2023 ATI General Assembly

Technical session: Using tax gap estimation towards improving effectiveness of revenue administrations

Day 3 | 22 June 2023 | 09:00 – 12:00 (GMT+2)

Background

In order to maintain a cost-effective tax system, governments need to reduce uncertainties about its actual performance. One of the most important tools in reducing those uncertainties is the measurement of the 'tax gap'. The tax gap could be broadly defined as the difference between potential revenue from underlying economic activities and actual revenue. Under this broad definition, the tax gap can be decomposed into two main components:

- the tax **compliance gap**, which is the amount of revenue lost by the government due to weakness in tax administration and enforcement, i.e. tax avoidance, tax evasion, non-payment, and errors in calculation of taxes; and
- the tax **policy gap**, which is the impact of policy choices and includes non-taxable activities excluded by law or policy (tax efficiency gap) and discretionary tax exemptions / expenditures (tax expenditure gap).

Tax gap analysis offers tax administrations, policy makers, and their stakeholders with a measure of the amount of tax revenues lost or forgone from various types of taxes. Conducting a tax gap estimation enables authorities to make the better policy choices and developing effective tax administration programmes to mitigate key taxpayer compliance problems.[1] [2] However, tax gap measurement is more than just numbers steering tax policy and risk management. Tax gap measurement is a fundamental tool to achieve tax administration and tax policy accountability which, in this case, is not only an important indicator of good governance, but also carries a fiscal significance, since a good level of trust in the tax administration is easily translated to increases in voluntary compliance.[3]

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[1] IMF (2021). *The Revenue Administration Gap Analysis Program*. Available from https://www.elibrary.imf.org/view/journals/005/2021/009/article-A001-en.xml

[2] CEF (2020). Online course on 'Estimating the Tax Gap / RA-GAP - Measuring Tax Gaps and Why It Matters to Modernize Tax Administration and Understand the Informal Economy'. Available from https://www.cef-see.org/2020-tax-gap

[3] Durán-Cabré, M.; Esteller, A.; Mas-Montserrat, M.; Salvadori, L. (2019). The tax gap as a public management instrument: application to wealth taxes. *Applied Economic Analysis Vol. 27 No. 81*. Available here.

The estimation of the tax gap follows different procedures. The most widely used approaches for estimation are the **top-down** and the **bottom-up** gap estimates.

A top-down approach can allow for estimation of both the compliance and policy gap by using independent statistical data, typically from national accounts to estimate total potential tax, against which actual tax collections can be compared. In contrast, bottom-up techniques use data from tax returns, from enforcement audits and from surveys (random and non-random), as well as micro-simulations models to extrapolate potential chargeable revenue when sample data instead of population data is collected. As well, these can provide valuable insights into compliance behaviours and risks, and they can be used to test and interpret top-down estimates. While the bottom-up approach covers only specifically identified sources of the tax gap and could be costlier to execute comparted to a top-down approach, the bottom-up approach is recommended in the absence of independent source of data.[4]

With regard to the different type of taxes for which estimations exist, Value Added Tax (VAT), Personal Income Tax (PIT), and Corporate Income Tax (CIT) are some of the most common ones. The International Monetary Fund (IMF) with its Revenue Administration Gap Analysis Program (RA-GAP), for instance, assist revenue administrations of IMF member countries — including lower-income countries in Africa, Asia, and Latin America — in the estimation of tax gap and identification of the underlying causes of the gap, in particular for VAT.

For the case of **VAT gap**, the recommended RA-GAP approach is the top-down approach, being the main advantages of this technique that (i) it provides administrations with details of the nature of the tax gap, not just its size, by breaking the VAT gap down by sectors of activity in the economy, and by basic administrative functions; (ii) allows for a more precise modelling of the policy structure of a countries VAT; and (iii) allows for tracking an administration's efforts to close the gap over time.[5]

With respect to **CIT gap**, the IMF's RA-GAP methodology is the top-down approach, using existing macroeconomic data without additional costs of collection and suits initial evaluations efforts of countries with regard to overall CIT noncompliance.[6] Recent estimations, such as the one for Ghana[7] or for Zambia[8], use a bottom-up

[4] Hutton, E. (2017). *The Revenue Administration–Gap Analysis Program: Model and Methodology for Value-Added Tax Gap Estimation*. IMF Technical Notes and Manuals 17/04. Available here.
[5] Ibid.
[6] Ueda, J. (2018). *Estimating the Corporate Income Tax Gap: The RA-GAP Methodology*. IMF Technical Notes and Manuals 18/02. Available here.
[7] World Bank (2020). *Ghana Tax Gap Analysis*. World Bank, Washington, DC. Available here.
[8] Adu-Ababio, K.; Koivisto, A.; Lungu, E.; Mwale, E.; Msoni, J.; Musole, K. (2023). *Estimating Tax Gaps in Zambia: A Bottom-Up Approach Based On Audit Assessments*. WIDER Working Paper 2023/25. Helsinki: UNU-WIDER. Available here.

approach for estimating their CIT gap. Lastly, for **PIT gap**, a bottom-up approach is suggested by the IMF's RA-GAP in the absence of independent source of data.[9]

International institutions, such as the IMF, the World Bank, the Organisation for Economic Co-operation and Development (OECD), the African Development Bank Group (AfDB), the Asian Development Bank (ADB); development partners such as the European Union (EU); and international think tanks such as the United Nations University World Institute for Development Economics Research (UNU-WIDER)[10] have acknowledged the importance of tax gap analysis towards more effective and transparent revenue administrations while providing financial and/or technical support to developing countries in conducting tax gap estimations.

With regard to capacity building measures, the IMF provides customised training for tax administration experts on how to conduct the tax gap analysis. The RA-GAP's online course for the **VAT Gap Estimation Model (VGEM)** is an important programme in this regard. Other recent measures include the Centre of Excellence in Finance (CEF) on-site course undertaken in 2020, which built on the VAT gap methodology of the IMF's RA-GAP's, and the Intra-European Organisation of Tax Administrations (IOTA)'s 2022 online workshop discussing the use of tax gap estimation and its latest developments.

More generally, other organisations such as the West African Tax Administration Forum (WATAF) and the World Bank have enriched the resources available to partner countries connected to tax gap. WATAF developed a **Compliance Risk Management (CRM) Framework**[11] with the aim of delineating common language, methodology, and tools for establishing and implementing CRM programmes[12] that increase voluntary compliance and reduce tax gaps, and which could be customised and implemented by WATAF member revenue administrations. Likewise, the World Bank's **Dash Revenue Dashboard**, created as a tool for benchmarking tax policy performance, includes tax gap and aims to provide policymakers and researchers with necessary data and information to conduct a high-level analysis of a country's tax system.

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[9] Thackray, M.; Jennings, S.; Knudsen, M. (2021). *The Revenue Administration Gap Analysis Program: An Analytical Framework for Personal Income Tax Gap Estimation*. IMF Technical Notes and Manuals 21/09. Available here.

[10] UNU-WIDER is a blend of think tank, research institute, and UN agency funded by an endowment fund and additional contributions from Finland and Sweden. The Institute provides services going from policy advice to governments to freely available research.

[11] WATAF (2022). *Compliance Risk Management Framework for Tax Administrations in West Afric*a. Available here.

[12] WATAF highlights the goal of such a programme is to provide a systematic basis to accurately, consistently, and timely identify, analyse, prioritise, treat and monitor risks that pose the greatest threads to revenue administrations' goals and objectives.

The topic of tax gap analysis is relevant for members of the Addis Tax Initiative (ATI), and particularly for the fulfilment of **ATI Commitment 1** included in the ATI Declaration 2025, which points out that its members "*will enhance the effectiveness of partner countries' revenue administrations in curbing non-compliant behaviour by strengthening their capacities and capabilities, including risk management frameworks.*" As a result of this commitment, an indicator on the regularity of tax gap estimation for at least VAT, CIT, and PIT was included in the ATI Declaration 2025 monitoring framework, aiming to track the progress of ATI members towards increasing the effectiveness of revenue administrations in ATI partner countries.

According to the results of the most recent **2020 ATI Monitoring Report**[13] that includes the indicator on tax gap analysis, among ATI partner countries that submitted a response to the 2020 ATI Monitoring survey: (i) eight countries (Georgia, Kenya, Liberia, Madagascar, Mongolia, Paraguay, Rwanda and Sierra Leone) have undertaken tax gap analysis on VAT; (ii) three countries (Kenya, Liberia and Paraguay) have undertaken tax gap analysis on CIT; and one country (Liberia[14]) have undertaken tax gap analysis on PIT. The Philippines reported that it has recently undertook a comprehensive analysis of tax gaps to feed into the recently implemented Comprehensive Tax Reform Program, and in Sierra Leone a general tax gap analysis was undertaken by the National Revenue Authority (NRA) in 2016 and by the World Bank in 2020.

Overview of the technical session

The technical session will be held during the third day of the 2023 ATI General Assembly, on 22 June 2023, from 09:00 to 12:00 (EAT). The session will be structured in two main parts.

The first part of the session will focus on the basics of tax gap estimation, with focus on VAT, CIT and PIT: why it is important to perform a tax gap estimation, the different methodologies available for each one of the three types of taxes, including the advantages, disadvantages, and particular challenges of the different approaches — top-down and bottom-up techniques. The first part will also highlight best practices of tax gap estimations including both the policy gap and the compliance gap, as well as its usage for compliance risk management and for benchmarking purposes. This first part will be presented by experts from the IMF's RA-GAP, the World Bank, and WATAF.

The second part of the session will feature different experiences by selected ATI partner countries for tax gap estimation. It will include at least one case study in which

[13] To be published soon on the ATI website.
[14] Liberia has conducted a comprehensive VAT, CIT, and PIT tax gap analysis with the support of the AfDB.

real empiric data of tax gap estimation will be presented, outlining how recent developments and new technologies can contribute to achieving better tax gap estimations results. The second part of the session will also provide insights about the process and results of the collaboration with different supporting organisations and development partners. UNU-WIDER and the Zambian Revenue Authority (ZRA) will co-present their tax gap estimation report, setting the scene for deeper discussions among participants, and final presentation of cases from Kenya and Paraguay.

The technical session will be concluded by a summary of the results of the two sections, bringing together theory and practice, with a look to the future. This shall form the basis for a follow up discussion that will be scheduled next year.

Objectives

The main objectives of technical session 1 are to:

- increase knowledge of the existing methodologies for VAT, CIT, and PIT gap estimations in ATI partner countries by providing space for exchange between tax administrations, experts, and tax organisations, highlighting the importance of tax gap analysis for aspects such as compliance risk management and benchmarking tax policy and administration performance;
- dig deeper into practical experiences of ATI partner countries that have estimated tax gap for one or more tax types, with the aim of proving the necessary inputs for revenue administrations in partner countries (interested in) undertaking such an estimation, including potential collaboration with development partners, supporting organisations, and related stakeholders providing technical and/or financial support for this purpose; and
- contribute to the fulfilment of ATI Commitment 1, particularly to the increase of effectiveness of revenue administrations in ATI partner countries.

Preliminary agenda

Time	Item	Responsible	Method
09:00 – 09:10	Welcome and presentation of agenda	Moderator (tbc)	Plenary
09:10 – 09:40	Tax Gap Analysis: methodologies, opportunities, and challenges of VAT,	Miguel Pecho, IMF's RA-GAP	Presentation

	CIT, and PIT gap estimations in partner countries		
09:40 – 09:55	Approach to tax gap estimation and benchmarking possibilities	Silver Namunane, Wold Bank	Presentation
09:55 – 10:05	The nexus between CRM and tax gap	Mr. James Kerkulah, WATAF	Virtual presentation
10:05 – 10:20	Questions & Answers	Moderator (tbc)	Plenary
10:20 – 10:35	Coffee break	Everyone	Coffee + snacks
10:35 – 10:50	Tax gaps in Zambia: estimation of VAT and CIT gap using a bottom-up approach	Amina Ebrahim, UNU-WIDER & Jonathan Msoni, ZRA	Co-presentation
10:50 – 11:20	Deep dive: Based on the inquiry among the participants on whether their revenue administrations (RAs) has been involved or are interested in VAT, CIT or PIT gap estimation, the moderator will divide the group into three sub-groups for each one of the three types of taxes. These groups will discuss the following questions: • How often does your RA plan to / will estimate this tax gap? Which are / were the considerations for such a decision? • Which challenges can you foresee or did your RA already experience in the tax gap estimation process? How did you handle them? • Which are the reasons for your RA being or not being able to conduct tax gap estimation?	Moderator (tbc) / participants	Breakaway groups

11:20 – 11:50	Country experiences, including take-aways of discussion in breakaway groups: VAT Gap in Kenya CIT Gap in Paraguay PIT Gap in ATI partner country (tbc)	Joseph Sirengo, KRA Diego Domínguez, SET Paraguay Representative (tbc)	Presentations
11:50 – 12:00	Closing remarks and next steps	Moderator / ATI Secretariat	Plenary

Format

The technical session will last three hours and is targeted to technical staff within revenue administrations of partner countries. It will be held in a hybrid format and simultaneous translation from / into English, Spanish and French will be available. This technical session will be moderated by XX in person.