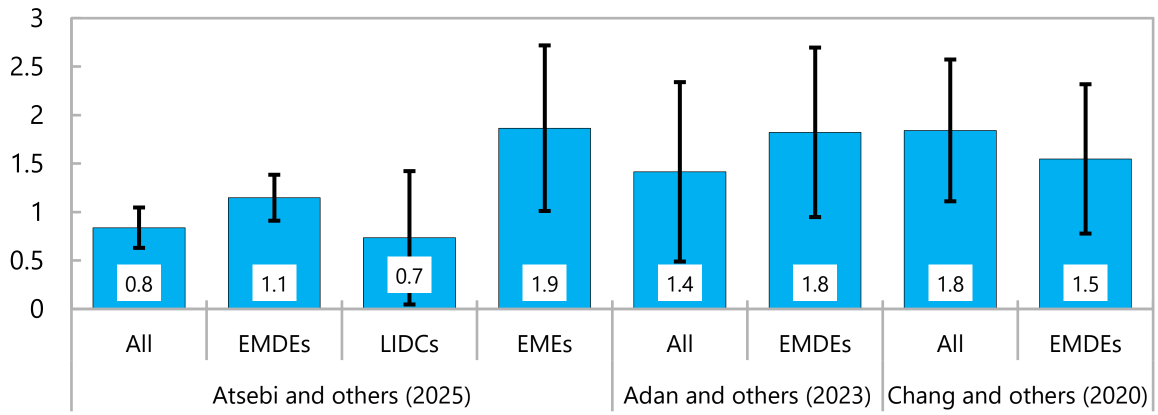


Source: Atsebi and others (2025); ISORA 2023.

Note: This chart illustrates the correlation between tax administration strength and tax revenue. It does not account for other potential drivers of tax revenue, such as tax policy, macroeconomic conditions, or structural factors.

nine indices are: (i) Compliance Risk Management; (ii) Use of Third-Party Data; (iii) Degree of Digitalization; (iv) Service Orientation; (v) Public Accountability; (vi) Autonomy; (vii) Large Taxpayers Office and High-Net-Worth Individuals; (viii) Tax Enforcement; and (ix) Human Resources Management and Development.

Figure 15. Estimates of Revenue Yields from Reforms in Tax Administrations (Percent of GDP)

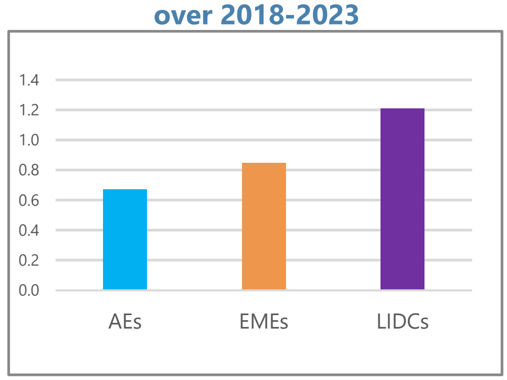


Sources: Atsebi and others (2025, forthcoming); Adan and others (2023), and Chang and others (2020).

F. Measuring Efficiency

32. Costs of collection are significantly higher in LIDCs relative to AEs and EMEs. ISORA provides comparable data[29] on the operating expenditure of tax administrations, expressed as a percentage of total net revenue collected. Figure 16 shows average operating expenditure in LIDCs of 1.21 percent of total net revenue, which is nearly double that of AEs at 0.67 percent, with EMEs positioned in between. This mainly reflects the low revenue collection of tax administrations in LIDCs, rather than high operating expenditure per se. Indeed, expressed as a percentage of GDP, operating expenditures are similar between the three groups of countries. By comparison, the International Survey on Customs Administration (ISOCA) 2016 indicated average customs operating expenditure was higher at approximately 2.65 percent of revenue collected by the customs administration (and 0.81 percent of total net revenue). This may be because customs

Figure 16. Operating Expenditure as Percent of Total Net Revenues, Median over 2018-2023



Source: ISORA 2024.

[29] The data are based on the response to a detailed question using in ISORA. Given the differences between countries' tax administration design and organization, they may reflect differences between RAs in administrative scope, taxes collected and size. Furthermore, RAs operating within finance ministries, rather than as semi-autonomous agencies, may not identify all operational costs.

administrations generally require higher operating expenditure for sophisticated operating technology used, such as cargo scanners and laboratory equipment.

33. The marginal return on investment (ROI) in tax administration in AEs can be more than 10 times the amount invested.[30] The ROI is measured as a fiscal return, i.e., the additional revenue collection induced by an increased investment in compliance improvement initiatives such as process improvement, taxpayer services, training, data acquisition, and enforcement activities. Several studies have measured this ROI. For example, the United States Congressional Budget Office (2020) estimates that a $20 billion investment in the Internal Revenue Service in the US could raise $61 billion over a 10-year period, i.e. an ROI of 3:1. Sarin and Summers (2020) argue, however, that this is likely a significant underestimation as it ignores behavioral responses from increased deterrence. They find that a plausible estimate of the ROI would be closer to 10:1. The Australian Taxation Office achieved an overall actual ROI of 12.9:1 on its 2023-24 GST compliance strategy. The strategy had five components covering registration, preventative actions, filing improvements, corrective audits and maximizing debt collection. Each component was measured separately with the ROI for debt collection being 76.4:1 (ATO 2025). The Canada Revenue Agency (2021) estimates an average ROI of 6.84:1 for past investments, while the New Zealand Minister of Finance expects an 8:1 ROI (New Zealand Budget 2025). It should be noted that as tax compliance gaps are reduced, the ROI will diminish over time. Yet even the AEs above are estimating sustained ROIs of at least 3:1 over a 5-to-10-year period. For EMEs and LIDCs, we are not aware of reliable ROI estimates. On the one hand, they could be larger given the much larger tax compliance gaps in these countries. On the other hand, achieving a high ROI will depend on the quality of the institutional framework, which varies between countries.

34. Estimates of the costs of tax compliance vary between taxpayers and countries and rise with the complexity of tax design. Several studies highlight that compliance costs—time, money, and effort spent on tax-related activities—can be substantial. A review by Eichfelder and Vaillancourt (2014) reports that the compliance costs typically range between 2 and 5 percent for revenue collected from individual taxpayers. For small businesses, they report a wide range of estimates, with most below or around 1 percent of turnover. However, some outliers suggest costs can well exceed that. For medium-sized and large firms, the costs of compliance are considerably smaller, usually less than 0.1 percent of turnover. This suggests a large fixed-cost component of tax compliance. Compliance costs also depend on the complexity of the tax system, frequency of changes, and taxpayer knowledge. Most RAs make significant strides in taxpayer service channels to make compliance easier and less expensive for taxpayers.

35. Compliance costs from customs compliance can be inferred from time release studies (WCO, 2025). These costs arise, for instance, when goods are delayed at border posts. Delays such as ships held up at ports or trucks unable to proceed promptly may result in product spoilage or dissatisfied importers and exporters. In some cases, these stakeholders may attempt to recover their

[30] There is not a single international standard for calculating ROI in revenue administration compliance activities, e.g. in terms of the number of years after which revenue effects are measured or whether and how to include indirect effects. However, each of the countries referenced here has a robust external scrutiny of their financial accounting processes giving confidence that the calculations are defensible.

costs through non-compliant practices. These studies also suggest that electronic 'single window' systems significantly reduce release times compared to paper-based systems, pre-arrival processing speeds up clearance, risk-based inspections improve efficiency, and publishing time-release studies helps drive reform.

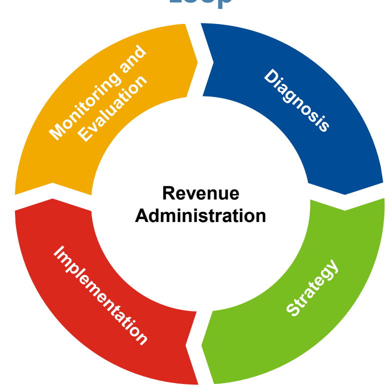
HOW TO STRENGTHEN REVENUE ADMINISTRATION IN DEVELOPING COUNTRIES

Reform strategies to improve the effectiveness and efficiency of revenue administration should be tailored to country circumstances, capacity, and needs. In the short term, targeted interventions can promote tax compliance, e.g., through incentives for voluntary compliance, expanding third-party reporting, and improved risk-based auditing practice. Larger and sustainable improvements call for a structured and comprehensive medium-term approach to manage the myriads of institutional reforms. Simpler targeted approaches might be more feasible in fragile and conflict states and in small developing states. This section briefly discusses how the reform process to strengthen revenue administration can be designed and managed, elaborates on some common priorities, and references successful examples.

36. In the short run, countries can consider targeted interventions in compliance management to reap quick revenue gains based on their capacity. Advancing CRM is often a short-term priority to improve the effectiveness of revenue administration at a relatively low cost (a "low-hanging fruit"). By encouraging administrations to prioritize the most significant revenue risks, CRM can help optimize the allocation of limited resources and promote voluntary compliance. The approach is adaptive, data-driven, and responds to evolving risks across different taxpayer segments, economic conditions, and technologies. For LIDCs, CRM may start with simple taxpayer segmentation focusing on a few high-value taxpayers; in somewhat more advanced EMEs, CRM could be enhanced by exploiting new opportunities for third-party reporting, such as from intermediaries (banks and telecommunication companies); AEs might look at third-party reporting from more sophisticated data sets, including for use in predictive behavioral analysis.

37. In the medium-term, more sustained improvements call for a comprehensive, tailored, and sequenced reform approach—and one that is sufficiently agile and resilient to cope with change. The approach generally follows the four steps distinguished in Figure 17: diagnosis – strategy – implementation – monitoring/evaluation. After diagnostic analysis of the revenue administration framework, a strategy should be formulated to guide reform. Progress with implementation should be monitored and evaluated on a regular basis, which may lead to adjustments in the strategy and its implementation as needed. Thus, a

Figure 17. Continuous Improvement Loop



continuous improvement loop might occur between the four steps. Indeed, revenue administration reform is not once and done. It needs to be agile, with flexible and rapid responses to emerging risks and opportunities. For example, responding to a natural disaster or a pandemic may necessitate a swift change to the strategy or a revised timeline.

A. Diagnosis

38. A reform strategy should be grounded in an adequate diagnostic assessment of the current situation to help understand the relative strengths and weaknesses. International organizations like the IMF and other development partners can support this, using a variety of tools and frameworks, as outlined above and in Box 2, as well as in the companion G20 report by the partners of the Platform for Collaboration on Tax (2025). Diagnostic indicators that were discussed in the previous section suggest that many developing countries suffer from institutional weaknesses across the board. However, care needs to be taken to determine which diagnostic tool is most appropriate. It is important for the RA that its focus appropriately and timely shifts towards the strategy and implementation stages of reform.

B. Strategy

39. After analyzing the diagnostics, a strategy for the medium term should be formulated to guide the reform process with adequate priorities and sequencing. This could be based on the medium-term revenue strategy (MTRS) approach, developed by the partners of the PCT (Figure 18). The MTRS is a country-owned, whole-of-government approach that recognizes the importance of the link between taxation and the spending side of the budget. It also emphasizes the criticality of sustained political commitment and the coordination of external support, as well as embracing the tax systems approach mentioned earlier, i.e., stressing the close linkages between tax policy, revenue administration, and the legal framework as components of a unified system. The importance of sustained political commitment cannot be overstated. Even where ministers change or governments change, ongoing commitment to a MTRS gives certainty and transparency of the reform path for all stakeholders. The MTRS approach has helped shape reform agendas in many developing countries and is currently being updated by the PCT partners, based on the experience so far.

Figure 18. Medium-Term Revenue Strategy

40. Where an MTRS is not feasible, such as in some fragile and conflict states or small developing states, a simpler strategy focused on sequenced CRM seems more appropriate. For these countries, incremental short-term transactional changes are more manageable than longer-term transformational reforms. The process is nevertheless the same: measuring the current state of the revenue administration framework (tax gaps, performance outcomes and operational effectiveness) through simple diagnostic tools, then diagnosing the problems, and strategizing an implementation plan that best uses the skills, technology, and financial resources available.[31] Monitor progress and adapt as successes are achieved and weaknesses are identified. Rinse and repeat.

C. Implementation

41. Implementation requires strong leadership, management, and commitment to achieve reform goals, supported by adequate resources. Committed and stable leadership is essential to effectively manage change, while building trust among stakeholders, taxpayers, and staff. Leadership development programs can equip revenue administration management with the skills to deal with complex challenges, with a particular focus on areas such as effective communication, change management, conflict management, and performance management.[32] To sustain public support for the reform, integrity, transparency, and public trust in revenue administration are vital. It requires rules-based decision-making with limited administrative discretion. Transparency and accountability should be advanced by publicizing revenue outcomes and operational efficiency, thus showing the public how public resources are used. Collaboration and regular communication among tax and customs administrations, with other government bodies, and international partners helps build understanding of the reform program and its impacts. This can further reinforce transparency and trust.

D. Monitoring/Evaluation

42. Regular monitoring and evaluation to measure progress can help identify the need for modifications of the strategy and its implementation. Monitoring and evaluation should be a routine part of any RA to promptly identify deviations from the plan and make timely modifications to ensure milestones and performance indicators are met. Monitoring can also be based on the same diagnostic tools as the ones used in step 1 (diagnosis), such as a repeat TADAT assessment, or an interim self-assessment, or measuring progress in compliance gaps. Ex-post impact studies can further identify what works under what circumstances so that reforms can be refined or scaled up. Also, changes in the external environment, such as new ICT and AI tools, new international guidelines or cooperation agreements, and developments in the digital economy, may require adjusting the strategy and its implementation. Hence, being agile is key.

E. Successful Cases

43. While sustained comprehensive reform can be difficult, several successful cases demonstrate that it is possible. Box 5 contains case study vignettes for Cabo Verde, Guinea-Bissau, Jamaica, Kosovo, Mongolia, Madagascar, Palau, and Sri Lanka, showing a range of shorter- and longer-term reforms across EMEs, LIDCs, SDS, and FCS that have come along with material tax-to-GDP improvements. What these successful reforms have in common is sustained political

[31] The reverse gap methodology for VAT compliance gap estimation uses indirect techniques suitable for countries where high-quality data is not available, see Baer et al (2025).

[32] IMF has developed an adaptive leadership course for RAs, which has been delivered at regional and country levels, with around 300 officials trained from both tax and customs administrations.

commitment, strong leadership, ample stakeholder consultation, and transparent communication—all vital ingredients for success.

44. The most common priority areas for improving revenue administration are technology and human resource enhancements. Technology can strengthen core capacities in identification, detection, and collection and modernize core business functions, particularly taxpayer services. However, digitalization must be accompanied by staff changes and sustained funding investment to realize its full potential. In FCS, tailored reforms in taxpayer services supported by new technology are resilient to political and economic instability as these reforms tend to be irreversible and gain support from the tax community. Investing in skilled staff can enhance operational effectiveness and requires attracting and retaining specialized skills and continuous staff development. Improving compliance functions, people, and technology should still be accompanied by improvements in other hallmarks of effective and efficient revenue administration as, given complementarities, focusing only on one aspect without developing others will unlikely yield optimal results. Attention should therefore also be given to corresponding organization, governance, and the legal framework enhancements and to developments in the wider operating environment.

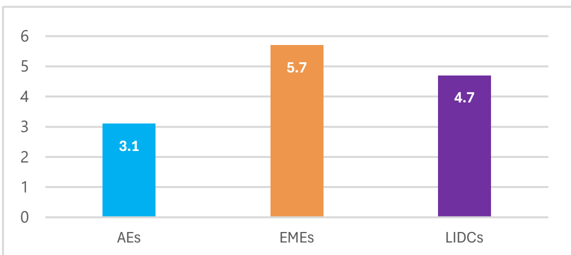
45. While the IMF and other providers of capacity development can play an important role in supporting countries to enhance their tax capacity, it is subsidiary and subordinate to the domestic political process. Revenue reforms are intrinsically political, with social preferences and economic, political and social circumstances varying across countries and over time. Reforms can therefore only be domestically determined and driven. Yet, technical advice, training and peer learning on policy, process design, institutional structure, reform management and leadership can help countries embark on a successful reform process, as the examples in Box 5 show. Especially in developing and fragile states, international support can thus be transformative in supporting the design, financing and implementation of reform.

Box 1. Customs Administration

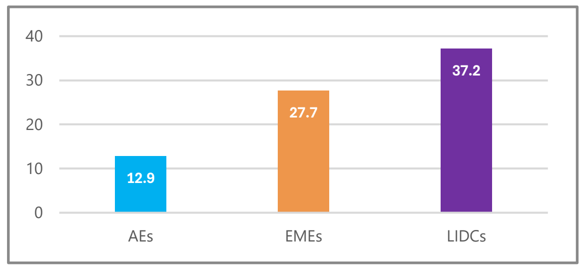
Customs administration is an important source of revenue collection for developing countries. VAT on imports represents, on average, around 50 percent of the total VAT collected. The revenue collected by customs in developing countries, on average, represents 37 percent of total revenue collection—or around 3-6 percent of GDP – see Figure 19a. Revenue from taxes collected at the border is particularly significant in fragile states (Baer and others 2021). In recent decades, tariff revenue in many LIDCs has been replaced by more efficient broad-based consumption taxes, such as VAT. Customs administrations also perform other functions in promoting economic development, such as facilitating trade, collecting essential statistics for formulating balance of payments, fiscal, and trade policies, ensuring compliance with security regulations, contributing to the fight against terrorism and money laundering.

Box 1. Figure 1. Customs Revenue Collections

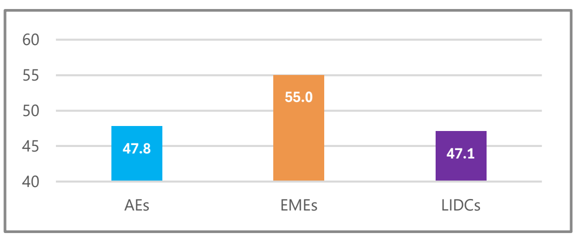
a. Customs Revenue (Percent of GDP)



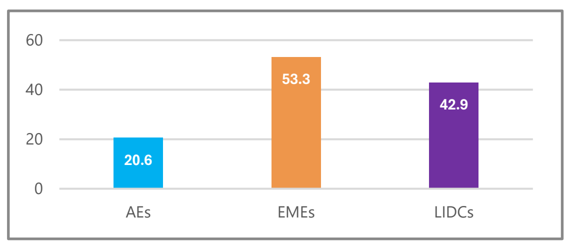
b. Customs Revenue (Percent of Total Tax Revenue)



c. VAT Collected on Imports (Percent of Total Customs Revenue)



d. VAT Collected on Imports (Percent of Total VAT)



Source: IMF staff calculation (Pérez Azcárraga and others 2022).

Cooperation between tax and customs administration is important. Both organizations must establish coordinated objectives and implement strategic initiatives such as: (1) a unique, up-to-date, and reliable tax identification number; and alignment between industry and commodity classifications (2) timely and efficient electronic cross-validation between customs declarations and basic tax obligations; (3) complementary strategies to monitor and control exemptions and special regimes; (4) comprehensive and coordinated VAT and excise management and compliance programs; and (5) complementary strategies to monitor and control imports and exports within certain industries, e.g. the extractive industry.

Box 2. Tools IMF Uses for Measuring Revenue Administration and Supporting CD

FITAS (Framework for International Tax Administrative Strengthening) is a structured tool developed by the IMF to help countries manage international tax by assessing their administrative capabilities and identifying CD opportunities. The tool addresses six categories of international tax administration: People, Systems and CRM, Tools, Data, Legal Framework, Organization Structure and Governance. The assessment helps tax administrations to develop prioritized action plans that address identified weaknesses and improve their overall effectiveness in managing international tax risks.

ICAS (International Customs Administration Survey) is a second iteration of the IMF customs survey to be launched early in 2026. The new survey focuses on key customs indicators related to the governance and functioning of customs administrations and is intended to make reliable and standardized data available to enable cross-country benchmarking and conduct analytical work. A companion to the ISORA survey (below), the ICAS will also help foster a data-driven decision-making culture for strategic planning and policy development.

IMF's Revenue Portal. The IMF's Revenue Portal provides a centralized online source for a broad range of products related to IMF's Capacity Development (CD) and research work, including reports, tools, working papers, technical notes, and other publications on priority revenue issues as well as training courses and seminars. See. https://www.imf.org/en/Topics/fiscal-policies/Revenue-Portal

IMF's TAYAT (Tax Administration Yield and Assessment Tool). The IMF's TAYAT, built on the ISORA dataset, benchmarks a country's tax administration performance over time and across comparators—allowing users to visualize strengths and weaknesses, overall and by structural foundation and practice, and relative to relevant comparators. This helps identify policy gaps relative to peers and reform priorities. The tool also enables users to systematically estimate the revenue yields from potential tax administration reforms and offers a back-casting feature that decomposes past changes in tax revenue into contributions from tax administration, tax policy, macroeconomic trends, and other structural factors—providing a clearer picture of reform effectiveness over time. The tool is being piloted in eight IMF member countries and will be released soon.

ISORA (International Survey on Revenue Administration) captures tax administrations' self-reported performance data to provide information on operational performance measurement and other measures such as organizational structure, functions and services, taxpayer segmentation, HR, resource allocation, and stakeholder interactions. The survey was launched in 2016 and now provides an extensive database of quantitative and qualitative tax administration information that can be used for benchmarking and systematic performance analysis. The results also give thematic insights on taxpayer service, digitalization, the use of CRM, trust in the tax administration, governance, and autonomy. The survey is administered by a partnership between the Asian Development Bank (ADB), Inter-American Center of Tax Administration (CIAT), the Intra-European Organization of Tax Administrations (IOTA), the IMF, and the OECD. See http://isoradata.org

***MTRS* (Medium term revenue strategy).** The backbone of the MTRS – developed by the partners of the Platform for Collaboration on Tax (PCT) – comprises four interdependent components: (i) a clear link with the development agenda and associated spending that would be possible with additional public finances; (ii) an integrated tax systems approach reflecting the linkages between tax policy, revenue administration and the legal framework; (iii) management of the political-economy of tax systems reform, based on a country-owned whole-of-government approach; and (iv) effective coordination among development partners supporting the reform process with capacity building. This comprehensive approach aims to increase the likelihood of boosting DRM success as part of the overall development agenda. See. https://www.tax-platform.org/publications/mtrs

Box 2. Tools IMF Uses for Measuring Revenue Administration and Supporting CD (concluded)

RA-GAP (***Revenue Administration Gap Analysis Program).*** Tax gaps estimated using the IMF's RA-GAP approach provide a comprehensive analysis of the value of tax revenues foregone through non-compliance. Gap assessments also contribute to transparency by providing a strategic performance indicator for tax administration. The gap assessment program tools cover VAT, CIT and PIT gaps. See https://www.imf.org/en/Capacity-Development/Training/ICDTC/Search?sortby=Relevancy&sortdir=Descending&keywords=RA-GAP

RAGIA (Revenue Administration Governance and Integrity Assessment Tool). The RAGIA, (currently being piloted) highlights governance and integrity issues in tax and customs administrations. An assessment may not demonstrate evidence of improper or corrupt conduct but will highlight vulnerabilities and inform discussion on measures to reduce vulnerabilities and the likelihood of integrity and governance failures.

TADAT (Tax Administration Diagnostic Assessment Tool) measures the effectiveness of a tax administration system against international good practices in nine key performance outcome areas (POAs) covering systems and processes to achieve the integrity of the taxpayer base, effective risk management, support for voluntary compliance, timely filing of tax declarations and payment of taxes, accurate reporting in tax declarations, effective tax dispute management, efficient revenue management and accountability and transparency. Assessments help countries identify the relative strengths and weaknesses of their tax administrations, serving as a basis for a reform agenda to improve DRM outcomes. Collectively the results yield important insights into the relative strengths and weaknesses of tax administrations globally. See https://www.tadat.org/

VITARA (Virtual Training to Advance Revenue Administration), a joint initiative of the IMF, CIAT, IOTA, and OECD, launched in 2020, to develop a globally accessible, on-demand, and free online training curriculum on revenue administration topics. VITARA currently has 21 modules and 7 reference guides available in 4 languages and can be accessed in 175 countries. VITARA complements the founding organizations' CD and training efforts. See http://www.imf.org/en/Capacity-Development/Training/ICDTC/Search?sortby=Relevancy&sortdir=Descending&keywords=VITARA

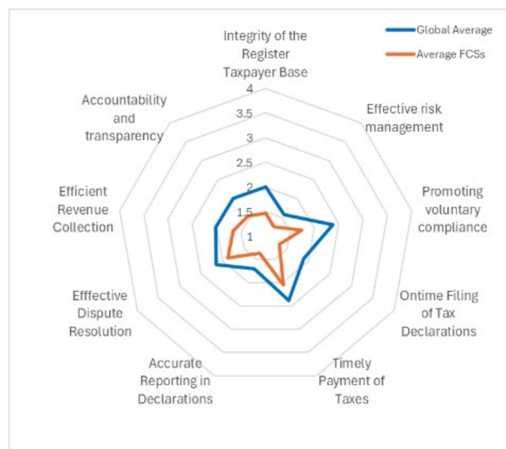
Box 3. Revenue Administration in Fragile and Conflict States (FCS)

Revenue administration in FCS encounters a unique and challenging environment, which may lead to different reform priorities compared with those in non-FCS countries (Akitoby and others, 2020). Externally, FCS face an unstable political environment and increased uncertainty of revenue collection. There is frequently competition between states and non-state armed groups (particularly in borderlands). Internally, revenue administrations are often exposed to a manual operating environment, with limited data availability, outdated technology, weak HR policies and procedures, and lack of a reliable taxpayer base. This greatly undermines the effectiveness and efficiency of revenue administration. SDS face similar challenges to FCS albeit without the conflict. SDS challenges are exacerbated by their geographic size, limited economic diversification, lack of scale of economy, and exposure to natural disasters.

Customs administration is often critical for FCS, where it often remains one of the few functional and unified public institutions. Basic customs revenue collection can be easier to manage in FCS than domestic revenue collection given the relatively few border collection points. Further, in FCS, where state legitimacy is often severely degraded, reinforcing customs administrations also helps restore the legitimacy of the state whilst also supporting short-term budgetary impacts (Cantens and Raballand 2021).

Tax administrations in FCS lag in all areas of performance. TADAT data shows tax administrations in FCS lag in all performance outcome areas, with the largest differences in the integrity of the taxpayer register, support for voluntary compliance, on-time filing, and accountability and transparency (see Figure 20). While there are performance gaps in all the aspects of tax administration, the differences are most pronounced in some areas including: the adequacy of information; scope, timeliness, and accessibility of information; the extent of electronic filing of tax returns; mechanisms to ensure the integrity of personnel; and publication of financial and operational performance.

Box 3. Figure 1. Average TADAT Scores Globally vs. FCS



Source: Acedo and others (2024).

Poor legal frameworks and limited governance hamper FCS RAs. Many FCS have poor legal frameworks, including outdated tax and customs laws, and weak regulations for collection, enforcement and penalty procedures. ISORA data suggests many FCS have no governance framework, no strategic, digitalization and operational plans, and no service delivery standards. FCS also score lowest on autonomy and integrity, limiting their ability to improve internal operations closer to international good practices, (See: Governance Indicators in Figure 7). Yamou and others (2024) noted the significant impact negative perceptions of integrity can have on VAT efficiency and thus the importance, in the face of fragility, of placing a high importance on reforms that help improve citizens' perceptions of integrity.

A tailored "small steps" reform strategy may be more appropriate. Based on gaps identified from the diagnostic tools and CRM analysis, reform priorities for FCS should ideally focus on securing the compliance of the largest taxpayers and strengthening the enabling framework that underpins compliance improvement initiatives. These include updating the legal framework to support tax and customs operations, using digital technology to support services that encourage voluntary compliance, developing or recruiting skilled staff, and implementing transparency and integrity measures to restore trust. Data collected from taxpayers and third parties and data shared between government agencies will enable tailored and targeted compliance

Box 3. Revenue administration in Fragile and Conflict States (FCS) (concluded)

improvements with taxpayers' core obligations. Given the challenging environment in which FCS operate, a gradual "small steps" approach—rolling out and piloting selected initiatives in high potential taxpayer segments—will likely be most effective.

Box 4. Empirical Studies on Tax Compliance Using Administrative Taxpayer Data

A growing literature uses taxpayer data to assess the effects of administrative interventions on tax compliance, revenue collection, and taxpayer behavior—often based on experimental research designs. This yields critical insights into the importance of, among others, information reporting, audits and digitalization. This box discusses some important findings.

Third-party reporting and withholding. There is robust evidence of deterrent effects of third-party reporting to enhance taxpayer compliance. In Denmark, income subject to third-party reporting—such as wages—is reported almost fully accurately, while self-reported income—like from self-employment—is substantially underreported (Kleven and others 2011). In Uganda, broadening reporting to include mobile money providers and other financial intermediaries improved compliance among small and medium-sized firms (Musimenta 2020). In VAT, third-party cross-checking has effectively reduced underreporting of sales in Chile and Ecuador (Pomeranz 2015; Carrillo and others 2017). However, incentive schemes encouraging consumers to report third-party transactions, such as lotteries or rebate programs, have yielded mixed results on revenue, partly reflecting the cost of these incentive schemes themselves and potentially indicating collusive behavior between buyers and sellers (Naritomi and others 2025). Third-party withholding can further strengthen compliance. For example, in Costa Rica, credit card company withholding raised aggregate sales tax revenues by 8 percent (Brockmeyer and Hernandez 2016).

Audits and enforcement. Empirical studies on the deterrence effect of audits produce robust evidence. In Denmark, audits significantly increased compliance of self-reported income (Kleven and others 2011). In the US, this effect is found to be particularly pronounced among higher-income individuals (Slemrod and others 2001), while in the UK the effect on tax payments lasted several years following audit interventions (Advani and others 2023). For Rwanda, Kotsogiannis and others (2024) find that the sustainability of the impact only holds for comprehensive audits among firms, not for narrow-scope audits that can actually have an opposite effect. This aligns with other evidence suggesting that audit strategies may decrease voluntary compliance over time as audited taxpayers become familiar with them (Lederman 2018). Audits for companies have also shown positive spillover effects on other firms within the same network (suppliers, clients), reflecting broader deterrence effects (Boning and others 2020). In Spain, higher audit probabilities for large taxpayers led firms to underreport income to avoid crossing the large taxpayer unit threshold (Almunia and López-Rodríguez 2018).

Digitalization. Recent studies indicate that digital technologies—including e-invoicing, e-filing, e-payment, electronic fiscal devices—can significantly improve tax compliance, although success depends on other enabling factors (Okunogbe and Santoro 2022). In Brazil, the combination of electronic invoicing and consumer reporting incentives resulted in more accurate sales reporting (Naritomi 2019). Santoro and others (2022) find that e-filing in Eswatini increased reported taxable income by 4 percent, although effects on revenue were unclear due to lack of enforcement. Bellon and others (2022) report that electronic fiscal devices in Peru increased reported firm sales by 5 percent in the year following adoption, with positive spillovers to other firms observed in subsequent analysis (Bellon and others 2023). Kotsogiannis and others (2025) find that e-invoicing improved VAT payments by firms in Rwanda primarily through improved audit efficiency—pointing to interactions between digitalization and enforcement efforts. Mascagni and others (2021) find that digitalization induced a large increase in reported sales in Ethiopia. Yet, they emphasize that the success of digitalization initiatives hinges on factors such as institutional capacity, taxpayer trust, and the seamless integration of technology into existing workflows. Subsequent reporting by IMF sources in Ethiopia is that digitalization has also increased the accuracy of reported tax data allowing easier reconciliation between VAT and profit reporting. Digitalization can also boost property tax revenue, as emphasized by Prichard and others (2017).

Box 5. Indicative Successful Revenue Administration Reforms – Selected Examples

This box provides a brief summary of some successful revenue administration reforms in a diverse set of countries. While there may have been other reforms during the same period, such as changes in tax policy design or in general institutions, the focus here is on revenue administrative reforms such as digitalization of the tax or customs administration, improved governance, strengthened leadership, process improvements, staff development and training, and stakeholder engagement. We also illustrate how these countries have used diagnostic assessments and monitoring and measurement to shape their reforms. In each case, the RA sustained their effort over several years. Although we cannot infer a causal impact, the administrative reforms in each of these countries have been associated with measurable improvements in revenue mobilization. The changes in tax-to-GDP ratios below are those reported by the respective RAs.

Cabo Verde

SDS	Period: 3 years (2022-2024)	Tax to GDP increase (percentage):	**2.6**

The Cabo Verde revenue administration (DNRE) embraced digitalization, including electronic invoicing, process reengineering to remove paper-based processes, automated penalties and digital notifications, and an automated VAT audit system. TADAT was used to identify areas for further strengthening and repeat RA-GAP studies were used to validate the reduced tax gaps and revenue performance improvements.

Guinea- Bissau

FCS	Period: 3 years (2021-2023)	Tax to GDP increase (percentage):	**1.7**

A shift towards digitalization commenced during the COVID-19 pandemic, by enabling e-filing and e-payment. This digitalization trend has progressively expanded, now including electronic notification (with legal effect) to taxpayer e-mail boxes. Building on increased use of technology, data is now gathered from a wider variety of third-party sources and used for data-matching with other internal and external data.

Jamaica

EME	Period: 8 years (2015-2022)	Tax to GDP increase (percentage):	**4.6**

Tax Administration Jamaca (TAJ) focused on improved taxpayer services to support voluntary compliance in the form of e-filing, e-payment and a customer relationship strategy. Expanded access to over 100 sources of third-party data was also used for automated cross-checking, and to assure voluntary compliance. Repeat TADAT assessments were used to identify outcome improvements, and where further development was needed.

Kosovo

FCS	Period: 4 years (2019-2022)	Tax to GDP increase (percentage):	**2.0**

A strong management commitment to implement a CRM approach led the Tax Administration of Kosovo (TAK) to prioritize establishing a CRM unit, training staff, revising internal processes, making ICT resources available and securing data from a range of third parties. Analysis with the TAYAT identified that strengthening CRM accounted for over half of the improved tax-to-GDP performance.

Box 5. Indicative Successful Revenue Administration Reforms – Selected Examples (concluded)

Madagascar

LIDC	Period: 2 years (2023-2024)	Tax to GDP increase (percentage): **TBD**

The Malagasy Customs Administration (MCA) is building on two years of strengthening its digital capabilities. From early 2025 the MCA launched its artificial intelligence (AI) capability to undertake dynamic risk and fraud detection. These reforms build on sustained leadership commitment to partner with the Korea Customs Service to install a data center, and recruit and train data scientists and customs officers in a dedicated AI and data analytics team. MCA frontline inspectors show increased confidence in the system as detection rates increase, and false positives decline.

Mongolia

EME	Period: 5 years (2019-2023)	Tax to GDP increase (percentage): **5.4**

The Mongolian Tax Administration (MTA) leadership committed to improve use of technology, implementing e-filing, e-payment and a full fiscalization system supported by QR[1] codes and a consumer mobile phone app. The increased access to transactional data helped drive CRM, supported by machine-learning analytics. Tax gap and TADAT tools were used to assess progress, and subsequently senior leaders studied the VITARA module on strategic management.

Palau

SDS	Period: 5 years (2020-2024)	Tax to GDP increase (percentage): **4.7**

Palau, with a population of about 18,000 people has a revenue administration with only 25 staff. Strong commitment by the Government, strong leadership in the tax administration and international support led to the successful reform to implement a broad-based Goods and Services Tax. VITARA and the content of the TADAT Field guide have been adopted as staff training resources. Regional leadership is now being shown as they share their journey of success and challenges with regional peers.

Sri Lanka

EME	Period: 4 years (2021-2024)	Tax to GDP increase (percentage): **4.7**

A TADAT assessment for the Inland Revenue Department (2023) and a Customs Diagnostic for the Customs Department (2024), established performance baselines and identified areas for improvement. Both agencies have made notable strides in reform, especially in integrity measures and risk-based compliance. Strong government and political commitment, and effective organizational leadership have underpinned the reform efforts.

[1] Quick Response code, a type of two-dimensional matrix barcode.

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