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ISORA 2016 Understanding Revenue Administration

William Crandall, Elizabeth Gavin, and Andrew Masters

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Acronyms and Abbreviations

CIAT	Inter-American Center of Tax Administrations
CIT	corporate income tax
FAD	Fiscal Affairs Department (of the IMF)
FTE	full-time equivalent
HIC	high-income country
HNWI	high-net-wealth individual
HR	human resources
IMF	International Monetary Fund
IOTA	Intra-European Organisation of Tax Administrations
ISORA	Interational Survey on Revenue Administration
LIC	low-income country
LMIC	low-middle-income country
LTO/P	large taxpayer office/program
OECD	Organisation for Economic Co-operation and Development
PAYE	pay-as-you-earn
PIT	personal tax income
SSC	social security contributions
RA-FIT	Revenue Administration Fiscal Information Tool

TADAT	Tax Administration Diagnostic Assessment Tool
UMIC	upper-middle-income country
VAT	value-added tax

Acknowledgments

This departmental paper presents the results of the International Survey on Revenue Administration (ISORA) deployed during 2016 and covering fiscal years 2014 and 2015. It is made possible by the participation of 135 tax administrations from around the world that provided data. This survey round (the data collection aspect) was a joint venture with the Inter-American Center of Tax Administrations, the Intra-European Organisation of Tax Administrations, and the Organisation for Economic Co-operation and Development. This departmental paper was authored by a team of staff and consultants from the IMF's Fiscal Affairs Department (FAD) led by Andrew Masters, and including William Crandall (consultant), Elizabeth Gavin, and Xavier Gomez-Maqueo (who provided research assistance). The paper benefitted from extensive assistance from Michael Keen. Staff in the revenue administration divisions of FAD and in the IMF's Regional Technical Assistance Centers were most helpful in assisting with the conduct of the survey.

The authors' views as expressed in this paper do not necessarily reflect the views of the IMF, its Executive Board, or IMF management. Errors and omissions are the authors' sole responsibility. It should be noted that summary or aggregated information presented in this paper is derived from data that is self-reported by participants, and as such may be subject to review and change without prior notice.

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Union; Germany; Republic of Korea; Kuwait; Luxembourg; the Netherlands; Norway; and Switzerland.

Further documentation, data, and information are available online through the Revenue Administration Fiscal Information Tool Data Portal at http://data.rafit.org.

Most of the data used in this departmental paper has been sourced from the ISORA 2016 database. Accordingly, where this is the case, no attribution is made in either figures or tables. Where data has been obtained elsewhere, the source is appropriately attributed.

Executive Summary

Background

The International Survey on Revenue Administration (ISORA) collects tax administration data from national or federal tax administrations. It surveys tax administration operations and other characteristics based on common questions and definitions agreed by four partner organizations: the Inter-American Center of Tax Administrations, the IMF, the Intra-European Organisation of Tax Administrations, and the Organisation for Economic Co-operation and Development. ISORA uses an online data collection platform (called Revenue Administration Fiscal Information Tool) developed and administered by the IMF.

A total of 135 tax administrations voluntarily participated in ISORA 2016, which collected data for fiscal years ending in 2014 and 2015. Partner organizations do not formally validate the data received, and as such, all information gathered by the survey should be considered as self-reported data. Participating administrations represent a significant portion of the worldwide economy (92 percent of global GDP), engage with a tenth of the world's population as active personal income taxpayers, and collect revenues annually of almost $10 trillion.

In this publication (*Understanding Revenue Administration—ISORA 2016*), results of the ISORA 2016 round are analyzed against three subject areas: (1) performance-related data, (2) profile data, and (3) administrative and operational practices.

These subject areas are generally compared against three groupings of the 135 participants: (1) small states (31 jurisdictions with a population of less than 1.5 million people and a mixture of higher and lower incomes), (2) lower-income jurisdictions (44), and (3) higher-income jurisdictions (60).

Highlights of the ISORA 2016 Analysis

1. Performance-related data (filing and payment, including electronic filing and payment; tax arrears and audit; disputes; cost of collection; tax administration resources)

- Small-state and lower-income jurisdictions generally lag behind higher-income participants in many areas.

  For example, *on-time filing rates* for value-added tax (VAT) and corporate income tax (CIT), and electronic filing rates:

	Value-Added Tax (percent)	Corporate Income Tax (percent)	Electronic Filing (percent)
Small States	81	40	58
Lower Income	84	72	49
Higher Income	90	81	89

- Higher-income jurisdictions have the lowest cost of collection (0.89 currency units to collect 100 currency units, versus 1.10 for lower-income and 1.92 for small-state) as they are better able to take advantage of automation and economies of scale.
- In some areas, the higher-income participants are not further ahead—lower-income jurisdictions report a debt-to-revenue ratio of 24 percent, whereas higher-income jurisdictions report 38 percent, although this may point to the inherent weaknesses in this measure as an indicator.
- In terms of the size of tax administrations, and with respect to efficiency, higher-income participants report some 700 active taxpayers per full-time equivalent, whereas the corresponding number for small-state and lower-income jurisdictions are, respectively, 120 and 35.

2. Profile data (institutional arrangements, scope, segmentation, legislative powers, management, human resources, compliance risk)

- Half of participating administrations (68 of 135) self-identified as semiautonomous organizations (8 small-state, 23 lower-income, 37 higher-income).
- About 36 percent of participants (49 of 135) are responsible for both tax administration and customs administration.
- In addition to core taxes (personal income tax, CIT, VAT, social security contributions), 66 percent of participants collect domestic excise taxes; 40 percent collect motor vehicle taxes; 46 percent are involved in real property taxes; 22 percent collect wealth taxes; 37 percent collect estate, inheritance, and gift taxes; and another 59 percent report collecting at least one other tax not included in this list.

- Noncore taxes, social security contributions, and nontax revenues account for close to 40 percent of all revenues for small-state jurisdictions, and about 30 percent for the others.
- By tax administration function, participants overall reported the following allocations of staff: front office functions (registration, service, returns, and payment processing)—about 30 percent of staff; back office functions (audit, verification, and enforced debt collection)—about 40 percent of staff; disputes (objections and appeals)—about 3 percent of staff; and other operational and support functions—about 27 percent of staff.
- More than 85 percent of respondents report having dedicated large taxpayer offices/programs.
- The higher-income group has 22 percent of employees aged 55 years or older. The comparable figures for small-state and lower-income participants are 12 percent and 10 percent, respectively.
- Overall, female staff make up 53 percent of tax administration employees, but only 40 percent of executives.
- Lower-income and higher-income jurisdictions are more likely to have a formal approach to identifying, assessing, and prioritizing key compliance risks across a range of tax administration functions than are administrations in small states.
- Across all groups, audit and verification activities are most likely to have formal compliance risk approaches (73 percent overall), whereas taxpayer service and payment processing are least likely (52 percent and 53 percent, respectively) to have formal compliance risk approaches.
- VAT fraud is a high priority for 70 percent of ISORA's participants. For lower-income jurisdictions, "preferential tax regimes and incentives" is a high priority focus area; for higher-income jurisdictions, "aggressive domestic tax avoidance schemes" and "the underground or cash economy" were identified as high priority focus areas.

3. Administrative and operational practices (four separate indices based on ISORA questions: [1] performance standards—a self-assessment of the extent to which participants have met standards; [2] management and human resources autonomy—measurement of the autonomy granted to tax administrations related to budget management and human resources; [3] public accountability—a measure of commitment to making information public; and [4] taxpayer service orientation—a measure of a participants' demonstration of taxpayer-centric planning and services).

- 51 percent of small-state and 52 percent of lower-income participants report "mostly meeting" their tax administration performance standards. The comparable number for higher-income jurisdictions is almost 70 percent.

- Not surprisingly, the self-identified "semiautonomous" tax administrations scored much higher on the management and human resources autonomy index than did the others—almost 90 percent versus 63 percent.
- On the public accountability index, which measures whether participants make public documents such as plans and annual reports, taxpayer rights, satisfaction surveys, and the like, as well as whether they have appropriate complaint mechanisms, small states scored 40 percent, lower-income participants 54 percent, and higher-income participants 60 percent.
- Gaps on the service orientation index were similar—a score of 50 percent for small states, 59 percent for lower-income jurisdictions, and 79 percent for higher-income jurisdictions.
- All four indices demonstrate a similar pattern, revealing that in general, administrations in higher-income jurisdictions are further ahead of small-state and lower-income jurisdictions in implementing a range of practices considered to be "good practice."
- Tax administrations that self-identify as semiautonomous also score higher on average on all four indices than do tax administrations that operate within a ministry.
- There are strong linkages between the service orientation index and the indices for public accountability and for management and human resources autonomy. A particularly strong correlation between service orientation and public accountability suggests both may be related to the degree of commitment by the administration's management to demonstrate accountability and responsiveness to taxpayers and citizens in general.

While ISORA 2016 is the first iteration of the new survey, it represents a significant improvement in coverage of administrations and completeness of responses from the forerunner surveys conducted by the ISORA partners in previous years. Participants can use ISORA data to compare themselves with peer organizations—this should always be done with caution and considering country context. Aggregated data, too, can provide useful baselines not only for participants but also for the calibration of other tools such as the Tax Administration Diagnostic Assessment Tool. Furthermore, ISORA data can be used to assist in identifying focus areas for technical assistance in tax administration.

ISORA 2018, covering fiscal years 2016 and 2017, is currently under way, and results should be available in the second half of calendar year 2019.

CHAPTER

1 Part 1: ISORA 2016—General Overview

Introduction

The International Survey on Revenue Administration (ISORA) is a survey collecting tax administration data from national or federal tax administrations. It surveys tax administration operations and other characteristics based on common questions and definitions agreed by four partner organizations: The Inter-American Center of Tax Administrations (CIAT), the IMF, the Intra-European Organisation of Tax Administrations (IOTA), and the Organisation for Economic Co-operation and Development (OECD). For the ISORA 2018 round of the survey (the next round), the Asian Development Bank is also using the shared survey as an affiliate of the ISORA partnership.

A jurisdiction's participation in this survey is voluntary. ISORA uses an online data collection platform (called Revenue Administration Fiscal Information Tool [RA-FIT]) developed and administered by the IMF.

A total of 135 tax administrations participated in ISORA 2016, which collected data for fiscal years ending in 2014 and 2015. These participating administrations represent a significant portion of the world-wide economy (92 percent of global GDP) and engage with a tenth of the world's population as active personal income taxpayers. Some key aggregated information related to tax administrations is set out in Table 1.

The breadth of coverage in ISORA 2016 also demonstrates the considerable institutional variation in the tax administrations participating in the survey. A survey of this nature must be able to accommodate the largest and the smallest tax administrations in the world and enable reasonable cross-country comparisons to be made. Examples of the differences in scale and resources are shown in Table 2.

Table 1. Key Aggregated Information from ISORA 2016[1,2]

Total Net Revenue Collected (US dollars)[3]	9,800,000,000,000
Operational Budget (US dollars)	108,000,000,000
Active Personal Income Tax and Corporate Income Tax Taxpayers	800,000,000
Value-added Tax Registrants	310,000,000
Audits Undertaken (excluding automated verification activities)	50,000,000
Administrative Reviews Resolved	4,700,000
Staff Employed	2,000,000
Complaints Received	537,000
Jurisdictions Participating in ISORA 2016	135

[1]ISORA respondents provide data on tax collections, budgets, and tax arrears in local currency. These have been converted to US dollars using averages over a calendar year of the IMF's standard daily conversion rates available from http://www.imf.org/external/np/fin/data/param_rms_mth.aspx.

[2]These are minimum values as some administrations did not supply all data.

[3]It should be noted that with respect to net revenue collected, only revenue collected by the tax administration has been included. In other words, any revenue collected by customs or any other agency has been excluded (for example, taxes on international trade, and value-added tax on imports).

Table 2. Variation among ISORA 2016 Participants

Indicator (2015)	Average of Five Largest Values	Average of Five Smallest Values[1]
Staff Employed	226,000	30
Citizens per Full-time Equivalent	44,000	637
Active Taxpayers per Full-time Equivalent	2,500	8
Active Corporate Income Tax Taxpayers	9,000,000	590
Value-added Tax Registrants	11,000,000	674
Personal Income Tax Returns Expected	55,000,000	346
Audit Interventions	3,300,000	63
Objection Cases on Hand at Year-end	73,000	1
Appeal Cases on Hand at Year-end	127,000	1

[1]Excludes zeroes and missing values.

Purpose of ISORA

ISORA is designed to gather tax administration data on a regular basis and from an IMF perspective to:

- Provide an improved focus on data management, performance measurement, and reporting by tax administrations internationally;
- Provide a larger set of comparable and standardized quantitative and qualitative tax administration information to improve advice and analysis, in areas such as:
  - Understanding historical performance;
  - Identifying trends and establishing baselines;
  - Flagging policy and administrative inefficiencies; and
  - Providing sufficient data to facilitate focused and in-depth research.

- Develop data and analyses that can improve cross-country comparisons;
- Assist in developing international revenue administration performance measurement and reporting standards;
- Improve the quality of revenue administration technical assistance to strengthen institutions;
- Provide necessary data to better calibrate other revenue administration tools, such as the Tax Administration Diagnostic Assessment Tool (TADAT); and
- Assist senior executives of revenue administrations in managing and evaluating their administrations' performance.

ISORA uses common questions and definitions developed by the partner organizations to ensure consistency and comparability. The survey collects information in three areas of tax administration: (1) performance-related data, (2) profile data, and (3) data on administrative and operational practices. It is critical to note that ISORA relies on voluntary participation and self-reporting by national or federal tax administrations. It is not an evidence-based undertaking.[1]

The result of ISORA is a database (an historical time series) that can be used for analytical and comparative purposes by international organizations and by survey participants themselves.[2]

History and Development of ISORA

Regular data collection on tax administration matters is not new. The OECD has been collecting tax administration data since 2004[3] using its own paper-based survey. The IMF began collecting similar information in 2012 with Round 1 of its RA-FIT, also a manual survey but using an Excel spreadsheet, covering some 86 countries. In 2014, the IMF launched Round 2 of RA-FIT, gathering data from 89 countries, this time using an online platform.[4] CIAT began publishing comprehensive tax administration data

[1]This is in sharp contrast to TADAT, which is a formal evidence-based tool to assess tax administrative performance against nine broad performance outcome areas that cover the entire range of tax administration operations, and the assessment is carried out in situ by persons certified in the TADAT methodology.

[2]The IMF's Staff Report *Current Challenges in Revenue Mobilization: Improving Tax Compliance* (IMF 2015c) points to the value of comparative data in enabling countries to improve their basic operations and implement approaches that grow tax compliance and hence revenue.

[3]OECD published a biannual Tax Administration Series with the results of their own survey, their most recent publication—*Tax Administration 2017: Comparative Information on OECD and Other Advanced and Emerging Economies*—is based on ISORA 2016 and covers 55 tax administrations. See http://dx.doi.org/10.1787/tax_admin-2017-en.

[4]The IMF published *Understanding Revenue Administration* in 2015 and *Understanding Revenue Administration Volume 2* in 2017 to present some of the aggregated data and related analyses and observations from RA-FIT Rounds 1 and 2, respectively.

on many Latin American countries in 2011 and joined IMF's Round 2 of RA-FIT in 2014.[5] IOTA gathers data regularly from its members for internal analysis and review.

In 2016, CIAT, IMF, IOTA, and the OECD concluded a memorandum of understanding to collect tax administration information, based on common questions and definitions and using the IMF's online RA-FIT platform.[6] The first result of this partnership is ISORA 2016, a single survey with a total of 135 participating tax administrations. While there is a single *data collection survey*, the *partner organizations* continue to produce their own analyses and contextualization of data in a manner that best meets the needs of their members.

ISORA 2016—Survey Metrics

As noted, there are 135 participating tax administrations in ISORA 2016.[7] All these tax administrations completed most of the information requirements for the survey. Six other administrations submitted the ISORA forms but were unable to complete a sufficient number of responses, or completed only one year, to qualify for inclusion in this round.

The geographic distribution of the 135 ISORA jurisdictions is shown in Figure 1.

The specific regional breakdown of the 135 participants by World Bank–defined Income Group[8] is shown in Table 3.

ISORA 2016 responses from low-income countries (LICs) are largely concentrated in sub-Saharan Africa, whereas Europe's responses are dominated by upper-middle-income countries (UMICs) and high-income countries (HICs).

As highlighted in the introductory section, the size of the institutions and jurisdictions served by ISORA 2016 varies considerably. Table 4 shows the distribution of ISORA 2016 participants by country size.

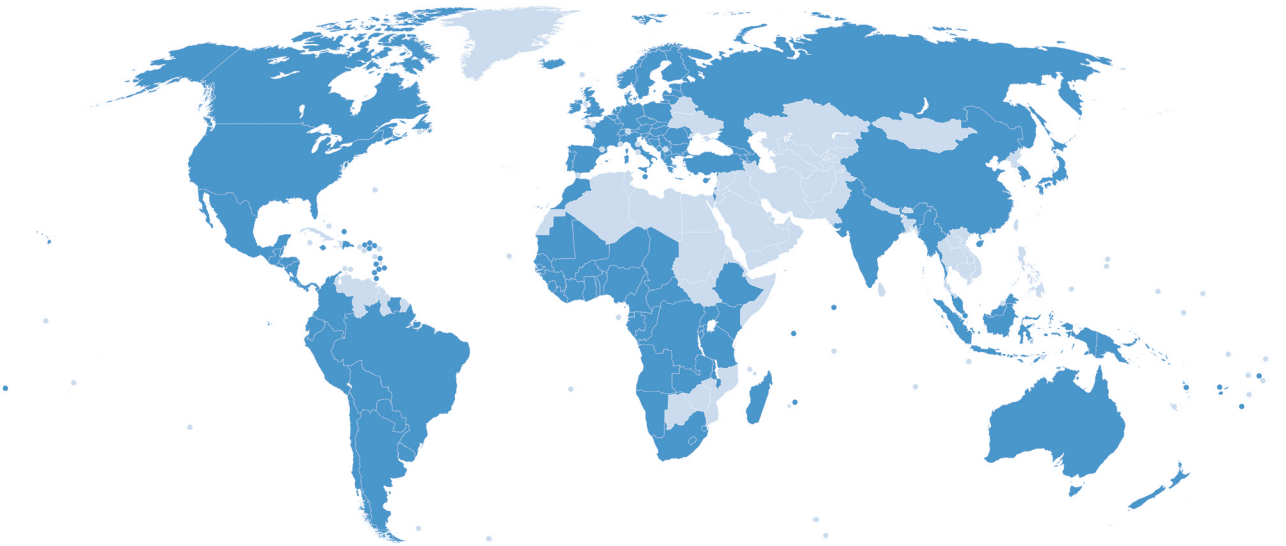
[5]CIAT's 2016 publication *The Revenue Administrations in Latin America and the Caribbean* was based on data collected through RA-FIT Round 2. Several CIAT working papers published in 2018 have used ISORA 2016 data.

[6]The use of the on-line platform for data capture improves data quality, through the implementation of consistency and completion checks as well as other validations of data entered by respondents.

[7]Not all participants are sovereign states, but all are members of one of the international partner groups or have a relationship with one of the IMF's Regional Technical Assistance Centers.

[8]The World Bank groups countries by 2013 gross national income per capita as follows: low-income countries—$1,045 or less; lower-middle-income countries—$1,046 to $4,125; upper-middle-income countries—$4,126 to $12,745; and high-income countries—$12,746 or more.

Figure 1. Geographic Distribution of ISORA 2016 Participants



Source: IMF Staff.
Note: The areas shaded in blue represent the 135 jurisdictions that participated in ISORA 2016.

Table 3. Survey Participants by Income Group and IMF Region

Group	Sub-Saharan Africa	Asia and the Pacific	Europe	Middle East and Central Asia	Western Hemisphere	Total
Low-Income Countries	21	1	0	0	0	22
Lower-Middle-Income Countries	9	6	1	4	6	26
Upper-Middle-Income Countries	6	6	10	1	17	40
High-Income Countries	1	6	30	0	10	47
Total	**37**	**19**	**41**	**5**	**33**	**135**

Table 4. Survey Participants by Population Size

Group	Small States: < 1.5 Million People	1.5 to 7.5 Million People	7.5 to 24 Million People	> 24 Million People	Total
Low-Income Countries	0	6	9	7	22
Lower-Middle-Income Countries	4	9	8	5	26
Upper-Middle-Income Countries	15	10	5	10	40
High-Income Countries	12	13	11	11	47
Total	**31**	**38**	**33**	**33**	**135**

Each ISORA partner organization supports participants from their organizations, meaning they assist them in completing the survey. However, there is a great deal of overlap in the respective memberships of the partners. OECD supports its original 55 or so countries, including a number from both CIAT and IOTA. Only 36 countries are actual OECD members; the rest are associated with the OECD's Forum for Tax Administration. In addition, all

participants are members of the IMF or are supported by the IMF's Regional Technical Assistance Centers.

Box 1 lists the jurisdictions supported by each partner for the ISORA 2016 survey.

Access to and Use of ISORA Data

Currently, there are certain implications for access to and use of ISORA data, depending on the partner-supported group. Tax administrations supported by OECD and CIAT have agreed that all their data can be made public by those respective organizations. For ISORA 2016, the OECD has already made public the vast majority of the data from its supported administrations.[9] Those supported by the IMF and IOTA are not currently required to agree that their data can be placed in the public domain.

While country-specific data from IMF- and IOTA-supported administrations cannot be made public without that administration's express consent, aggregated data (from at least five countries) and other data sufficiently anonymized to prevent identification may be made public. ISORA 2016 publications from the OECD and CIAT use extensive country-specific data. Because of the confidentiality restrictions previously noted, this publication will provide only aggregated and anonymized data. Statistics such as the average or median (in the case where the distribution is highly skewed, and outliers are present) are used where at least five data points are available.

The IMF is planning to seek approval from its supported participants for ISORA data to be placed in the public domain.

Data collected in the course of ISORA 2016 is available from the RA-FIT Data portal, described in more detail in Box 2.

The Overall Approach for this Publication

Previous IMF publications (*Understanding Revenue Administration Volumes 1 and 2* [IMF 2015a, 2017]) have analyzed the tax administration survey data based on the survey forms themselves. The forms are generally organized by subject matter—revenue collected, management and organization, human resources, segmentation, registration, returns and payment, service, debt collection, audit, and disputes. These subject matter areas were then mostly analyzed by income group or, where it was appropriate, by IMF region.

[9]Data in the Tax Administration Forum's database can be accessed from https://qdd.oecd.org/subject.aspx?Subject=TAS.

Box 1. Jurisdictions Listed by ISORA Partner Providing Support

Inter-American Center of Tax Administrations–supported Jurisdictions (15)

Barbados, Bolivia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Kenya, Nicaragua, Panama, Paraguay, Suriname, Trinidad and Tobago, and Uruguay.

IMF-supported Jurisdictions (55)

Angola, Anguilla, Antigua and Barbuda, Belize, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo (Democratic Republic of), Congo (Republic of), Cook Islands, Côte d'Ivoire, Dominica, Equatorial Guinea, eSwatini (formerly Swaziland), Ethiopia, Fiji, Gabon, Gambia (the), Ghana, Grenada, Guinea-Bissau, Guinea, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mauritius, Myanmar, Namibia, Niger, Nigeria, Papua New Guinea, Rwanda, Samoa, Senegal, Seychelles, Sierra Leone, Solomon Islands, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Tanzania, Togo, Tonga, Turks and Caicos Islands, Uganda, Vanuatu, Virgin Islands (British), and Zambia.

Intra-European Organisation of Tax Administrations–supported Jurisdictions (10)

Albania, Armenia (Republic of), Azerbaijan (Republic of), Bosnia and Herzegovina, Georgia, Macedonia (FYR), Moldova, Montenegro, Republika Srpska, and Serbia (Republic of).

Organisation for Economic Co-operation and Development–supported Jurisdictions (55)

Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, China (P.R.: Hong Kong), China (P.R.: Mainland), Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Korea (Republic of), Latvia, Lithuania, Luxembourg, Malaysia, Malta, Mexico, Morocco, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Romania, Russian Federation, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.

Box 2. The RA-FIT Data Portal

The RA-FIT Data portal (http://data.rafit.org) provides public access to aggregate data collected in ISORA 2016, together with useful reference material (ISORA questionnaires and guides), presentations, and publications based on ISORA data. Data is available in the form of standard tables and visualizations, and users can also create custom tables through the query tool. The portal includes data collected in ISORA 2016 that was not covered explicitly in this publication.

The portal also provides access to adminstration-level data to registered users. The staff of participating tax administrations may register for such access, and have at their disposal standard tables, visualizations and the possibility of creating custom tables with administration-level data. Registered users are bound by the general terms and conditions of use: unless data are in the public domain already, only aggregate data may be published.

The screenshots below illustrate the range of information and data available from the RA-FIT Data Portal.

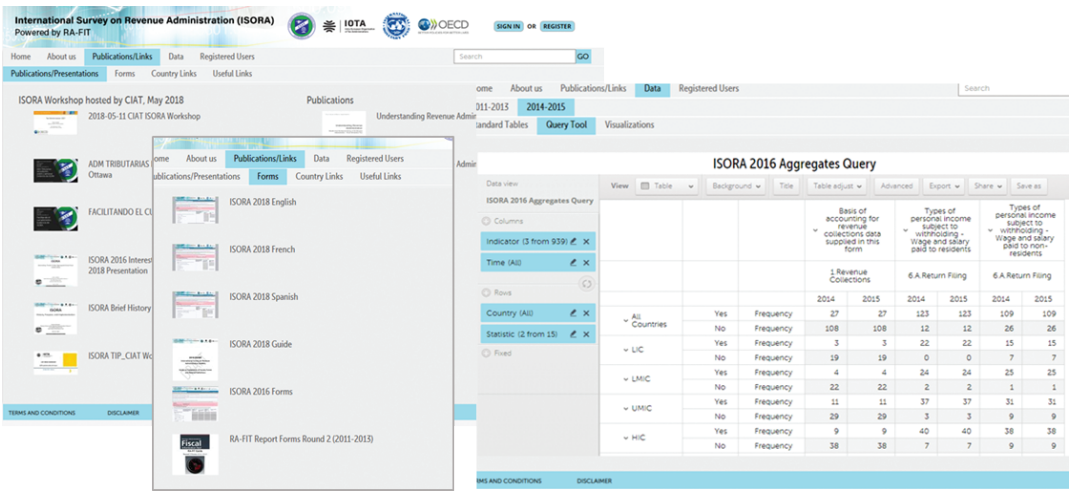


Table 5. Grouping of ISORA Subject Matter Areas

Area	Examples
Performance-related Data	Return filing and payment, electronic filing and payment, tax arrears, audit/verification, disputes, cost of collection, and tax administration resources.
Profile Data	Institutional arrangements, scope, segmentation, registration, personal income tax withholding and reporting, information-gathering powers, collection powers, management issues, human resources, and compliance risk management.
Data on Administrative and Operational Practices	Indices on the existence of performance standards, management and human resources autonomy, public accountability, and service orientation.

This publication considers tax administration data in ISORA from a slightly different perspective. Subject matter topics are grouped into three areas: (1) performance-related data, (2) profile data, and (3) data on administrative and operational practices. This is set out in Table 5.

These groupings will enable a more targeted analysis in terms of the general and specific interests of the IMF. Furthermore, the third grouping, administrative and operational practices, is set up based on indices in four specific areas, as noted in Table 5. These indices are calculated based on a participant's responses to a series of "Yes/No" questions related to the topic at hand. The higher the number of "Yes" responses, the higher the resulting index. There is an inherent assumption that the more "Yes" answers, the more representative the index is of "good" practice.

During the analysis of previous surveys, it became clear that there were significant differences in tax administration (both in performance and in other areas) between higher-income and lower-income jurisdictions. One obvious reason for this is the very characteristics of higher-income administrations (for example, adequate numbers of properly skilled staff, stable budgets, and advanced applications of information technology). However, it was also clear that these differences were more muted, and in fact, more difficult to explain in the context of four different levels of income grouping (LICs, LMICs, UMICs, and HICs). In some cases, the sample size is not sufficient to make any inferences from four different income groupings. Analyzing ISORA data at four income levels is simply too granular for some of the data provided through the survey. Further, many small states, although largely higher-income countries, exhibit characteristics of lower-capacity, lower-income-tax administrations. Treating this group separately (that is, taking them out of the higher-income and lower-income groupings) increases the homogeneity of the groups, which leads to clearer differences in the statistics of these groups.

Therefore, this publication uses a binary distinction in income level—"lower" income, which will comprise both LICs and LMICs, and "higher" income, which will comprise UMICs and HICs. Both these groupings exclude small-state participants. On this basis, it will be clear if there are any signifi-

Table 6. Survey Participants by Partner-Group

Group	Inter-American Center of Tax Administrations	IMF	Intra-European Organisation of Tax Administrations	Organisation for Economic Co-operation and Development	Total
Small States	3	21	2	5	**31**
Lower Income	7	31	3	3	**44**
Higher Income	5	3	5	47	**60**
Total	**15**	**55**	**10**	**55**	**135**

Table 7. Survey Participants by IMF Region and the Standard Grouping

Group	Sub-Saharan Africa	Asia and the Pacific	Europe	Middle East and Central Asia	Western Hemisphere	Total
Small States	4	7	7	0	13	**31**
Lower Income	29	4	1	4	6	**44**
Higher Income	4	8	33	1	14	**60**
Total	**37**	**19**	**41**	**5**	**33**	**135**

cant differences based on income. Strong differences emerge in the reported performance, profile, and practices of administrations in large and small jurisdictions, given economies of scale. IMF interest (especially the provision of technical assistance to strengthen tax administration) often includes small states, or those with populations up to 1.5 million.[10] This publication uses as a standard analysis framework three groups: lower income, higher income, and small state—comprising responses from 44, 60, and 31 jurisdictions, respectively. These three groups are referred to as the standard grouping throughout this paper.

Distribution of ISORA 2016 participants by partner-supported group is shown in Table 6.

In some limited instances, this publication analyzes data according to a slightly different grouping, namely, IMF regions and fragile states. Table 7 shows the number of ISORA 2016 participants by IMF region and the three standard groups.

Three of the five IMF regions (sub-Saharan Africa, Europe, and Middle East and Central Asia) are predominated by one of either the lower-income or higher-income grouping. Sub-Saharan Africa and Middle East and Central Asia are dominated by the lower-income group, and thus will generally have characteristics similar to the lower-income grouping. Europe will be similar to the higher-income grouping for the same reasons. It will therefore rarely be necessary to analyze these regions separately from an ISORA perspective. As for Asia and the Pacific and the Western Hemisphere, the small states (Caribbean and Pacific Island jurisdictions) will need to be considered on their own and will of course have the characteristics of small-state partici-

[10]See, for example, IMF (2018).

Table 8. Fragile State Participants by Income and Standard Grouping

Income Grouping	Number of Fragile States	Standard Grouping	Number of Fragile States
Lower-Income Countries	13	Small States	1
Lower-Middle-Income Countries	3	Lower Income	15
Upper-Middle-Income	2	Higher Income	2
Higher-Income Countries	0	**Total**	**18**

pants. The remainder in both regions is dominated by higher-income participants, and this subgroup will thus generally have the characteristics of the higher income participants. In summary, proxies for the characteristics in the IMF regions are readily available and separate regional analysis will not usually be necessary.

This publication will also, in some instances, make a distinction in respect of fragile states[11] where sufficient data from these states highlights specific differences. ISORA 2016 response distribution by fragile state and by the standard grouping is shown in Table 8.

An appendix contains tabulations based on the World Bank's income groupings to facilitate comparison with earlier editions of *Understanding Revenue Administration*.

Box 3 lists the jurisdictions in the main categories used in this publication (that is, lower income, higher income, and small states, or the standard grouping). It also lists the jurisdictions by IMF regions as well as those jurisdictions identified as fragile states.

Making Improvements to ISORA

The operating philosophy of the ISORA partners is one of continuous improvement. The survey process is a complex one, and except for the OECD-supported jurisdictions, is a relatively new activity for many participants. Definitions and terminology are constantly being reviewed to ensure the most comparable data possible, and hence the most accurate analysis. The structure of the ISORA partnership includes a Technical Working Group, guided by an Executive Council, to ensure that the ISORA product improves with each iteration of the survey.

In the drive for continuous improvement, two of the important tasks of the Technical Working Group following each survey round are:

[11]The IMF uses a three-year average of the World Bank's Country Policy and Institutional Assessment score as opposed to the most recent outturn only. See IMF (2015b). This results in the designation of 39 states as fragile in 2015, of which 18 provided responses to ISORA 2016.

- A complete review of each survey question and participant responses, to identify problems of definition, ability to provide data, utility of the information requested, and other matters raised by participants[12]; and
- A sharing of experience in providing assistance and review for ISORA partners during the collection phase, to take advantage of synergies in techniques used for quality assurance.

There are some obvious data quality issues associated with ISORA. Most are attributable to the newness of the initiative along with its relative complexity, and to the wide disparity in the capacity of the participating tax administrations themselves to provide accurate data. However, with so many changes introduced by ISORA (compared to previous IMF and OECD surveys), it is difficult to quantify the data quality and completeness issues through such measures as response (completeness) rate and participation. Over the longer run, as successive surveys are added to the ISORA data set, response and participation rates will be analyzed with the results factored in to further survey improvements.

ISORA provides a single, comparable set of data for all tax administrations using common concepts and definitions. It significantly increases the number of data points available for numerical responses (for example, tax arrears figures, on-time filing, audit results, and the like), adding breadth and depth to the base of comparable data.

[12]For example, scrutiny of ISORA 2016 responses resulted in significant changes to the 2018 questionnaire, which will facilitate easier completion by participants. The proportion of prefilled data entry points has grown from 44 percent (in the ISORA 2016 questionnaire) to 69 percent, along with a reduced proportion and number (reduced from 368 to 282 data entry points) of annual questions, of which most are numerical. Both the 2016 and 2018 questionnaires may be found at http://data.rafit.org/?sk=3dba84d7-1dd8-4533-b682-c0dfcb1d7f13&sId=1445908451587.

Box 3. Jurisdiction Groupings Used in this Paper

Small States (31)

Anguilla, Antigua and Barbuda, Barbados, Belize, Cook Islands, Cyprus, Dominica, Equatorial Guinea, Estonia, eSwatini (formerly Swaziland), Fiji, Grenada, Iceland, Luxembourg, Maldives, Malta, Mauritius, Montenegro, Republika Srpska, Samoa, Seychelles, Solomon Islands, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Tonga, Trinidad and Tobago, Turks and Caicos Islands, Vanuatu, and Virgin Islands (British).

Lower Income (44)

Armenia (Republic of), Benin, Bolivia, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo (Democratic Republic of), Congo (Republic of), Côte d'Ivoire, El Salvador, Ethiopia, Gambia (the), Georgia, Ghana, Guatemala, Guinea-Bissau, Guinea, Honduras, India, Indonesia, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Moldova, Morocco, Myanmar, Nicaragua, Niger, Nigeria, Papua New Guinea, Paraguay, Rwanda, Senegal, Sierra Leone, Tanzania, Togo, Uganda, and Zambia.

Higher Income (60)

Albania, Angola, Argentina, Australia, Austria, Azerbaijan (Republic of), Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Canada, Chile, China (P.R.: Hong Kong), China (P.R.: Mainland), Colombia, Costa Rica, Croatia, Czech Republic, Denmark, Dominican Republic, Ecuador, Finland, France, Gabon, Germany, Greece, Hungary, Ireland, Israel, Italy, Jamaica, Japan, Korea (Republic of), Latvia, Lithuania, Macedonia (FYR), Malaysia, Mexico, Namibia, Netherlands, New Zealand, Norway, Panama, Peru, Poland, Portugal, Romania, Russian Federation, Serbia (Republic of), Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States, and Uruguay.

Sub-Saharan Africa (37)

Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo (Democratic Republic of), Congo (Republic of), Côte d'Ivoire, Equatorial Guinea, eSwatini (formerly Swaziland) Ethiopia, Gabon, Gambia (the), Ghana, Guinea-Bissau, Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, South Africa, Tanzania, Togo, Uganda, and Zambia.

Box 3. Jurisdiction Groupings Used in this Paper *(continued)*

Asia and Pacific (19)

Australia, Cook Islands, China (P.R.: Hong Kong), China (P.R.: Mainland), Fiji, India, Indonesia, Japan, Korea (Republic of), Malaysia, Maldives, Myanmar, New Zealand, Papua New Guinea, Samoa, Singapore, Solomon Islands, Tonga, and Vanuatu.

Europe (41)

Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Macedonia (FYR), Malta, Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Republika Srpska, Romania, Russian Federation, Serbia (Republic of), Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, and United Kingdom.

Middle East and Central Asia, including North Africa (5)

Armenia (Republic of), Azerbaijan (Republic of), Georgia, Mauritania, and Morocco.

Western Hemisphere, including Caribbean (33)

Anguilla, Antigua and Barbuda, Argentina, Barbados, Belize, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Guatemala, Grenada, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, United States, Uruguay, and Virgin Islands (British).

Fragile States (18)

Angola, Bosnia and Herzegovina, Burundi, Central African Republic, Chad, Congo (Democratic Republic of), Congo (Republic of), Côte d'Ivoire, Guinea-Bissau, Guinea, Liberia, Madagascar, Malawi, Mali, Myanmar, Sierra Leone, Solomon Islands, and Togo.

CHAPTER

2 Part 2: Analysis of ISORA 2016 Data

Performance-related Data

Introduction

This section on performance data covers eight specific performance areas (including groups of measures) that are part of the International Survey on Revenue Administration (ISORA). They are all generally quantitative measures, and most of them can also be found in the Tax Administration Diagnostic Assessment Tool (TADAT).

The idea behind this section is to discuss and analyze an indicative set of performance measures, and to assess the extent to which ISORA is capable of collecting information on such measures. It is not the intention to provide an exhaustive list of all the quantitative performance measures in ISORA nor to deal with any performance measures that are not yet included in ISORA.

The key measures discussed are as follows:

- ***Return filing***—on-time filing rates;
- ***Payment***—on-time payment rates;
- ***Electronic filing and payment***
  - Percentage of returns filed electronically;
  - Percentage of electronic payments;
- ***Tax arrears***—arrears at year-end as a percentage of total net taxes collected;
- ***Verification***
  - Assessments raised through verification activity as a percentage of total net taxes collected;
  - Verification activity per 100 active taxpayers (coverage rate);
  - Percentage of verification activities leading to adjustment (adjustment rate);

- ***Disputes***—value of year-end stock of objections (administrative disputes) as a percentage of total net tax collected;
- ***Cost of collection*** (not measured in TADAT)—total recurrent expenditure as a percentage of total net taxes collected (excluding value-added tax [VAT] and excises on import); and
- ***Tax administration resources compared to taxpayers and citizens*** (not measured in TADAT)
  - o Active core taxpayers per full-time equivalent (FTE: an FTE of 1.0 means resources equal to one staff member available for one full year;
  - o Citizens per FTE.

This section also provides analysis and a discussion of issues associated with the information reported by participants.

Return Filing

Filing of tax returns remains a critical process for all jurisdictions, despite increasing use of prefilled returns and their potential deemed acceptance. Increasingly, the "on-time" filing rate is becoming a key performance measure in tax administration. The on-time filing rate is determined by taking the ratio of returns filed on time during the period for a given tax type to the total number of "expected" returns for that same tax type over the same period.

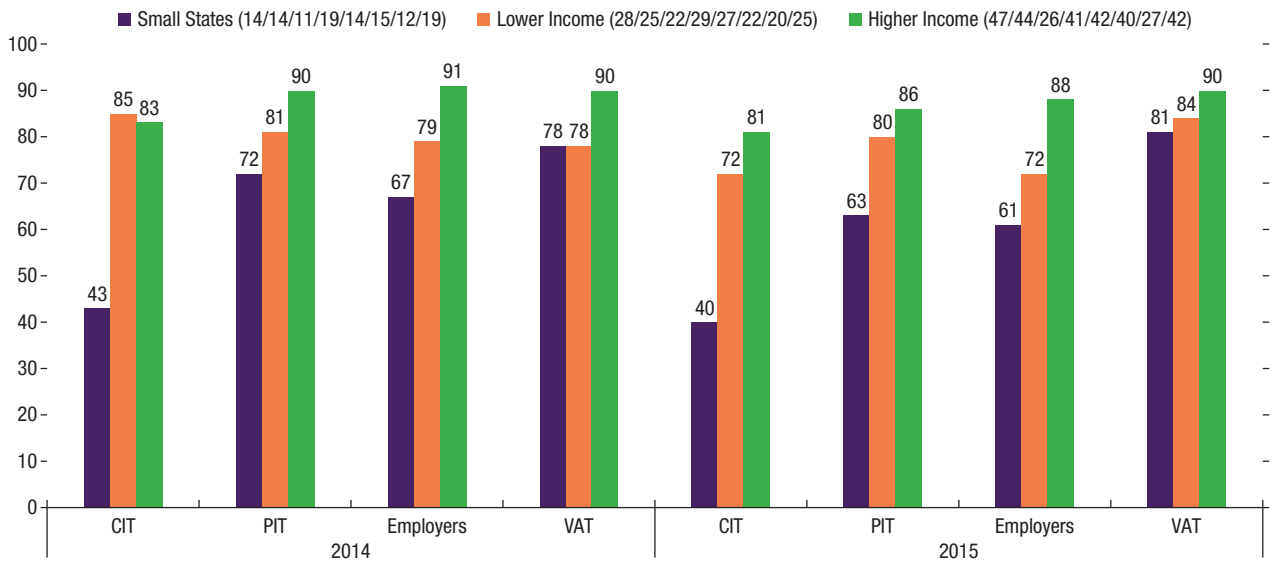
In Revenue Administration Fiscal Information Tool (RA-FIT) Rounds 1 and 2, the on-time filing rates were considered very low, suggesting ample room for improvement. For example, the on-time filing rate for personal income tax (PIT) returns was 45 percent in 2010 growing to 50 percent by 2013. Analysis of the data suggested issues of inaccurate estimates of expected returns as well as problems with the taxpayer register. On-time filing rates for corporate income tax (CIT) improved to 57 percent from 49 percent over the same period. VAT showed higher on-time filing rates than the other taxes in both rounds of RA-FIT.

Based on ISORA 2016, there is evidence of further improvement in on-time filing rates. On-time filing rates were determined for all core tax types[1] from the number of expected returns and the number of on-time returns.[2] Where either of these numbers are not provided by a respondent, the rate cannot

[1]The TADAT definition of "core taxes" is used in this publication. Core taxes are defined by TADAT as direct taxes such as PIT and CIT, and indirect taxes such as VAT and other goods and services taxes; and social security contributions where they are a major source of revenue and collected by the tax administration. This is discussed in more detail in the section on scope in Part IIB. See also http://tadat.org/files/IMF_TADAT-FieldGuide_web.pdf.

[2]For VAT, the expected returns and the on-time returns across all return frequencies were totaled to derive an overall VAT on-time filing rate.

Figure 2. Median On-Time Filing Rates
(Percent)



Note: CIT = corporate income tax; PIT = personal income tax; Employers = employers withholding such as PAYE; VAT = value-added tax. Numbers in parentheses represent the number of administrations providing data used to determine the medians for each bar.

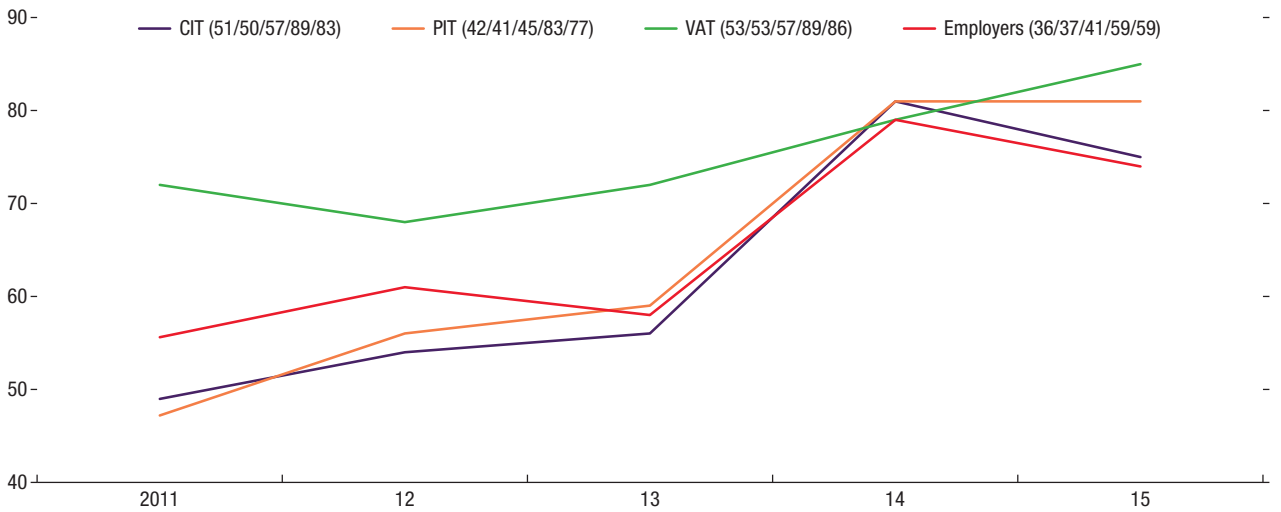
be calculated. Figure 2 shows the median on-time filing rates per tax type for 2014 and 2015, along with the number of data points available for each tax type filing rate.[3] The corresponding data table as well as a table showing the filing rates by World Bank–defined income grouping may be found in Appendix Tables 1 and 2.

Filing rates can be computed for roughly 60 percent of the ISORA 2016 participants, translating into a larger set of filing rate values than in previous tax administration surveys.

Overall, the VAT on-time filing rate exceeds that of other core tax types. Filing rates in higher-income jurisdictions are without exception higher than for other groups in all taxes. Differences in rates between years are also discernable. This is in part due to different sets of administrations providing sufficient data in 2014 and 2015. Of those administrations that provided data in both years, the rate increased for roughly half.

[3]In this figure and the tables and figures that follow, the number of responses on which the statistics shown in each graphical point or table column are based is shown in parentheses in the order in which the statistics are provided.

Figure 3. Median On-Time Filing Rates for Core Taxes, 2011–15
(Data set 1—All participants providing data for each year; percent)



Note: Numbers in parentheses equal the sample size for data supplied in each year.

The Organisation for Economic Co-operation and Development (OECD), in its publication concerning ISORA 2016,[4] noted "surprisingly lower" rates for CIT than for other taxes. This comment applies only to the OECD-supported jurisdictions, which are mostly higher income. For lower-income participants, CIT rates are often higher than for the other core taxes.

It is also significant to note that the small states have the lowest on-time filing rates for each tax type for each year. Underlying reasons for their rates could include a general lack of development in overall tax administration as well as difficulties associated with scale and an inability to take advantage of specialization which is so necessary in modern tax administration.

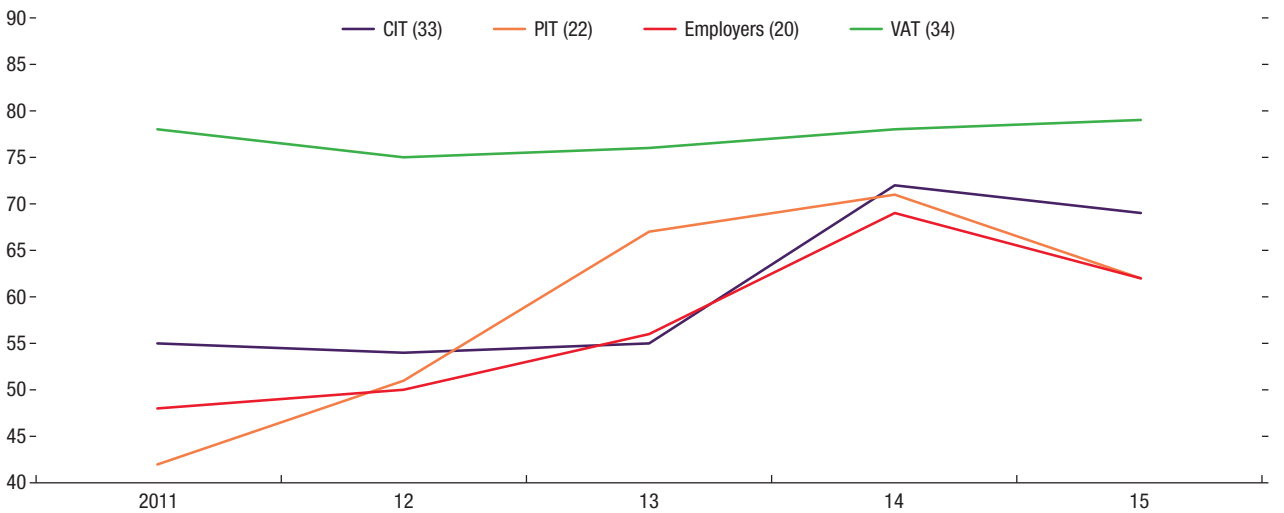
Figure 3 shows the median on-time filing rates for all administrations who provided data for the core tax types from 2011 to 2015. The 2011 to 2013 figures are drawn from RA-FIT Round 2.[5]

Figure 3 appears to indicate that on-time filing rates have improved over time, with VAT showing the least volatility. However, it must be noted that these on-time data pertain to *different sets of tax administrations* each year. In particular, the data points for 2014 and 2015 derive from a larger

[4]See OECD (2017).

[5]No data was collected on the on-time filing rate of employers for pay-as-you-earn in Round 1. Round 2 separated PIT filing data for "salaried" and "other" taxpayers; the data have been combined to create a single PIT on-time filing rate for comparability with later years.

Figure 4. Median On-Time Filing Rates for Core Taxes, 2011–15
(Data set 2—Participants providing data over all years; percent)



set of administrations and include a much larger number of participants in higher-income jurisdictions, for which on-time filing rates tend to be higher, particularly in the case of CIT and PIT.

It is thus useful to focus on a set of jurisdictions for which there are data over the entire period. Over the five-year period 2011 to 2015, there are 33, 22, and 34 administrations that provided data for determining on-time filing rates for CIT, PIT, and VAT, respectively. The change in the median on-time rate for these sets of administrations is shown in Figure 4.

In general terms, apart from a change in the on-time filing rate due to a shift in the behavior of taxpayers, there could be several other reasons for the changes observed in the calculated rates. These include:

- Changes to the registration or filing requirements within a jurisdiction (probably very infrequent);
- The cleansing of the tax register, leading to changes in the number of active taxpayers;
- Changes in the estimation methodology[6] used by tax administrations to determine expected returns; and
- Data capture errors in the survey.

[6]Currently, the TADAT Field Guide does not provide specific advice on this methodology. Some jurisdictions appear to be simply using their "active" registrant base, which in some cases is the same as total registrants, in their ISORA submissions, without any consideration of the impact of upcoming changes due to program activity (such as initiatives to expand the formal economy) or economic forecasts. Others seem to be making a

There appear to be examples of all these in the RA-FIT and ISORA data sets. In both rounds of RA-FIT and in ISORA, the actual number of returns received on time and the expected returns were provided, and so can be examined. Further, in RA-FIT Round 2 and in ISORA, the number of active taxpayers per core tax type has also been requested. Thus the change in expected returns over time can be examined in relation to the change in active taxpayers.

A more detailed look at the five-year trend, focusing on CIT and on jurisdictions that provided data for all five years, is presented in Box 4.

Payment

ISORA collects similar information for on-time payments as it does for on-time filing. For the purposes of performance measurement, this section will review the on-time payment rate for core taxes.

TADAT examines two measures in respect of on-time payment, both having to do with VAT only: (1) on-time payment rate *by number* of payments and (2) on-time payment rate *by value* of payments. VAT is taken to be a proxy for the other core tax types.

In line with the expectation that large taxpayers are more compliant, the on-time payment rate by value generally exceeds the on-time payment rate by number.

The ISORA completeness or response rate for on-time payment is low, in fact significantly lower than for on-time filing. Data enabling the determination of the on-time payment rate was not collected in earlier rounds of RA-FIT. For 2015, more than 65 percent of jurisdictions provided sufficient data to compute on-time filing rates. For on-time payment rates, the comparable figure is less than 40 percent. This is a concern for all the ISORA partners and raises a note of caution when using the data and derived analyses. Over time, efforts will be required to improve responses in this area.

In Figure 5, on-time payment rates *by value* are presented for all four core taxes, but not *by number* as this data is not requested in ISORA. The underlying table and on-time payment rates for the four World Bank–defined income groups may be found in Appendix Tables 3 and 4.

calculation of the number of expected returns for a specific tax year rather than for a specific time period, and this may have an impact.

Box 4. Five-year Analysis of Corporate Income Tax On-time Filing Rates

There are 33 jurisdictions for which there is corporate income tax (CIT) data for the five-year period 2011 to 2015. Overall, the CIT median percentage on-time filing rates for the five years for these jurisdictions are as follows:

- 2011: 55
- 2012: 54
- 2013: 55
- 2014: 72
- 2015: 69

It is clear from these data that there has been a sudden and unexpected increase in CIT on-time filing rates between 2013 and 2014. This analysis focuses on factors that may explain this change.

First, the richness of data has improved over the three surveys (Revenue Administration Fiscal Information Tool [RA-FIT] Rounds 1 and 2, and International Survey on Revenue Administration [ISORA] 2016). In the first survey, only "registered taxpayers" and not "active taxpayers" were captured. In the second survey, "active taxpayers" were added, and in the third survey (ISORA 2016) filing frequency was added—which now enables a much richer picture to be developed of how administrations get to the on-time filing rates that they provided.

Second, in the case of CIT, which in most countries is administered through a single annual return, the ratio of expected returns to active taxpayers might be expected to remain constant and close to one. The definition of "active taxpayers" used in ISORA 2016 means that a return would be expected from each active taxpayer. Some statistics on the ratio of expected returns to active taxpayers are shown in Table 9.

Table 9. Expected Corporate Income Tax Returns Compared to Active Corporate Income Tax Taxpayers

Proportion of Responses where the Ratio of Expected Corporate Income Tax Returns to Active Corporate Income Tax Taxpayers is:	2011	2012	2013	2014	2015
< 1	35	31	34	39	34
= 1	31	25	24	31	33
> 1	35	43	41	30	33
Between 0.9 and 1.1	40	37	38	58	61
Number of Data Points	**52**	**51**	**58**	**80**	**76**

The proportion < 1 means the jurisdictions expect *fewer* returns than they have active taxpayers, whereas > 1 means they expect *more* returns than they have active taxpayers. The proportion "1" means the jurisdictions reported they expect *exactly the same* num-

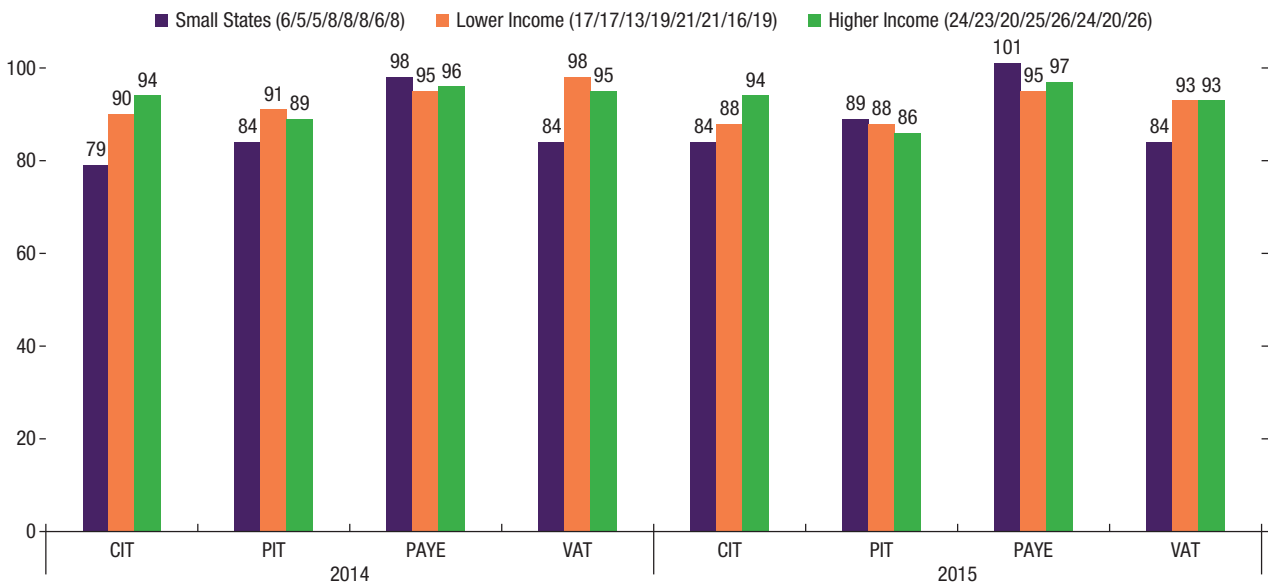
Box 4. Five-year Analysis of Corporate Income Tax On-time Filing Rates *(continued)*

ber of returns as they have active taxpayers. These three proportions total 100 percent. (For information, as a separate item, the proportion between 0.9 and 1.1 shows jurisdictions where expected returns is *very close* to active taxpayers.)

From Table 9, it can be seen the proportion that expected more returns than active (> 1) fell by 11 percent between 2013 and 2014, whereas the proportion that expected fewer returns than active (< 1) grew by 5 percent over the same period. In other words, there was a *considerable reduction* in expected returns compared to active taxpayers. *Reductions in expected returns, all other things being equal, would by itself lead to an increase in the on-time filing rate*. Hence the observed increase in on-time filing rate between RA-FIT Round 2 and ISORA 2016 cannot be interpreted purely as an indication of greater taxpayer compliance. The same is true of the slight decline in the median on-time filing rate for CIT from 2014 to 2015: the decline in filing rate coincided with a larger growth in the number of expected returns than the number of active taxpayers.

This may be an avenue for further study. Changes in the on-time filing rate are complex in that they are very dependent on the estimation methodology for expected returns.

Figure 5. Median On-Time Payment Rate by Value
(Percent)



Pay-as-you-earn (PAYE) has the highest on-time payment rates overall, followed by VAT, CIT, and then PIT. Within this overall picture, several other observations are possible:

- Differences by income group and small states do not appear to be significant, with almost all values over both years clustered within a 10 percentage point range.
- Rates by group are not consistent across tax type. For example, depending on tax type and year, each grouping has examples where their rates are highest, lowest, or in-between.
- Some of the data are not explicable at this point (for example, 101 percent for PAYE for small states in 2015). The issue here has to do with the formula used for calculating the on-time payment rate (that is, actual value of on-time payments as a percent of the *estimated* value of on-time payments [see similar discussion in previous section on on-time filing rates]). There is considerable variation in the ratio of the estimated payments by due date to the aggregate net tax collected. Some administrations may be factoring an expectation of a proportion of payments being late in their estimation process.

While data in this area should improve over time, caution should be exercised in using these ISORA 2016 data relating to on-time payments.

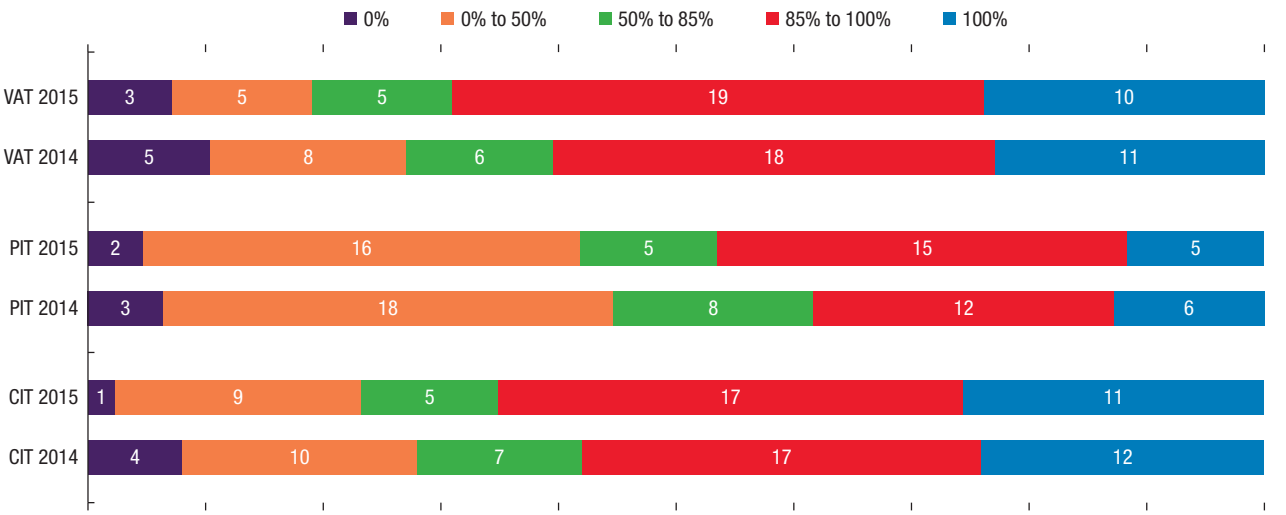
Electronic Filing and Payment

ISORA seeks data on filing by channel (that is, paper, online, or in the case of PIT, by deemed acceptance). It also seeks data on payment rates by channel (that is, online, via agency, or in person). It is posited that online filing and payment rates can be a measure of tax administration performance.[7] Many administrations are striving to increase these rates to improve service and to increase efficiency.

Online filing rates can be determined for about 45 to 50 jurisdictions, depending on the year and tax type. This is a low response rate overall—well under 50 percent of total ISORA participants—with most responses coming from higher-income jurisdictions. Less than a quarter of all small-state and lower-income jurisdictions provided information on filing channels used.

[7]TADAT measures electronically filed declarations for all core taxes, and assigns ratings as follows: A—at least 85 percent of declarations are filed electronically for each of the core taxes, and all large taxpayers file core tax declarations electronically; B—at least 70 percent of declarations are filed electronically for each of the core taxes, and at least 80 percent of large taxpayers file core tax declarations electronically; C—at least 50 percent of declarations are filed electronically for at least two core taxes; and D—the requirements for a "C" rating or higher are not met.

Figure 6. Number of Responses by Online Filing Rate
(Percent)



Very few among those providing e-filing channel information indicated that no e-filing occurred. It appears that administrations offering e-filing facilities were more likely to provide channel information, and hence the statistics derived from the responses will be skewed toward administrations that offer e-filing. The numbers of ISORA 2016 responses are shown by online filing rate in Figure 6.

Approximately a quarter of respondents providing return filing channel information indicated that 100 percent of CIT and VAT returns are received online. More administrations record an online filing rate of between 85 and 100 percent than a rate between 0 and 85 percent. It appears that administrations that offer e-filing are generally successful in getting CIT and VAT taxpayers to submit returns electronically. The online filing rates for PIT lag those of CIT and VAT, although 10 percent of the participants providing return channel information record 100 percent online filing, and the online filing rate for PIT taxpayers is over 50 percent for more than half of these administrations.

The average proportions of returns filed electronically for CIT, PIT, and VAT for 2014 and 2015 for administrations reporting e-filing (that is, excluding responses indicating that no returns were filed online) are set out in Table 10. It is clear from this table that the e-filing rates for responding participants from higher-income jurisdictions are significantly higher than those from participants from lower-income jurisdictions and small states.

Table 10. Average Percentage of Returns Filed Electronically by Tax Type

	2014 (percent)			2015 (percent)		
Group	CIT	PIT	VAT	CIT	PIT	VAT
Small States (3/5/6/4/5/6)	—[1]	49	56	—[1]	52	58
Lower Income (8/6/7/6/5/3)	47	58	49	70	82	—[1]
Higher Income (35/33/30/32/31/30)	82	63	90	85	64	89
All (46/44/43/42/41/39)	**75**	**61**	**78**	**77**	**65**	**83**

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; PIT = personal income tax; VAT = value-added tax.
[1]Fewer than five respondents.

This is not surprising given the push in higher-income jurisdictions to publicize and promote electronic filing of tax returns. It is also not surprising to find CIT and VAT e-file rates in these jurisdictions reaching a saturation point (that is, above 85 percent) while PIT lags at a little over 60 percent. Around a third of administrations in higher-income jurisdictions that provided channel information indicate a 100 percent e-filing rate for CIT and VAT. Given the nature of PIT in higher-income jurisdictions, and its many peripheral uses such as social benefits delivery, current levels of e-filing may also be reaching a saturation point: roughly 20 percent of higher-income respondents report 100 percent e-filing for PIT.

Online payment rates can be determined for even fewer jurisdictions than online filing rates: from 17 to 21 depending on tax type and year (that is, around 15 percent of ISORA 2016 participants). This is a very low response rate, especially for a widely accepted measure of performance,[8] and it will affect the applicability of any analytical conclusions. The number of responses by online payment rate is shown in Figure 7. See Appendix Table 5 for breakdown by World Bank–defined income groups.

Even the response rate among higher-income jurisdictions limits any useful analysis. For the higher-income participants answering payment-related questions in the survey, non-VAT electronic payment rates are less than 50 percent, and electronic payment rates appear to be lower across all tax types than e-filing rates. Other ISORA partners have commented on the poor response rates for questions on electronic payment, and efforts will be intensified to improve response rates for future ISORA surveys. Table 11 shows the average percentage of electronic payments by tax type for administrations that receive electronic payments. As can be seen from Table 11, less than a third of the

[8]TADAT also measures electronic payments for core taxes, with the following rating: A—electronic payments account for more than 75 percent of the value of total tax collections for each of CIT, PIT, VAT, and PAYE; B—electronic payments account for more than 50 percent of the value of total tax collections for each of CIT, PIT, VAT, and PAYE; C—electronic payment facilities are used for at least one of the four core taxes; and D—the requirements for a "C" rating or higher are not met.

Figure 7. Number of Responses by Online Payment Rates, 2015
(Percent)

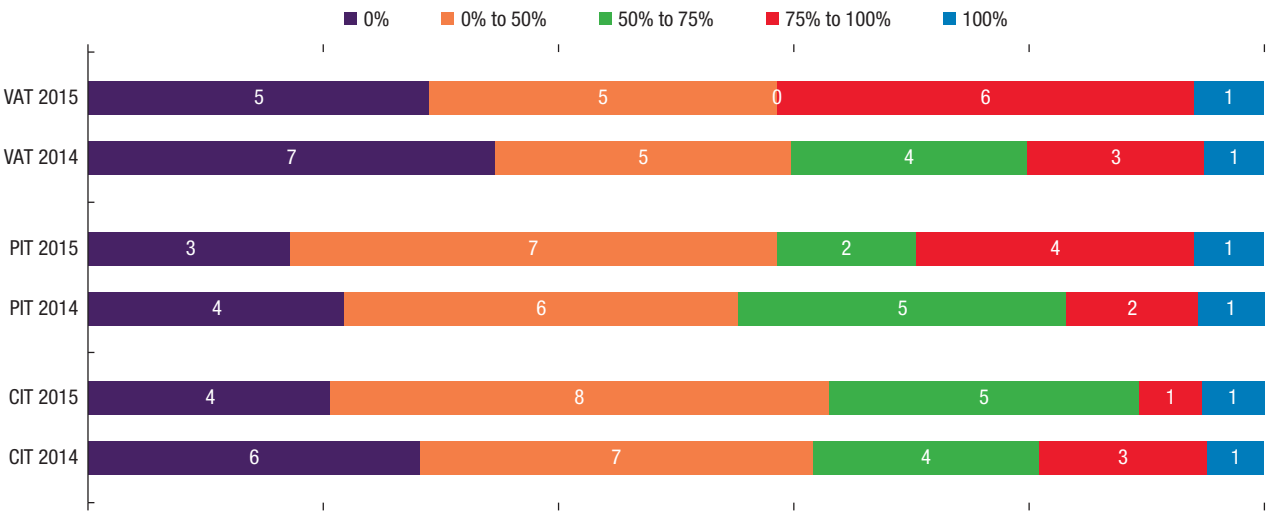


Table 11. Average Percentage of Electronic Payments by Tax Type

	2014 (percent)			2015 (percent)		
Group	**CIT**	**PIT**	**VAT**	**CIT**	**PIT**	**VAT**
Small States (1/2/0/1/2/0)	—[1]	—[1]	—[1]	—[1]	—[1]	—[1]
Lower Income (4/3/4/4/3/4)	—[1]	—[1]	—[1]	—[1]	—[1]	—[1]
Higher Income (10/9/9/10/9/8)	61	60	64	60	59	69
All (15/14/13/15/14/12)	**48**	**49**	**48**	**47**	**49**	**51**

Note: Numbers in parentheses equal the sample size for data supplied in each column.
CIT = corporate income tax; PIT = personal income tax; VAT = value-added tax.
[1]Fewer than five respondents.

responses provided originated from tax administrations in small-state and lower-income jurisdictions.

See Appendix Table 6 for breakdown by World Bank–defined income groups.

Tax Arrears

Reducing outstanding tax arrears is a priority of all tax administrations. A commonly used performance measure in this regard is the ratio of the stock of total tax arrears at year-end to total tax collections for the year. This is a performance outcome area[9] for TADAT, wherein a ratio is computed for

[9]TADAT defines the measure as "the value of total core tax arrears at fiscal year-end as a percentage of total core tax revenue collections for the fiscal year." The numerator in this ratio (that is, total core tax arrears) includes all core tax arrears including penalties and interest, both collectible and uncollectible. The denominator includes the total amount of core tax collected (net of refunds) by the tax administration during the year.

Table 12. Average Tax Arrears at Year-end as a Percentage of Total Net Tax Collected[1]

Group	2014 (percent)	2015 (percent)
Small States (12/14)	51	52
Lower Income (24/26)	23	24
Higher Income (47/44)	34	38
All (83/84)	**33**	**36**

[1]An extreme outlier has been omitted from the calculation of the average.
Note: Numbers in parentheses equal the sample size for data supplied in each column.

each of the past three fiscal years and a three-year average taken to score this dimension, as follows: an "A" rating (performance meets or exceeds international good practice)—the ratio is below 10 percent; a "B" rating (sound performance)—the ratio is above 10 percent but does not exceed 20 percent; a "C" rating (weak performance in relation to good international practice)—the ratio is above 20 percent but does not exceed 40 percent; and a "D" rating (inadequate performance)—the requirements for a "C" rating or higher are not met. TADAT uses the three-year average to smooth the volatility in this measure associated with sharp fluctuations in revenue.

ISORA collects information to compute the ratio of year-end tax arrears as a percentage of total net tax revenue; however, this data may not be directly comparable to TADAT as ISORA does not gather information on VAT revenues collected at the border by customs.[10] To the extent that this is a factor, ISORA-computed ratios may be overstated.

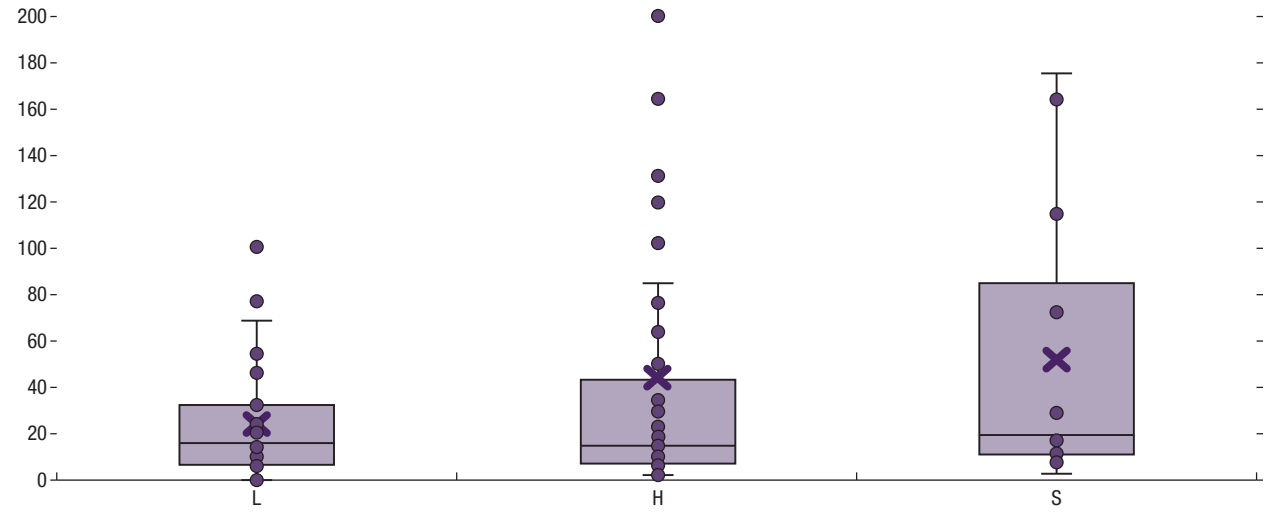
In Round 1 of RA-FIT, responses to survey questions related to tax arrears were very poor. By Round 2, data provided had improved markedly, with close to 70 percent of participants providing most of the arrears-related information. For ISORA, 63 percent of respondents were able to provide data sufficient to compute the ratios.

Table 12 sets out the average values of tax arrears at year-end as a percentage of total net tax collection for 2014 and 2015.

From Table 12, it is clear that the average ratios for lower-income jurisdictions are the lowest with higher-income jurisdictions averaging some 10 percentage points higher. Small-state jurisdictions are some 15 percentage points higher still. See Appendix Table 7 for breakdown by World Bank–defined income groups.

[10]Most ISORA partners only focus on tax administration and as such do not regard VAT on imports as a tax collected by the tax administration.

Figure 8. Distribution of Arrears-to-Collection Ratios, 2015[1]
(Percent)



Note: L = lower income; H = higher income; S = small states.

However, there is considerable variation in the arrears-to-collection ratio. Figure 8 shows the distribution of values by the three groups' averages in the form of a "box-and whisker" plot. The "boxes" contain half the values that lie in the middle of the range of values (that is, the second and third quartiles). For half of the administrations in lower-income jurisdictions, the ratio lies between 7 percent and 30 percent, but the interquartile distance for administrations in higher-income jurisdictions and small states is larger. Further, the points in the top quartile stretch far beyond the ends of the "whiskers,"[11] which mark the point at which values may be considered outliers. The distribution of arrears-to-collection ratios is highly skewed, so much so that the average ratio for administrations in higher-income countries lies above the third quartile. Even for small states, the average ratio lies far above the median (represented by the horizontal lines drawn through the "boxes").

In any event, average ratios suggest tax administrations have a long way to go in reducing these ratios to achieve scores considered to reflect good international practice in a TADAT assessment. In many tax administrations the amount of tax arrears is extremely large and increasing.

ISORA requests participants to distinguish between collectible and noncollectible arrears, but many administrations did not provide this breakdown (approximately 40 percent of those who provided tax arrears aggregates did not provide the noncollectible proportion).

[11]The whiskers extend to 2.5 times the third/second quartile range above/below the median.

Caution needs to be exercised in making use of this ratio for the following reasons. (1) External factors, beyond the control of the administration, may significantly change the ratio for an administration from year to year (for example, the global crisis in 2008 would have caused a major contraction in revenue collected for many jurisdictions while tax arrears would also have increased). (2) Administrations with active filing compliance programs are negatively affected by the ratio while administrations not pursuing outstanding returns are positively affected, as the tax liability of non-filers is not established. Tax arrears are usually brought onto the debt book for accounting purposes but obviously not reflected as cash collected (81 percent of participants recorded in ISORA 2016 that their basis of accounting was "cash" rather than "accrual"). And (3) where administrations fail to make use of write-off provisions in their legislation to categorize arrears as uncollectible, total tax arrears remain overstated and thus the ratio will be inflated.

Verification

Verification comprises a variety of interventions typically undertaken by revenue administrations to check whether taxpayers have properly reported their tax liabilities. Verification is the generic term for all the activities described in the following.

- ***Comprehensive audit:*** An intervention that is usually in-depth; covers multiple taxes, numerous issues, and tax years; and is mostly carried out at the premises of the taxpayer.
- ***Issue-oriented audit:*** An intervention usually focused on specific issues, taxes, or tax years, and normally carried out at the premises of the taxpayer.
- ***Desk audit:*** An intervention usually resulting from an in-office review of information returned by the taxpayer, normally taking the form of further written or telephonic enquiries.
- ***Other verification interventions:*** Any additional measures taken by the authorities usually encompassing high-volume automated checks such as income/document cross-matching.

With these descriptions in mind, this analysis focuses on two main performance measures for audit: (1) assessment results[12] and (2) coverage and adjustment rates. Results are measured by the percentage of total tax revenue provided through verification activities. Coverage rate is measured by verification activity per 100 active taxpayers, and adjustment rate is measured by the

[12]This section deals with "assessment results," or additional taxes assessed through audit. This is sometimes called the "audit effort." It would be preferable to deal with additional tax assessed through audit that *is collected*. While this information is requested in ISORA, response rates are low. Many administrations report an inability to track collection at this level of specificity.

Table 13. Assessments Raised through Verification Activity
(Percent of tax revenue)

Group	Verification Type									
	2014					2015				
	Comp.	Issue-Oriented	Desk	Other	All	Comp.	Issue-oriented	Desk	Other	All
Small States (11/11/6/5/8/15/11/8/7/9)	1.79	1.78	0.02	0.04	**2.45**	3.23	1.34	0.05	0.01	**4.69**
Lower Income (23/22/10/5/15/26/26/13/6/17)	4.52	0.86	0.01	0.00	**5.40**	3.39	1.38	0.00	0.00	**5.08**
Higher Income (36/29/28/20/19/35/29/28/19/19)	1.97	0.56	0.03	0.01	**3.85**	2.68	0.45	0.02	0.01	**4.05**
All (70/62/44/30/42/76/66/49/32/45)	**2.42**	**0.73**	**0.02**	**0.00**	**3.89**	**3.14**	**0.85**	**0.01**	**0.00**	**4.43**

Note: Numbers in parentheses equal the sample size for data supplied in each column. Comp. = comprehensive

percentage of the verification activity that leads to an adjustment in the tax liability of the taxpayer.

As will be noted in the next section on profile data, approximately 20 percent to 33 percent of all tax administration staff are engaged in activities related to verification, so these functions are a substantial consumer of scarce tax administration resources. It is further noted that the OECD, in its publication related to ISORA 2016 and in other publications,[13] states that more sophisticated analytical models are now allowing tax administrations to conduct greater automated reviews than before. However, these automated activities have given rise to difficulties and differences in reporting automated actions in performance data such as that collected by ISORA. For example, some jurisdictions record bulk automated activity in their verification reporting *by tax type* and/or *by segment*, and others do not. This can significantly affect the calculation of coverage and adjustment rates, with the result that ISORA 2016–based analyses need to be treated with some caution when making comparisons. These issues have been addressed for ISORA 2018.

Turning to the first measure of performance—verification results—Table 13 provides information for 2014 and 2015 on assessments raised through verification activity as a proportion of tax revenue by verification type.

It is perhaps a bit surprising that the result for the higher-income group as a percentage of total tax revenue is lower than for the lower-income group. However, the higher-income jurisdictions start with a significantly higher base of tax revenues and in many cases significantly higher levels of tax compliance, and this could explain some of that difference. It is perhaps more surprising that all groups, and especially the higher-income jurisdictions, show such low results for the Other Verification category, which includes all the automated processes, given the previously referenced comments of the OECD.

[13]Such as OECD (2016).

Table 14. Verification Activity per 100 Active Taxpayers (Coverage Rate)

	2014 (percent)				2015 (percent)			
Group	CIT	PIT	Empl.	VAT	CIT	PIT	Empl.	VAT
Small States (6/5/5/8/7/6/4/8)	1.46	0.13	0.60	6.59	1.77	0.28	–[1]	2.29
Lower Income (5/3/4/5/4/3/4/5)	4.32	–[1]	–[1]	12.29	–[1]	–[1]	–[1]	7.88
Higher Income (32/30/14/32/32/32/30/15/33)	1.75	0.43	1.29	3.89	1.52	0.47	0.92	3.99
All (43/38/23/45/43/39/23/46)	**1.72**	**0.38**	**1.02**	**5.01**	**1.65**	**0.45**	**0.92**	**4.02**

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; Empl. = employee withholdings; PIT = personal income tax; VAT = value-added tax.
[1]Fewer than five respondents.

Based on the number of administrations for which data have been provided, it is apparent that far more administrations provided information on comprehensive audits than any other type, including total assessments raised through all verification activities. This suggests that while comprehensive audits do not dominate in number, they still contribute more than any other audit type to assessments raised.

As a final point on the issue of the audit result, it is noted that future ISORA surveys should reflect a resolution of the issues already discussed on the reporting of high-volume automated activities, and thus permit a fuller analysis of this indicator, including by tax type.

The second performance indicator is the verification coverage and adjustment rates. Neither coverage nor adjustment rates, on their own, can act as a definitive performance measure for verification. For example, coverage could be high or increasing, but with little impact on directly measurable results. This could mean that the increased verification activities are not being well targeted and are not based on an effective risk-based approach. Adjustment rates could be high or increasing, and this too might not impact results as many other factors could be at play. However, taken together, results along with coverage and adjustment rates can be a useful indicator of progress in an administration's verification program.[14]

Table 14 provides information, by tax type, on verification activities per 100 active taxpayers—in other words coverage rates. Table 15 shows the percent of verification activities leading to adjustment by tax type, or adjustment rates. Both tables are based on median values. See Appendix Tables 8, 9, and 10 for breakdowns by World Bank–defined income groups.

[14]TADAT does not deal with any specific measures for verification results, or coverage or adjustment rates. It focuses more on the qualitative aspects of verification programs, their application to core taxes, the use of risk-based case selection, and the like. TADAT notes that verification programs have a far wider import than simply raising additional revenues—they also have critical roles in providing a deterrent and obtaining intelligence for the administration.

Table 15. Verification Activities Leading to Adjustment (Adjustment Rate)

	2014 (percent)				2015 (percent)			
Group	CIT	PIT	Empl.	VAT	CIT	PIT	Empl.	VAT
Small States (7/6/5/9/7/7/5/9)	67	98	100	78	54	89	100	76
Lower Income (6/5/5/5/4/4/4/4)	66	48	30	37	—[1]	—[1]	—[1]	—[1]
Higher Income (30/29/21/33/31/30/22/34)	54	61	57	58	55	64	62	53
All (43/40/31/47/42/41/31/47)	**58**	**71**	**67**	**61**	**53**	**67**	**64**	**58**

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; Empl. = employee withholdings; PIT = personal income tax; VAT = value-added tax.
[1]Fewer than five respondents.

Both tables are beset with sample size issues, particularly for lower-income administrations, and particularly for 2015. Higher-income participants also unexpectedly appear to have had difficulty in providing responses in these areas.

Some administrations provided verification statistics by audit type but not by tax type[15] and vice versa, and there is thus limited overlap between the administrations contributing to statistics on verification outcomes by audit type and by tax type. In addition, the ambiguous treatment of the high-volume automated verifications could have an impact on both coverage and adjustment rates, so conclusions from the tables need to be treated with caution.

With respect to Table 14, PIT coverage is extremely low for small states, suggesting inadequate verification, and little ability to provide a deterrent to noncompliant behavior. Even in higher-income jurisdictions, PIT coverage rates are lower than expected. VAT coverage rates are highest in both years, and there are at least three reasons why this might be the case: (1) VAT is often newer than other core taxes, and has been set up on a modern platform with modern approaches better facilitating verification; (2) some of the verification activity may be related to VAT invoice checking, especially in developing economies; and (3) VAT refunds are often audited at a very high rate.

Concerning Table 15, the relatively high adjustment rates in small-state jurisdictions could well be influenced by final withholding systems for PIT (fewer cases to audit) and excessive VAT checking and refund audit.

Disputes

Access to effective dispute processes is a key feature of a sound tax administration and a fair tax system. A dispute process must safeguard a taxpayer's right to challenge an assessment resulting from an audit and to get a fair

[15]IMF- and Inter-American Center of Tax Administration–supported administrations were presented with these questions as optional questions. In other words, they were not required to provide data.

Table 16. Value of Year-end Stock of Objections to Total Tax Revenue

Group	2014 (percent)	2015 (percent)
Small States (9/11)	0.04	0.11
Lower Income (16/16)	3.14	2.86
Higher Income (13/13)	2.84	2.58
All (38/40)	**1.99**	**1.50**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

hearing. The process should be based on a legal framework, be known and understood by taxpayers, be easily accessible, guarantee transparent independent decision-making, and resolve disputed matters in a timely manner.

In many cases, there are two kinds of disputes: objections (cases filed with the tax administration and reviewed in an informal or administrative process by the tax administration) and appeals (cases filed with a court or tribunal).

One potential performance measure in this regard is the size of the outstanding administrative review backlog at year end, measured by the value of disputed taxes represented by the administrative review backlog. Management and disposition of the stock of administrative disputes is usually assumed to be within the control of the tax administration. Large increases on a year-by-year basis can be indicative of problems that need to be addressed.

In light of this, it is concerning that the response to ISORA questions regarding disputes continues to be poor. In RA-FIT Rounds 1 and 2, only 33 percent of participants provided data, and of those the majority did not provide all the requested data. In ISORA 2016, the comparable percentage was 29 percent. The results are presented in Table 16. See Appendix Table 11 for a breakdown by World Bank–defined income groups.

Better responses to the ISORA questions will be required for this measure to eventually become useful, as there is not sufficient data across a number of years to yet make a reasonable analysis. In addition, large fluctuations in this measure may well be possible, especially in smaller countries where large-scale settlements can affect year-by-year comparisons dramatically. Measures other than value of the stock of administrative objections may also be used, such as the number of administrative review cases initiated per 1,000 active PIT or CIT payers. In light of a higher response rate in ISORA to questions concerning the number of objections than the associated values, tracking the number of review cases over time may prove to be a more useful measure. These data sets will benefit from the extended time series that future surveys will make possible.

From the data, it is reasonably clear that the value of administrative objections for small states is quite small. This may be indicative of a poor-functioning dispute resolution system or one at a very early stage of development. Values appear similar for lower- and higher-income jurisdictions, but as noted response rates on the ISORA dispute question was poor. This is particularly surprising for the higher-income participants where better completeness of data would have been expected.

Cost of Collection

The cost of collection is a widely used measure of tax administration efficiency, and sometimes effectiveness. In its simplest expression, "cost of collection" can be defined as the ratio of the cost of collecting revenue (that is, a measure of "input") to the revenue collected (that is, a measure of "output"). Despite the popularity of this measure for performance purposes, it needs to be used with great caution. Box 5 sets out some of the conceptual and measurement issues associated with the use of cost of collection as a measure of efficiency and effectiveness.

ISORA collects data that can be used to compute the "cost of collection" ratio. Because ISORA uses common definitions and approaches, the problems associated with the first item in Box 5 have been largely addressed. The other cautions remain. For the purposes of analyzing ISORA data, the cost of collection ratio is defined as:

$$\frac{\textit{Total recurrent expenditure}^{16}}{\textit{Net revenue collected less VAT and excises on import (if collected by customs)}^{17}}$$

This formula ensures the compatibility of the numerator and the denominator used in calculating the ratio. The use of recurrent expenditure only (that is, the exclusion of capital expenditure) makes for a less volatile measure over time. For 2015, information sufficient to compute the cost of collection ratio was provided by 76 participants. The cost of collection (both median and average) for 2015 for small-state, lower-income, and higher-income participants is set out in Table 17. See Appendix Table 12 for a breakdown by World Bank–defined income groups.

[16]This is found on ISORA Form 3A, question 1, Col. B.
[17]This is found on Form 1, question 3, Col. C *less* 3.II.B. b and e.

Table 17. Median and Average Cost of Collection Ratios, 2015

Group	Median (percent)	Average (percent)
Small States (11)	1.3	1.92
Lower Income (19)	1.0	1.10
Higher Income (46)	0.9	0.89
All (76)	**1.0**	**1.1**

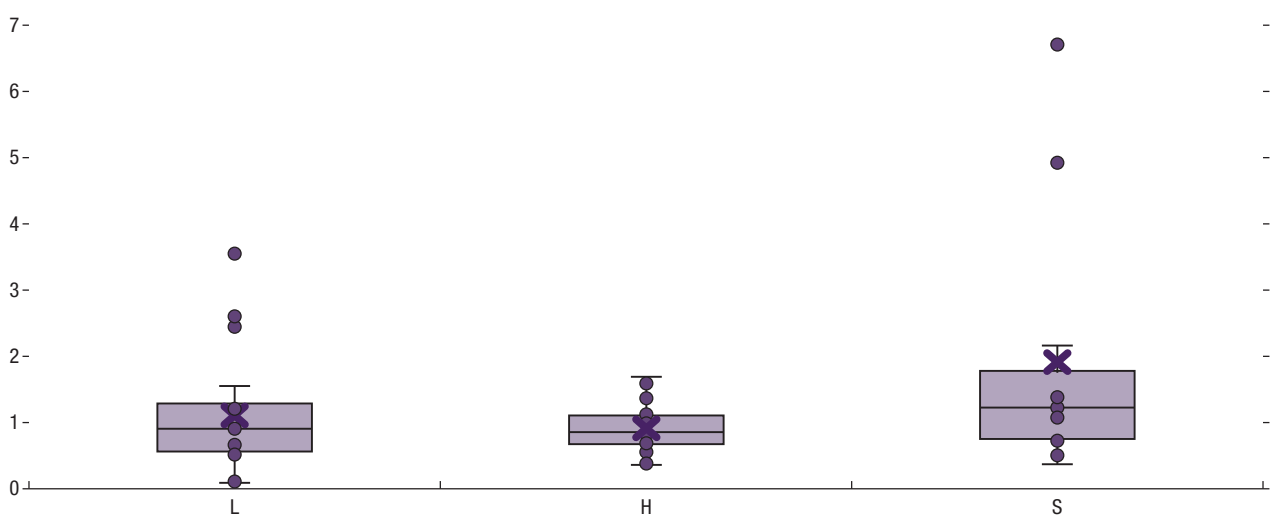
Note: Numbers in parentheses equal the sample size for data supplied in each column.

The large difference between the median and average values for small states suggests that the distribution of cost of collection ratios is highly skewed. This can be seen in Figure 9, which contains the box-and-whisker plots for each of the three groups of administrations.

The box that contains the values within the second and third quartiles is relatively narrow for high-income jurisdictions, and even the values within the first and fourth quartiles fall within the whisker range. For this group, the values are bunched tightly, and the mean almost coincides with the median value.

However, the distribution of values for the ratio is far wider and more skewed for both the small-state and lower-income groups. In each case there are a few high-value outliers that raise the value of the average (depicted by an "X") far above the median cost of collection (the horizontal line across the box, separating the second and third quartiles) for the group. For the small states, the average lies above the box (that is, within the top quartile of the

Figure 9. Distribution of the Cost of Collection Values, 2015



Box 5. Cautions in Using Cost of Collection as an Indicator

"Cost of collection" is a ratio of the cost of collecting taxes to the amount of taxes collected. All else being equal, reductions in this value indicate improvements in efficiency or effectiveness; however, this is seldom the case as the cost-efficiency and cost-effectiveness of a tax administration are impacted by many factors. As a result, a great deal of caution must be exercised when making international and national comparisons using this measure. The major considerations are the following:

1. Lack of common definitions and measurement approaches. This refers to all matters that impact the numerator and the denominator of the ratio. In relation to expenditure (the numerator), the treatment of employee benefits (such as pensions), accommodation (rent or own), and capital expenditure, among other things, may vary from tax administration to tax administration. In addition, some jurisdictions may be including costs incurred in areas other than tax administration, such as customs or independent investigative agencies, and others may not. With respect to tax revenue (the denominator), some countries will use "net" collections, and others will use "gross." Some will include such revenue items as nontax revenues and social security contributions, and others will not.

2. Differences in the range and nature of taxes administered and nontax functions performed. There are several differences that can arise here. In some countries, more than one major tax authority may operate at the national level (for example, customs, treasury, or independent investigative authorities). Some taxes may be administered at both the national and subnational levels, and in some cases national administrations may collect direct taxes with subnational administrations collecting mostly indirect taxes. In other cases, the national administration collects taxes for all levels of government. Many variants are in practice throughout the world, and this can impact greatly on international comparisons.

3. ***Macroeconomic changes.*** Abnormal movements in economic growth or inflation are factors that over time are likely to impact on the overall revenue collected by the revenue administration and the cost/revenue relationship. This is especially likely to occur in developing countries that are prone to a degree of volatility in the movement of such indicators.

4. ***Tax policy changes.*** Changes in tax policy, including rate changes, can have an impact on both the numerator and the denominator in the ratio.

5. ***Differences in compliance levels among jurisdictions.*** All other things being equal, initiatives that improve compliance with the laws (that is, improve effectiveness) will impact on the cost/revenue relationship. However, because the cost/revenue ratio

Box 5. Cautions in Using Cost of Collection as an Indicator *(continued)*

ignores the revenue potential of the tax system (tax gap), its value as a measure of effectiveness is extremely limited. This is particularly relevant in the context of international comparisons—jurisdictions with identical cost/revenue ratios can be poles apart in terms of their effectiveness at collecting revenues due.

range of cost of collection values). For the lower-income grouping, the high values raise the average above the median by 10 percent.

From the year-on-year changes, the accuracy of some of the extreme data points—both the high and the low values—for the small-state and lower-income groups appear questionable.

Despite these qualifications, higher-income jurisdictions reveal a more favorable ratio. To a certain extent this is expected—they tend to be more advanced especially in respect of automation. They also tend to have a larger cadre of highly skilled and experienced staff, and a better ability to detect and curb tax avoidance and evasion. These features should translate into higher levels of efficiency. A similar trend was evidenced in RA-FIT Rounds 1 and 2. The fixed or overhead costs of running a tax administration (that is, those that are not volume related) mean that smaller administrations could be expected to be associated with higher costs relative to collections.

The cautions in the use of this indicator will continue to limit its use, especially as an international comparator. Using the cost of collection ratio to compare the performance of a given tax administration over time will be more useful, but still some consideration of the cautions is necessary.

Tax Administration Resources in Relation to Taxpayers and Citizens Served

In reviewing tax administration performance, it is sometimes useful to consider the size of the administration (measured in FTEs) against selected population comparators. In this case, the comparators are "active taxpayers" and "citizens." While these measures may not lend themselves directly to the adoption of particular international benchmarks (owing largely to fundamental differences in tax administration roles including nontax roles across jurisdictions), they can be important points of comparison with outside administrations known to be similar and internally within the same tax administration at different points in time.

Table 18. Median Active Core Taxpayers per FTE

Group	2014	2015
Small States (18/20)	90	120
Lower Income (23/27)	33	35
Higher Income (54/53)	702	703
All (95/100)	**439**	**426**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

The median active core taxpayers per FTE for 2014 and 2015 is set out in Table 18. In this case, core taxpayers are those registered and active for PIT, CIT, VAT, and employers. These values may be considered as a proxy for workload per unit of labor, and hence a measure of efficiency, where workload is expressed by the number of active taxpayers for whom services (and enforcement) must be provided, and the labor unit is one FTE. See Appendix Table 13 for a breakdown by World Bank–defined income groups.

From Table 18, it is apparent that the number of active core taxpayers per FTE increases strongly when considering the two income groupings; in fact, higher-income jurisdictions have approximately 20 times more active taxpayers to "manage" per FTE than their lower-income counterparts, and approximately six or seven times more than for the small states. However, this can indicate many things: significantly greater efficiencies in higher-income jurisdictions, especially from automation and increased use of electronic services; the conduct of different tasks; administration of different tax regimes; more active taxpayers per citizen;[18] or other variables. Further, one might expect an economy of scale in FTEs required for the administration of a tax system, and so the lower ratios for small states are not unexpected. Since there are reasonable explanations for the large differences among the three groups, international comparisons across them will likely not be meaningful. However, comparisons within the groups, or comparisons over time for a particular jurisdiction, may be informative.

A second indicator in the same general area is citizens per FTE. The roles of many tax administrations go beyond their traditional tax roles, and hence they may interact with and provide services to citizens other than active taxpayers. The data on number of citizens used to calculate the citizen-to-FTE ratio comes from the World Bank's DataBank.[19] Table 19 sets out the ratio of citizens to FTE for 2014 and 2015. See Appendix Table 14 for a breakdown by World Bank–defined income groups.

[18]The ratio of active taxpayers to jurisdiction population for ISORA 2016 respondents varies from under 0.1 percent to over 100 percent.

[19]See https://data.worldbank.org/indicator/sp.pop.totl.

Table 19. Citizens per FTE

	Citizens per FTE	
Group	2014	2015
Small States (25/26)	1,461	1,430
Lower Income (31/32)	9,306	10,176
Higher Income (57/57)	1,556	1,476
All (113/115)	**2,167**	**2,192**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

The pattern seen here, where lower-income participants have significantly more citizens per FTE (about six times more than higher-income administrations) is not new. The same pattern was demonstrated in previous rounds of RA-FIT. Again, many factors are at play here, including the nature of the tax system, the size of the informal economy and relative levels of compliance, the actual levels of service provided, etc. Small states, which are mostly higher-income or upper-middle-income countries, exhibit similar citizen per FTE ratios to the higher-income grouping.

Conclusion

All measures have been assessed for 2014 and 2015 by grouping (small state, lower income, and higher income). A certain amount of year-on-year volatility is evident in the data presented, leading to the conclusion that a longer ISORA time series will lead to a better understanding of norms and trends.

As a rule, the lower-income and small-state jurisdictions lag behind the higher-income participants. However, in the case of some performance measures, such as on-time filing and payment rates, the differences are less marked than might be expected. To illustrate, a list of typical examples is shown in Table 20.

Unlike past surveys using RA-FIT Rounds 1 and 2, in ISORA there is now a reasonable number of participating jurisdictions in each group, which provides at least a minimum threshold for comparability. Because of the signifi-

Table 20. Illustrative Example of Indicators

Group	VAT On-time Filing	CIT On-time Filing	VAT On-time Payment	CIT On-time Payment	Debt Ratio	e-filing Rate	Cost of Collection
			(percent)				
Small States	81	40	84	84	52	58	1.92
Lower Income	84	72	93	88	24	49	1.10
Higher Income	90	81	93	94	38	89	0.85

Note: CIT = corporate income tax; VAT = value-added tax.

cant expansion of ISORA over RA-FIT, 2014 and 2015 will in many cases be the effective starting years for analysis.

As has been noted, ISORA is not an evidence-based process. Quality control of ISORA responses is limited to general plausibility and technical checks such as ensuring proper use of local currency values to the nearest thousand across all forms, and that significant variations across years have been queried. Content accuracy is 100 percent the responsibility of the participating jurisdiction. For this reason, it will be interesting to compare ISORA-reported values for these quantitative performance measures with the ever-increasing set of evidence-based assessments on the same measures under TADAT.

Future iterations and analyses of ISORA data will need to focus more on these measurable performance indicators to assist participants in making effective use of ISORA to improve performance in tax administration.

Profile Data

Introduction

Profile data includes both qualitative and quantitative data on a variety of aspects of tax administration. Some of these data are the kind of information that changes rarely or does not change much from year to year. Other data is volumetric in nature and is expected to change from year to year.

This section provides data about the shape and nature of the tax administrations that participate in ISORA. For instance, information is collected around the following topics:

- The institutional structure of the tax administration;
- Its scope of activities;
- The size of the tax administration (FTE and budget) and how these resources are deployed by function and by the tax administration's network of offices and geographic locations;
- Characteristics of the tax administration's workforce;
- The existence and structure of large taxpayer offices or programs, including the share of total tax revenue from large taxpayers;
- The registration of taxpayers;
- Legislated powers to gather information and to collect debts;
- Various general management and human resources management issues; and
- Compliance risk management.

Generally, there is a focus in this section on legal framework, structure, inputs, and outputs. Tax administrations have found it useful to compare themselves with peer organizations in these areas, and one of the major contributions of ISORA in this regard has been the harmonization of terminology and definitions such that there is a much-improved commonality and uniformity so that like is being compared with like.

Institutional Arrangements

This section deals with governance structures of tax administrations (or of comanaged tax and customs administrations) and with management boards where they exist.

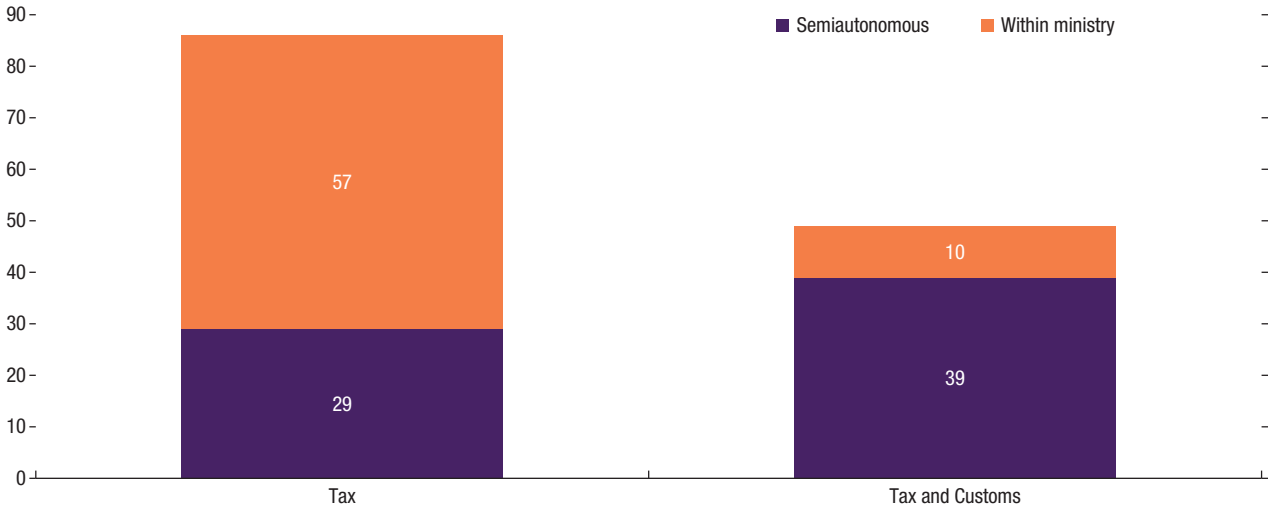
There are two common models for tax administration: (1) organizations composed of single or multiple directorates that are part of the ministry of finance; and (2) semiautonomous organizations, with or without a management board. In addition, there are two basic types of tax administration in terms of scope of responsibilities: (1) those in which tax administration and customs administration are separate organizational entities, and (2) those in which tax and customs administration are comanaged in the same organization.

ISORA participants self-assess as to whether they are a semiautonomous organization. The survey does not carry a specific definition of "semiautonomous"; however, this categorization has been used since the beginning of the OECD surveys in 2004 and has proven to be reasonably understandable and robust. In some jurisdictions, there is a more formal governance structure called a revenue authority, which is normally established by separate enabling legislation that sets out the parameters of autonomy for the organization. However, this category of governance is also difficult to define with precision.[20]

Based on participants' self-assessment of their autonomy status, the governance situation for 2015 for all 135 ISORA respondents is as set out in Table 21. The semiautonomous group covers both those that incorporate a management board and those that do not (more on management boards subsequently). This breakdown is displayed against those jurisdictions that are tax administration only, and those where tax administration and customs

[20]"Revenue authority refers to a governance model for revenue administration where traditional ministry of finance departments (tax and usually customs administrations) are established as an organization or agency with a degree of autonomy from government and independence from standard public service policies. A more precise definition of [revenue authority] is not really possible since these governance models cover a range on a spectrum" (IMF 2006).

Figure 10. Institutional Arrangements Matrix, 2015[1]



[1]135 respondents.

Table 21. Institutional Arrangements Matrix, 2015

Institutional Arrangements	Semiautonomous		Within Ministry		All	
	Number	*Percent*	Number	*Percent*	Number	*Percent*
Tax Only	29	*21*	57	*42*	**86**	***64***
Tax and Customs	39	*29*	10	*8*	**49**	***36***
All	**68**	***50***	**67**	***50***	**135**	***100***

administration are comanaged in the same organization. The same information is also displayed at Figure 10.

In RA-FIT Rounds 1 and 2, respectively, 40 percent and 45 percent of participants self-identified as semiautonomous. For ISORA 2016, the figure is now 50 percent. However, it is noted that ISORA is not fully comparable with RA-FIT as there is a different mix of participating jurisdictions. Still, it is noteworthy that half of ISORA's 135 participants self-identify as a semiautonomous organization.

Tax administration–only versus tax and customs administration comanaged is a different story. About 64 percent of ISORA participants are tax administration only, and just a third of these self-identify as semiautonomous. However, of the 36 percent where tax administration and customs administration are comanaged in the same organization, 80 percent self-identify as semiautonomous.

Table 22. Autonomy and Scope, 2015

Group	Semiautonomous (percent)	Within Ministry (percent)	All (percent)
Small States (31)	**26**	**74**	**100**
Tax Only	13	64	**77**
Tax and Customs	13	10	**23**
Lower Income (44)	**55**	**45**	**100**
Tax Only	16	43	**59**
Tax and Customs	39	2	**41**
Higher Income (60)	**60**	**40**	**100**
Tax Only	30	30	**60**
Tax and Customs	30	10	**40**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

When looked at through the lens of the grouping of small-state, lower-income, and higher-income jurisdictions, some additional patterns emerge. This information is presented in Table 22.

From the data in Table 22, it is evident that the small-state participants are much more likely to be part of the ministry of finance and less likely to be semiautonomous than their lower- and higher-income counterparts. They are also highly likely to be tax administration–only organizations. See Appendix Table 15 for a breakdown by World Bank–defined income groups, and Appendix Table 16 for a breakdown by type of institution.

The profile for the lower- and higher-income groups is very similar in all respects—close to 60 percent semiautonomous and 60 percent tax administration only. This result is striking—if participating administrations with a population of less than 1.5 million are excluded, 40 percent of participating administrations comanage their customs administration and tax administration functions in the same organization.

ISORA sought certain specific information from those participants self-identifying as semiautonomous (that is, did they have a management board; if so, was it a decision-making or advisory board; the number of board members; and the number of private sector board members). The IMF plans to conduct additional research into issues and practices related to autonomy, including the role of boards in tax administration, in the near future. Related responses are summarized in Figure 11 and Table 23.

More than half (53 percent) of the 68 participants who self-identified as semiautonomous indicated they had a management board, and for 80 percent of these (29 of 36) the management board is decision-making rather than advisory. The average number of board members is eight, with an average of three of those from the private sector.

Figure 11. Institutional Arrangements Including Nature of Management Board, 2015

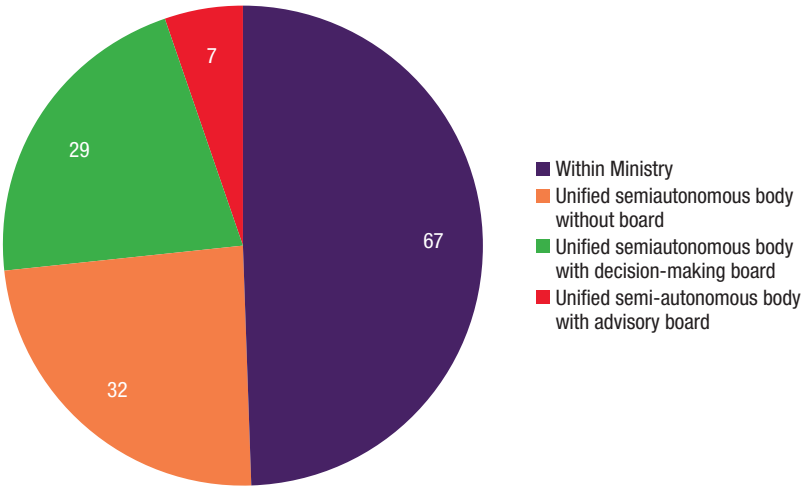


Table 23. Management Board Size by Type, 2015

Type of Board	Average Number of Board Members	Average Number of Private Sector Board Members
Decision-making Board (29)	8.1	2.8
Advisory Board (7)	6.4	2.5
All Boards (36)	**7.8**	**2.8**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

Scope

The *scope* of a tax administration is defined as the range of its tax and nontax activities. Typically, a tax administration has three kinds of collection or other responsibilities: (1) core taxes, (2) other taxes, and (3) nontax activities or roles.

Most jurisdictions have integrated the collection of *core* taxes (defined by TADAT as direct taxes such as PIT and CIT, and indirect taxes such as VAT and other general goods and services taxes; and social security contributions where they are a major source of revenue and collected by the tax administration) in a single tax administration. VAT on imports is normally collected at the border by customs, which may or may not be part of the same organization as tax administration.

Table 24. Share of Revenue by Revenue Type, 2015
(Percent)

Group	Core Taxes	Other Taxes (Non-core taxes)	Social Security Contributions	Nontax Revenue
Small States (23)	61.4	27.8	8.4	2.4
Lower Income (33)	69.8	26.3	0.9	3.1
Higher Income (54)	69.0	16.9	11.4	2.6
All (110)	**67.6**	**22.0**	**7.6**	**2.7**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

Other taxes is a standard category of taxes that includes, among others, domestic excises, motor vehicle taxes, real property, wealth taxes, estate and inheritance taxes, and others.[21]

Nontax activities or roles is another standard category that includes welfare benefits, child support, property valuation, student loans, population register, retirement savings, lotteries/gambling/gaming, and a broad spectrum of others.[22]

The following tables indicate a significant volume of activities and functions not related to core taxes that are the responsibility of tax administrations across the world. This is consistent with the findings of the OECD in its publication on ISORA 2016.[23]

> "There is an increasing trend, as also found in previous editions of the Tax Administration Series, to add other areas of responsibility to traditional tax roles. This . . . is a reflection of the strong capabilities that exist within tax organizations, particularly in registry, service delivery, customer interface, data management and compliance.
>
> This expansion of responsibilities can potentially increase risks to the core task of raising the tax revenue needed to fund public services and public goods, and requires strong governance, risk management and appropriate resourcing."

[21]Examples of "others" include, among others, taxes on payroll and workforce, travel tax, selective hydrocarbon taxes, capital gains tax, fringe benefits tax, various withholding taxes, nonresident shareholders' tax, education tax, hotel room tax, insurance surrender tax, graded tax, tourism marketing tax, technology tax, and tax on weapons.

[22]Examples of "others" provided by ISORA participants includes financial police, commercial registration, provision of statistics, tourism fees, public accounts management, treasury functions, vehicle licenses, gun licenses, state laboratory services, cadaster, passport fees, trade licenses, liquor administration, public officials asset declarations, traffic fines, toll road fees, state property administration, broadcasting fees, scholarship schemes, identity checks, mining royalties, stamp duties, training levies, utilities payments, land transfer fees, immigration fees, and clearance certificates.

[23]OECD (2017).

Table 25. Median Share of Revenue by Revenue Type for Administrations that Collect Each Revenue Type, 2015
(Percent)

Group	Core Taxes	Other Taxes	Social Security Contributions	Nontax Revenue
Small States (23/22/7/14)	67.6	27.6	20.8	1.9
Lower Income (33/31/3/18)	72.6	24.9	4.9	2.7
Higher Income (54/53/23/33)	67.6	15.1	30.5	1.5
All (110/106/33/65)	**69.2**	**20.0**	**27.1**	**1.7**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

ISORA provides information to show the relative contribution of core taxes, other taxes, social security contributions (SSC), and nontax revenue to total net revenue collected by the administration (this excludes tax revenue collected by organizations not part of the tax administration, that is, collected by customs). Table 24 sets out the average contribution of these various categories by the standard small-state, lower-income, and higher-income groupings for 2015. These average contributions are shown for all 110 administrations that provided sufficient data to determine the proportions. Appendix Table 17 breaks down this information by World Bank–defined income groups, and Appendix Table 18 breaks the same information down by IMF region.

Many of the measures derived from ISORA data cover the core taxes individually (for example, filing rates, payment rates, verification and debt figures), which make up approximately two-thirds of the net revenue collected by tax administrations. The remaining third is dominated by the contribution of other taxes, with SSCs and nontax revenue making up a little over 10 percent of collections. However, it is interesting to note that noncore taxes are more significant contributors to revenue in the case of small-state and lower-income jurisdictions. As expected, the collection of SSC is lowest among lower-income jurisdictions, but these jurisdictions also rely on their tax administrations more than those in small-state and higher-income jurisdictions in terms of collecting nontax revenue.

All 110 tax administrations collect one or more of the core taxes, and almost all collect at least one tax other than core taxes. Not all tax administrations collect SSC or nontax revenue. Table 25 shows the number of administrations that do collect these four categories of revenue, and for these that do collect this type of revenue, the median contribution of each revenue type to all revenue collected.

Nontax revenue is collected by almost two-thirds of the ISORA 2016 respondents, while almost one-third of tax administrations collect SSC. *It should also be noted that many of the nontax roles assigned to tax administrations do not result in the collection of any revenue*.

Table 26. Participants Collecting "Other Taxes," 2015
(Percent)

Group	Excises (domestic)	Motor Vehicle Taxes	Real Property	Wealth Taxes	Estate, Inheritance, Gift, and Other Taxes	Other Taxes
Small States (31)	48	45	42	16	23	61
Lower Income (44)	80	41	41	27	32	43
Higher Income (60)	65	37	52	22	48	68
Total (135)	**66**	**40**	**46**	**22**	**37**	**59**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

Table 27. Participants with Specific Nontax Roles, 2015
(Percent)

Group	Welfare Benefits	Child Support	Property Valuation	Student Loans	Population Register	Retirement Savings	Lotteries/ Gambling/Gaming	Other
Small States (31)	3	3	42	3	0	6	39	26
Lower Income (44)	0	0	18	2	0	2	36	32
Higher Income (60)	13	10	33	10	5	10	37	52
All (135)	**7**	**5**	**30**	**6**	**2**	**7**	**37**	**39**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

Concerning other taxes specifically, the situation is as shown in Table 26.

It is clear from Table 26 that substantial numbers of jurisdictions are involved in the collection of these other taxes, and from Table 25 that the revenue contribution associated with them is also significant. As noted by the OECD, these functions need to be properly resourced within the tax administration to ensure they do not divert resources away from collecting core taxes.

With respect to nontax roles, Table 27 sets out the proportion of ISORA participants indicating they have particular nontax roles. Appendix Table 19 provides a breakdown by World Bank–defined income groups.

In Table 27, under the "Other" column, a participant is counted if there is at least one other nontax role mentioned in the survey form. The average number of other nontax roles for participants responding positively to this question is two.

Table 28. Average Number of Nontax Roles and "Other Taxes" Collected, 2015

Group	Average Number of Nontax Roles	Average Number of "Other" Taxes Collected
Small States (31)	1.5	1.9
Lower Income (44)	1.0	1.8
Higher Income (60)	2.2	2.3
All (135)	**1.6**	**2.0**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

Table 29. Tax Administrations Collecting or Planning to Collect Social Security Contributions, 2015

Region	Collecting SSC (percent)	SSC Collection Planned (number)
AFR (37)	27	4
APD (19)	5	0
EUR (41)	54	4
MCD (5)	40	0
WHD (33)	33	0

Note: Numbers in parentheses equal the sample size for data supplied in each column. AFR = Africa; APD = Asia Pacific; EUR = Europe; MCD = Middle East and Central Asia; SSC = social security contributions; WHD = Western Hemisphere.

ISORA also provides information on the average number of other taxes collected per participant and the average number of nontax roles per participant. In this latter group, comments provided by those indicating "other" suggest an average of two "other" distinct nontax roles. Table 28 provides the 2015 information on average number of nontax roles and "Other Taxes."

With respect to SSC collections, a significant proportion of administrations are involved in the collection of SSC across all the geographical regions, bar the Asia Pacific region. More tax administrations are likely to take on the role of SSC collection in future, although the integration timeline is often anticipated to span several years. ISORA 2016 data shows that one tax administration that did not collect SSC in 2014 did so in 2015. In 2014, seven administrations indicated that there were plans to integrate SSC collection into tax administration, while in 2015 eight did so. These eight include all seven administrations that indicated a plan to integrate SSC and tax collection in their response for the previous year (Table 29).

Allocation of Tax Administration Staff

Staff Allocation by Function

ISORA collects data on how tax administrations allocate staff resources (FTEs) by function. This is often a useful point of comparison for tax administrations involved in the difficult task of allocating scarce resources across the spectrum of tax administration activity. ISORA participants are asked to provide FTEs for tax operations FTEs and for support activities FTEs.[24]

[24]Tax Operations: includes functions both at headquarters and operating offices related to - *Registration and Taxpayer Services* - taxpayer registration, taxpayer services and education; *Returns and Payment Processing* - processing returns, processing payments (including electronic payments), reconciling accounts and processing refunds; *Audit, Investigation, and Other Verification* - audit, investigation and other tasks involved with verification of taxpayer statements and claims; *Enforced Debt Collection and Related Functions* - debt collection and enforcement; *Disputes and Appeals* - management of objections and appeals; and, *Other Tax Operations Functions* - activities not covered by the prior descriptions, for example, staff involved in interpretations and rulings.

Figure 12. Full-Time Equivalent by Function, 2015
(Average percent)

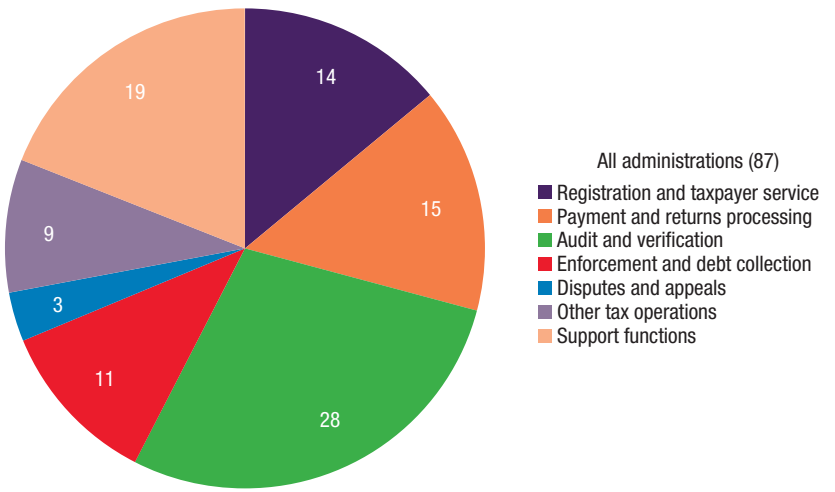


Table 30. Full-time Equivalents by Function, 2015
(Average percent)

Group	Registration and Taxpayer Service	Payment and Returns Processing	Audit and Verification	Enforcement and Debt Collection	Disputes and Appeals	Other Tax Operations	Support Functions
Small States (21)	14.7	15.3	30.1	10.7	2.1	8.8	18.3
Lower Income (19)	11.0	15.4	20.1	14.0	3.3	16.2	19.9
Higher Income (47)	14.9	15.0	30.9	10.2	3.9	6.1	19.0
All (87)	**14.0**	**15.2**	**28.4**	**11.2**	**3.3**	**8.9**	**19.0**

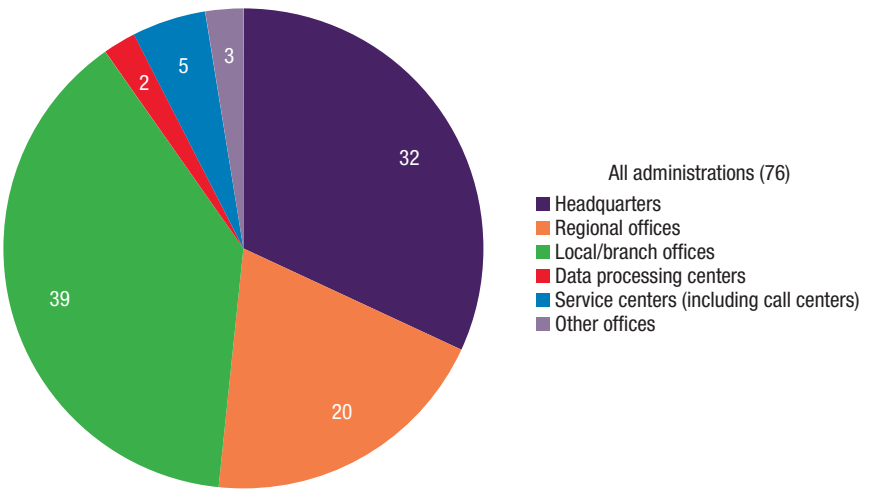
Note: Numbers in parentheses equal the sample size for data supplied in each column.

Figure 12 shows the staff allocation by function for 2015 (average percentage). Only data from administrations that provided data for all the entries for "Tax Operations" and "Support Activities" across the seven functional categories have been included in the analysis. This limits the administrations considered to 87, with a particularly poor response quality from administrations in the lower-income grouping (only 43 percent provided all the data required). Table 30 presents this same data in tabular format for ISORA participants by standard grouping. Appendix Table 20 provides a breakdown of the same data by World Bank–defined income group.

The proportion of staff allocated to audit and verification is the largest across all groups. However, it is clearly significantly lower for lower-income jurisdic-

Support Activities: includes all administrative, human resource management, information technology and other overhead functions, both at headquarters and in operational offices

Figure 13. Staff Allocation by Type of Office, 2015
(Average percent of full-time equivalent)



tions than for those in the small-state or higher-income groups (20 percent as opposed to 30 percent).

It is interesting to note that the total proportion of staff allocated to the basic services (registration and taxpayer services) together with enforcement and debt collection is similar across all the groups: almost exactly 25 percent for each group. Furthermore, and perhaps more surprising, resources for payment and returns processing are almost identical for all groups. It might have been expected, given the higher degree of automation usually found in higher-income jurisdictions, that their relative proportion of staff in this area would have been lower than the others.

Staff Allocation by Office

ISORA also collects staff data by type of office. Once again, using data only from administrations that supplied figures for operational and support staff in all the types of offices listed restricts the number of usable responses, even below those of allocation by function (76 as opposed to 87)—and again the response rate by lower-income jurisdictions is concerningly low. Figure 13 displays the average percentage of staff (FTE) by type of office.[25]

[25]The types of offices are *headquarters*—those central units not involved in operational activity; *regional offices*—offices reporting to headquarters that manage one or more local offices; *local/branch offices*—offices directly carrying out service or compliance activities; and three standalone office types—*data processing centers*; *service centers* (including call centers); and *other offices*.

Table 31. Full-time Equivalents by Type of Office, 2015
(Average percent)

Group	Headquarters	Regional Offices	Local/Branch Offices	Data Processing Centers	Service Centers (including Call Centers)	Other Offices
Small States (17)	52.9	9.8	29.8	0.2	6.1	1.2
Lower Income (16)	40.9	17.2	30.9	2.5	2.5	5.9
Higher Income (43)	20.3	24.6	44.9	2.9	5.5	1.8
All (76)	**31.9**	**19.7**	**38.6**	**2.2**	**5.0**	**2.6**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

The proportion of resources assigned to headquarters may be generally overstated. It is supposed to refer only to units not involved in operational activity. At about 32 percent of all FTEs, this seems rather high—an expectation might have been more in the 20 percent range. It may be that some jurisdictions (especially in the small-state and lower-income groups of ISORA participants) included all FTEs at headquarters "locations" rather than just those FTEs not involved in direct operations (see Table 31). Appendix Table 21 provides a breakdown of this data by World Bank–defined income group.

There are strong (and expected) differences when the data is viewed by standard grouping. Table 31 presents average percentage of FTEs by type of office and by standard grouping.

Headquarters' levels of FTEs for the higher-income group of jurisdictions is much closer to expectations, and the application of the definition will need to be reviewed for small-state and lower-income participants.

Small states have smaller regional and local structures as would be expected, and in particular have on average a small regional office presence—this "mid-layer" is likely superfluous in small-state jurisdictions.

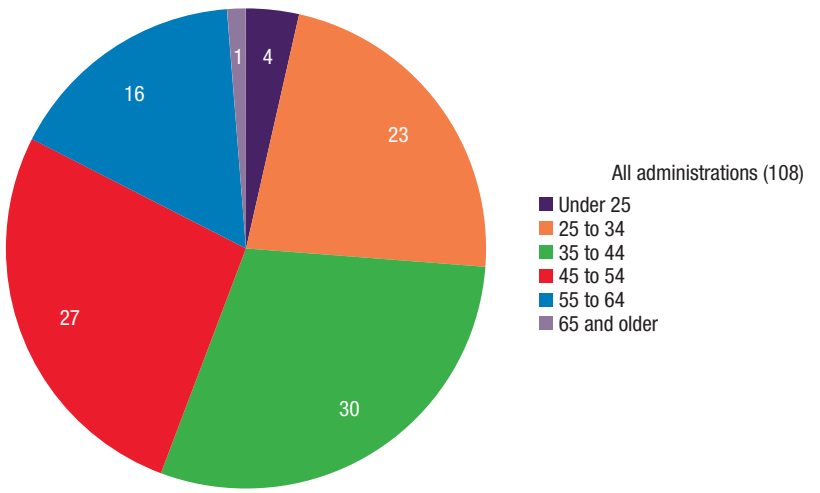
The allocation of staff to service centers and data processing centers is very low. This may be due to the outsourcing practices of participating tax administrations, and with respect to data processing centers—redundancy due to adoption of e-services. ISORA also gathers information on outsourcing, and relevant outsourcing data is presented in Table 32, which displays the propor-

Table 32. Administrations that Outsource Selected Activities, 2015
(Percent)

Group	Client Services (for example, call center operations)	Data Processing Services (for example, return data capturing)	Information Technology Services
Small States (31)	10	19	48
Lower Income (44)	11	23	41
Higher Income (60)	30	33	72
All (135)	**19**	**27**	**56**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

Figure 14. Staff by Age Group, 2015
(Percent)



tions of administrations that outsource some aspects of client services, data processing, and information technology.

Not unexpectedly, outsourcing is practiced more by administrations in higher-income jurisdictions. A third do outsource data processing, and 30 percent outsource client services including call centers.

Staff Demographics

ISORA collects information about staff in the tax administration including number of staff by staff category (for example, permanent, contractual, etc.), academic qualifications, age, length of service, and gender. This section presents summary information on the last three features: age, length of service, and gender.

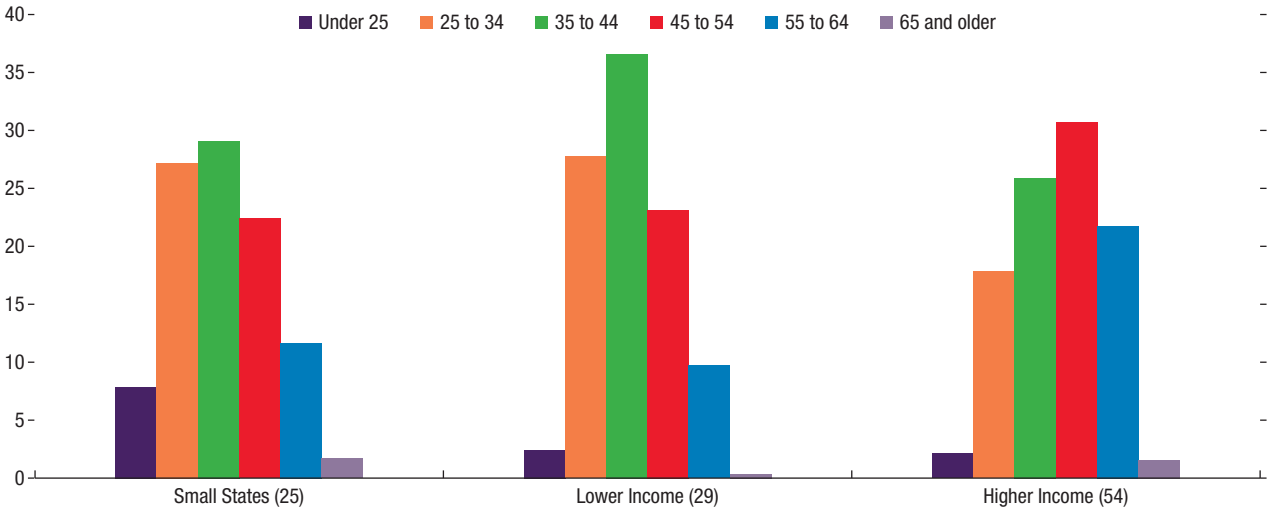
Age

Figure 14 shows the percentage of staff by age group for all participants that provided data on the age of staff.[26]

From Figure 14, it can be seen that percentage of tax administration staff aged 45 years and older is just over 44 percent, whereas staff aged 55 years

[26]The ISORA 2016 questionnaire requested the age profile for permanent staff; however, many administrations have provided information covering more than permanent staff alone.

Figure 15. Staff Age Distribution, 2015
(Percent)



and older alone constitutes 17 percent of the tax administration staff. By comparison, based on International Labour Organisation statistics, the proportion of the general labor force aged 45 years and older is about 36 percent and the proportion aged 55 years and over is 16 percent.[27] The overrepresentation of tax administration in the older age groups will have challenging consequences for management.

These challenges become even more apparent when the age profiles are broken down by standard grouping (see Figure 15). Appendix Table 22 provides the same breakdown by World Bank–defined income group.

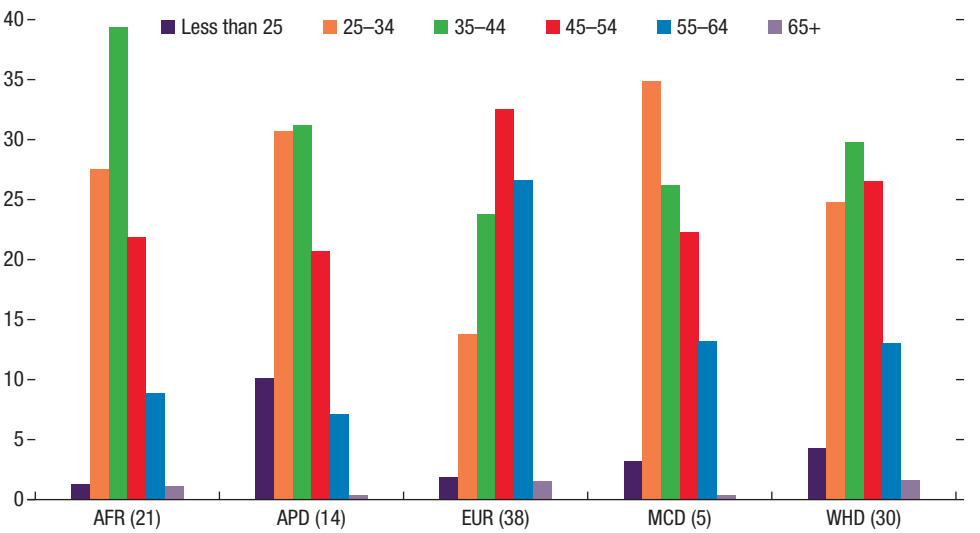
As noted, more than 44 percent of the staff of tax administrations are in the 45 years and older age bracket. Differences in the age distribution in this bracket are evident among the three groupings. Tax administrations in lower-income jurisdictions have a younger workforce with only about 33 percent in the 45 years and older bracket. For small states, the comparable figure is 36 percent and for higher-income ISORA participants it is 54 percent. The age distribution of the staff of tax administrations by region is discussed in more detail in Box 6.

[27]International Labour Organisation (2018).

Box 6. Age Distribution of Staff: Tax Administrations versus the General Labor Force

The age distribution of tax administration staff by IMF region shows distinct differences, as illustrated in Figure 16.

Figure 16. Staff Age Distribution by IMF Region, 2015
(Percent)



Although sub-Saharan Africa shows the strongest concentration of staff in the 35- to 44-year-old grouping, tax administrations in the Asia Pacific region are the youngest on average. The latter is the only region to have 10 percent of its staff aged 25 years or less, and over 40 percent of staff younger than 35 years. At the other extreme, tax administrations in Europe have more staff aged 55 to 64 years than staff aged 35 to 54 years. It is also the only region for which most staff fall in the 45- to 55-year-old bracket.

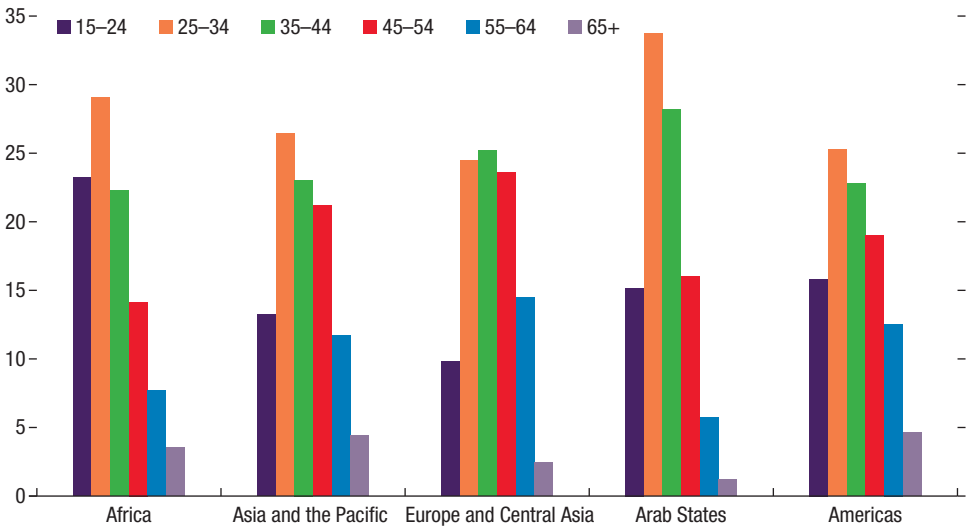
The question arises as to how much these strong differences in age distribution may be a reflection of the age of the general labor force by region. Figure 17 shows the age distribution of the labor force for similar regions according to International Labour Organisation data.

There are distinct regional differences in the general labor force: over 50 percent of the labor force in Africa is under 35 years, while in Europe (and Central Asia) over 40 percent of the labor force is over 45 years. However, by comparing the age distribution of the staff of tax administrations with that of the general labor force, it is evident that there are fewer staff under 35 years in tax administrations than in the labor force, with

Box 6. Age Distribution of Staff: Tax Administrations versus the General Labor Force *(continued)*

the exception of staff aged 25 to 34 years in the Asia Pacific region. Apart from lower proportions of staff over 65 years in tax administrations than in the general labor force, tax administration staff are generally older. This is particularly noticeable in the case of Europe, where over a quarter of tax administration staff is between 55 and 64 years.

Figure 17. Staff Age Distribution by Region: General Labor Force, 2015
(Percent)



Source: ILO data.

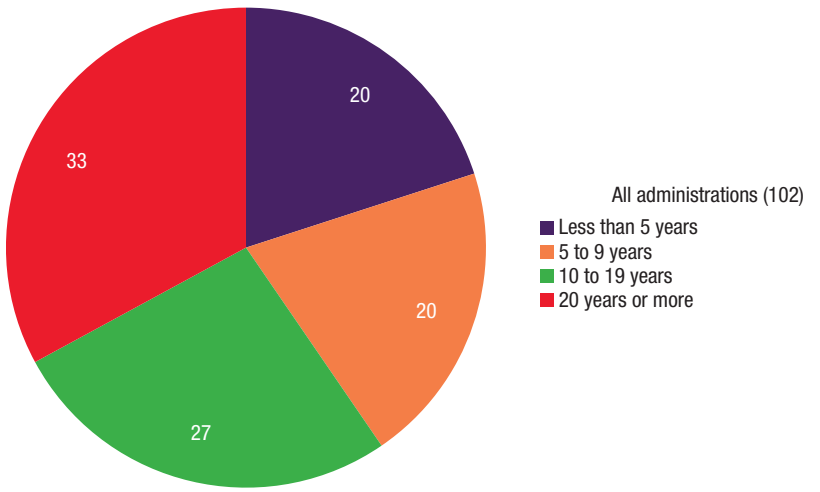
Length of Service

The length of service of staff by percentage for all ISORA participants is shown in Figure 18, and the same information by standard grouping is at Figure 19. Appendix Table 23 provides a breakdown by World Bank–defined income group.

In general, the high proportion of staff with service of 20 years or more fits the profile of long staff tenure in specialized, technical work areas.

As might be expected, given the difference in age profile of staff in jurisdictions by income grouping, there is also a strong difference in the percentage of staff by length of service. Higher-income jurisdictions have a high proportion of experienced staff: two-thirds of their staff have 10 or more

Figure 18. Service Profile of Tax Administration Staff, 2015
(Percent)



years' service but on the other hand, they have had relatively small intakes of new staff. A quarter of the staff of small states has been taken on in the past five years.

The age and length-of-service profiles are both consistent with a picture in which staff growth has taken place more recently in tax administrations in lower-income jurisdictions and in small states.

Figure 19. Service Profile of Tax Administration Staff by Standard Grouping, 2015
(Percent)

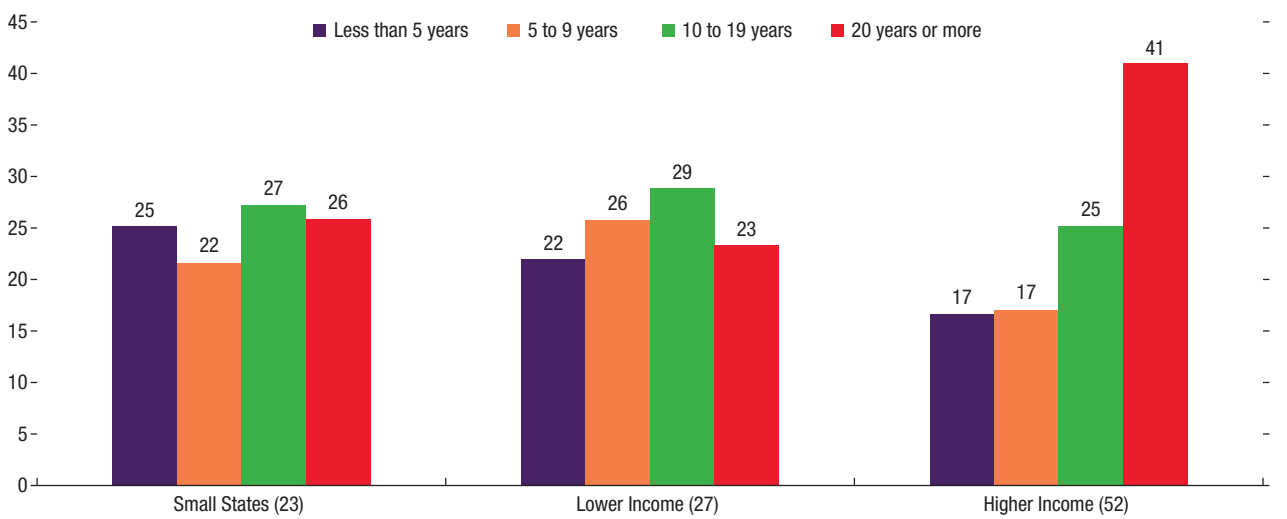
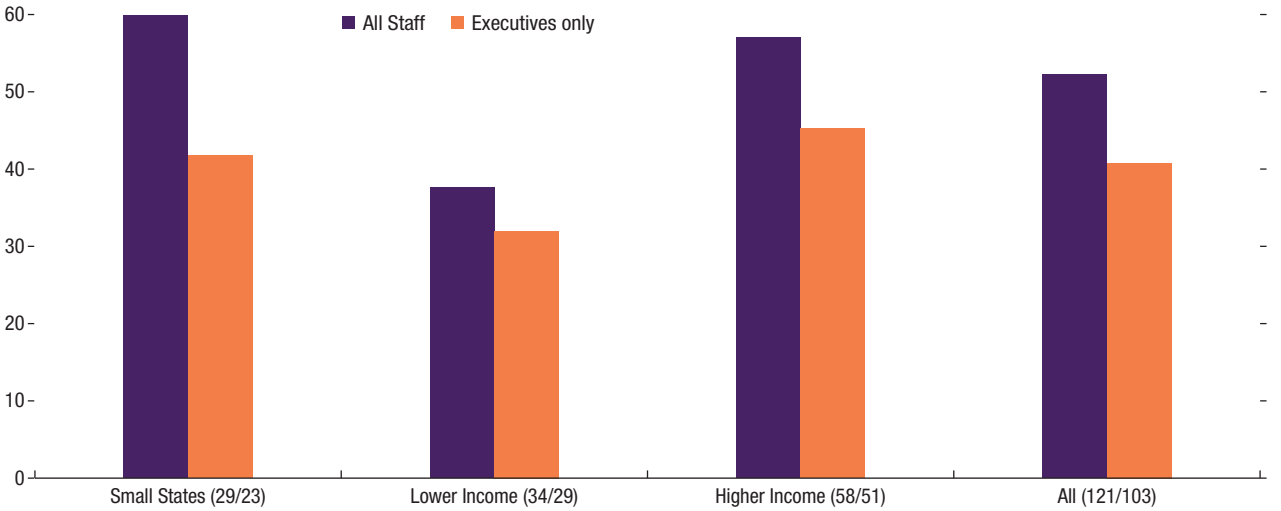


Figure 20. Female Staff and Executives, 2015
(Percent)



Gender

The percentage of female staff among ISORA 2016 participants is shown in Figure 20. It shows both the percentage of female staff generally and the percentage of female executives (it was left to participants to define what is meant by executives[28]). Appendix Table 24 provides the same data broken down by World Bank–defined income group.

The proportion of female staff, as well as female executives, is higher in tax administrations in higher-income jurisdictions and small states than in lower-income jurisdictions. In each group, the average percentage of female executives is lower than the proportion of female staff. Only in 36 administrations of the 103 for which data are available does the proportion of female executives exceed the corresponding staff proportion.

Segmentation

Modern, effective tax administration requires the segmentation of the taxpayer base in order to manage taxpayers according to risk, both from a service and enforcement perspective. The typical segments administrations find most useful are denominated by size, with special measures and approaches

[28]The meaning of "executive" varies among tax administrations: in a few cases, particularly in very small tax administrations, the ratio of "executives" to staff is over 25 percent, whereas the lowest ratio is less than 1 in a 1,000, and thus the figures provided by participants are not necessarily comparable.

for the very large and the very small. The large taxpayers are generally those subject to the core taxes and which meet other specific criteria or thresholds. The small taxpayers are often those subject only to income tax and/or to other taxes applicable below a particular threshold, such as turnover limits. Another increasingly used segment is high-net-wealth individuals (HNWIs), a high-risk group with respect to reporting income.

ISORA collects information related to the large and small taxpayer segments, and high-net-wealth taxpayers. This section presents information on the following:

- The existence of a large taxpayer office or program, HNWI program, and simplified tax regime for small taxpayers;
- Revenue collected through a large taxpayer office/program (LTO/P), and percent of CIT taxpayers managed by the program;
- The criteria for determining large taxpayers;
- The functions carried out by LTO/Ps; and
- The proportion of participants using various simplified regimes for small taxpayers.

ISORA participants were required to provide basic information about the segmentation of their taxpayers. Table 33 and Figure 21 identify the number of administrations who provided information about whether they utilized the three most common segmentation groupings: (1) an LTO/P, (2) an HNWI program, and (3) a simplified regime (based on legislation) for small taxpayers. Appendix Table 25 provides a breakdown of this data by World Bank defined income group.

In terms of utilizing a segmentation approach for its largest taxpayers, almost all lower-income and higher-income ISORA participants have a specific LTO/P. For the small-state participants, only half utilize this approach. This is not a surprising result, as the issue of scale at the very smallest of the small states may well preclude the formal establishment of an office or program that focuses specifically on the largest taxpayers. It is also possible that some of these very small states do in fact have a special focus on their largest taxpayers, but it is not considered a formal program as such.

With respect to HNWIs, it has been a matter of increasing focus in recent years especially in the higher-income jurisdictions. This group is considered extremely high risk, with a complex mix of business and tax dealings. The take-up rate for focusing on this segment appears to be increasing for the higher-income jurisdictions (as reported by OECD), but for the lower-income group and for the small-state participants it remains very low.

Figure 21. Administrations with LTO/P, HNWI, and Small Taxpayer Regimes, 2015
(Percent)

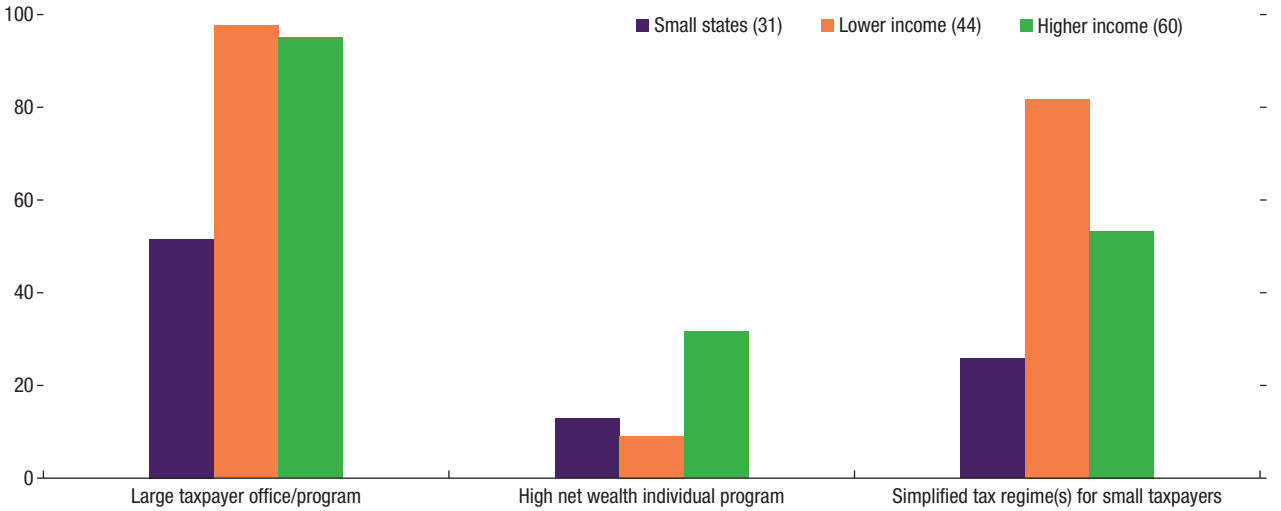


Table 33. Administrations with LTO/P, HNWI, and Small Taxpayer Regimes, 2015
(Percent)

Group	LTO/P	HNWI	Simplified Regime or Small Taxpayers
Small States (31)	52	13	26
Lower Income (44)	98	9	82
Higher Income (60)	95	32	53
All (135)	**86**	**20**	**56**

Note: Numbers in parentheses equal the sample size for data supplied in each column. HNWI = high-net-wealth individual; LTO/P = large taxpayer office/program.

Some administrations use a simplified tax regime for the small taxpayer segment, where the amounts of tax revenue at stake are disproportionately low and where, for many administrations, the availability of adequate books and records is also low. This could help explain why the incidence of a specific regime for small taxpayers for lower-income participants is more than 80 percent versus an average rate for all participants of 56 percent.

Two measures often used as indicators of a sound structure for LTO/Ps are the percentage of total core tax revenue (net) collected through the LTO/P and the percent of CIT payers included. These elements are shown in Table 34. Appendix Table 26 provides this same data broken down by World Bank–defined income group.

The median proportion of total net core tax revenue collected through the LTO/P is approximately 45 percent for 2014 and 2015. Rates for lower- and

Table 34. Total Tax Revenues Collected and Corporate Income Tax Payers Included in the LTO/P

	Median Percentage of Revenue Collected		Median Percentage of Corporate Taxpayers	
Group	2014	2015	2014	2015
Small States (2/3/6/7)	—[1]	—[1]	2.2	2.7
Lower Income (24/19/24/27)	45	49	6.0	4.5
Higher Income (32/29/45/44)	44	45	0.5	0.4
All (58/51/75/78)	**44**	**45**	**1.4**	**2.0**

Note: Numbers in parentheses equal the sample size for data supplied in each column. LTO/P = large taxpayer office/program.
[1]Fewer than five respondents.

higher-income groups are similar. This is consistent with the data from previous RA-FIT surveys covering 2011 to 2013.

CIT payers included in the LTO/P are significantly lower for the higher-income group. This is expected as higher-income participants have much higher rates of CIT payers per citizen compared to their lower-income counterparts. The ratio of active CIT payers to citizens is more than 10 times higher in higher-income jurisdictions than in lower-income jurisdictions (the median proportions are 3.9 percent and 0.2 percent, respectively—see section on Registration).

Participants who indicated they had an LTO/P were asked to provide information about criteria used to select taxpayers for this segment. This information is displayed in Figure 22. Appendix Table 27 provides this information broken down by World Bank–defined income group.

From Figure 22, the vast majority of ISORA participants use turnover as one criterion for including a taxpayer in the LTO/P. Economic sector or economic activity is second most used, followed by taxes assessed or paid, assets, and income. Other criteria were also indicated, especially for the higher-income group. Examples of companies included in LTO/Ps in the "other criteria" column include multinationals, companies that serve as a local branch of an international company, and smaller companies or subsidiaries that form part of a group, whereas individuals with international business interest and very important persons are also included in some LTO/Ps.

Not all LTO/Ps provide full-service (that is, the full range of tax administration functions—registration, taxpayer services, returns and payment processing, audit, enforced collection of arrears, and dispute resolution). Table 35 indicates the range of tax administration functions provided by the LTO/P. Appendix Table 28 provides this same information broken down by World Bank–defined income group.

Figure 22. Taxpayer Selection Criteria for LTO/P, 2015
(Percent)

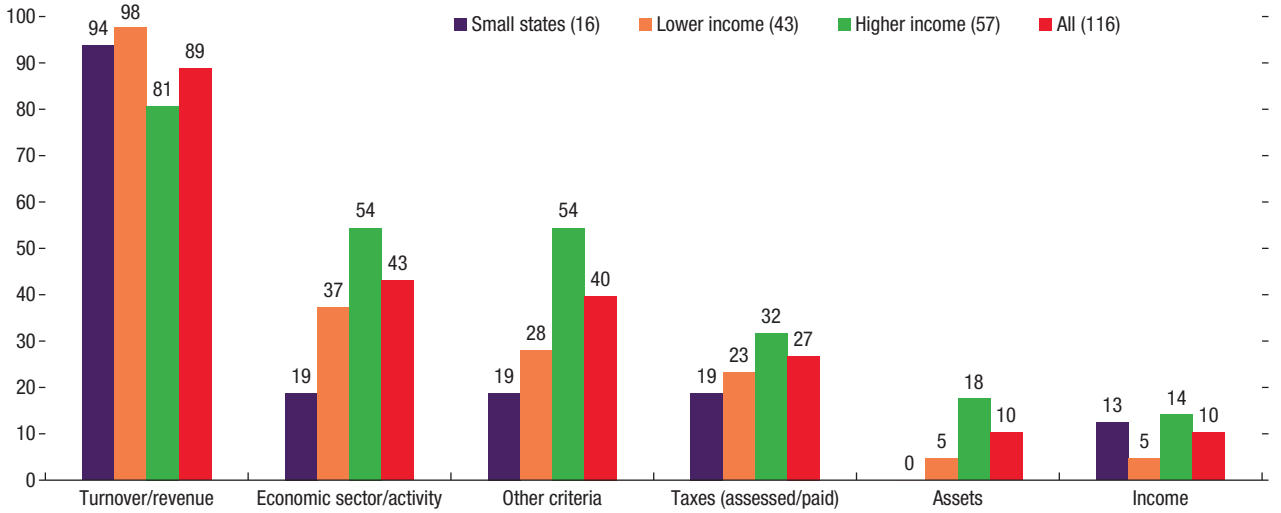


Table 35. Range of Functions within LTO/Ps, 2015
(Percent)

Group	Audit	Arrears	Services	Returns/Payment	Disputes	Registration	All Services
Small States (16)	88	69	81	50	50	25	6
Lower Income (43)	84	91	84	79	40	49	21
Higher Income (57)	96	53	86	60	53	49	21
All (116)	**91**	**69**	**84**	**66**	**47**	**46**	**19**

Note: Numbers in parentheses equal the sample size for data supplied in each column. LTO/P = large taxpayer office/program.

It is clear from Table 35 that there is a considerable mix of functions provided through the LTO/P, with audit being the most common function at 91 percent overall, and 96 percent for the higher-income group. While only one small state has an LTO/P that covers all six functions, just over 20 percent of the LTO/Ps in lower-income and higher-income jurisdictions provide an all-service LTO/P.

Simplified regimes for small taxpayers is another way tax administrations tackle the issue of risk and ensure that smaller taxpayers are taxed. This segment has a large number of taxpayers that provide little in revenue. Further, in lower-income jurisdictions, there is often a lack of books and records for the tax administration to examine. Table 36 and Figure 23 show the proportion of participants with specific regimes for small taxpayers using the various types of regimes.[29] Administrations may apply more than one small taxpayer regime. Appendix Table 29 provides the same information broken down by World Bank–defined income group.

[29]The small taxpayer regimes are detailed in the *ISORA 2016 Guide*, available on the RA-FIT Data portal.

Figure 23. Incidence of Small Taxpayer Regimes, 2015
(Percent)

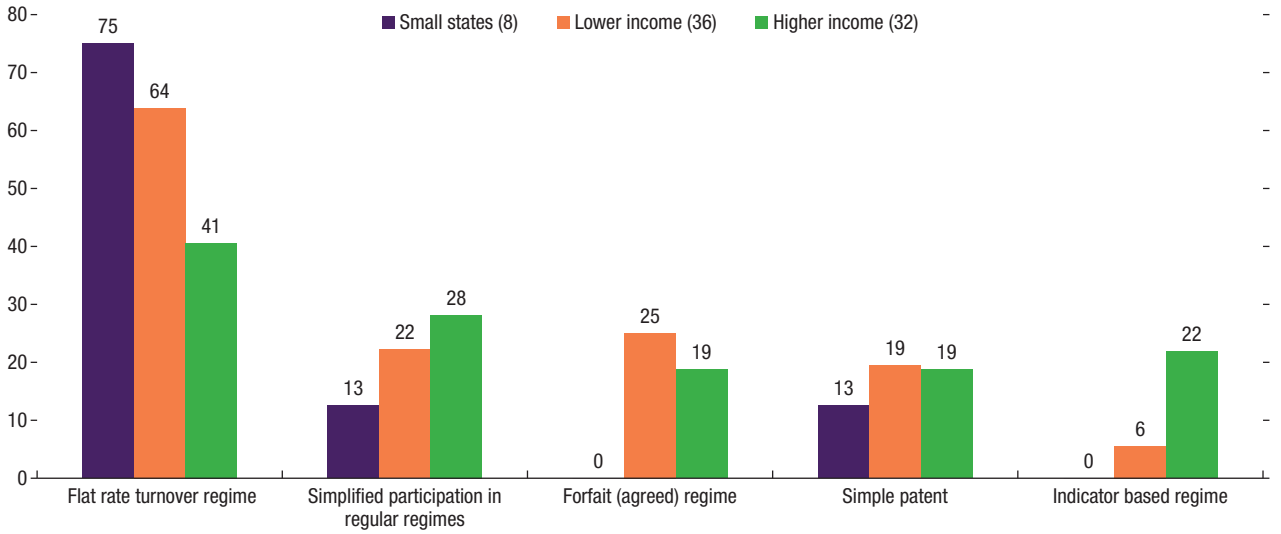


Table 36. Incidence of Small Taxpayer Regimes, 2015
(Percent)

	Type of Small Taxpayer Regime					
Group	Flat Rate Turnover Regime	Other	Simplified Participation in Regular Regimes	*Forfait* (Agreed) Regime	Simple Patent	Indicator-based Regime
Small States (8)	75	0	13	0	13	0
Lower Income (36)	64	25	22	25	19	6
Higher Income (32)	41	31	28	19	19	22
All (76)	**55**	**25**	**24**	**20**	**18**	**12**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

A flat rate on turnover and simplified participation in regular regimes are the two most popular approaches.

Registration

Taxpayer registration is a critical function for tax administration—it is the platform upon which all other functions are built. ISORA covers some basic aspects of the registration function, including:

- Use of a taxpayer identification number;
- Where and by whom registration can take place;
- Active taxpayers (normally those for whom a tax consequence arises during the fiscal year or that for any other purpose are obliged to file a tax return) compared to total taxpayers, by tax type;

- Registration channels; and
- Improving the quality of the tax register.

For TADAT assessments, there are no quantitative measures per se, but TADAT does assess many aspects of the taxpayer register, the registration process, and maintenance of the taxpayer register.[30]

As noted earlier, this publication does not present information about specific jurisdictions, so it does not focus on the total number of registered taxpayers by group (small state, lower income, and higher income). Given the very broad size range across each of these groups (including small-state jurisdictions) information on total registered taxpayers is not especially meaningful.

However, the question of total taxpayers on the registry versus active taxpayers is more informative. An active taxpayer is defined as "a taxpayer from whom a return is expected," and this is the same definition used by TADAT.[31] In the normal case, there is an expectation that active taxpayers would be a subset of total taxpayers on the register. A significant difference between the two can be indicative of poor taxpayer registry quality or even systemic issues such as the inability to deregister taxpayers. Having a good understanding of the active taxpayer base is important for forecasting workload for such functions as return processing and payment. Having a high-quality and up-to-date register is critical for other functions, such as filing compliance and searching cases of nonregistration.

In view of this discussion, it is somewhat surprising that participants continue to have difficulties in providing figures for both total taxpayers and active taxpayers. Table 37 and Figure 24 show instances where participating jurisdictions have effectively presented just a single number for registered taxpayers.[32]

It is not entirely clear why so many jurisdictions are unable to provide both total and active taxpayers, or that seemingly do not make the distinction between the two. Further study on this question will be necessary.

[30]On registration, TADAT assesses, among others, who must register, by law; the nature and content of the registration database; use of a taxpayer identification number; procedures for registration and deregistration; accuracy of register; detection of potential taxpayers not in register; and the extent of computerization in registration processes.

[31]The complete TADAT definition reads: "A registered taxpayer from whom a tax declaration (return) is expected (i.e. 'active' taxpayers exclude those who have not filed a declaration within at least the last year because the case is defunct (e.g. a business taxpayer has ceased trading or an individual is deceased), the taxpayer cannot be located, or the taxpayer is insolvent)."

[32]These are cases where total taxpayers on the registry are provided, but not active taxpayers, or where active taxpayers are provided but not total, or where the same number has been used for both active and total.

Figure 24. Participants Not Providing Data for Both Total and Active Taxpayers
(Percent)

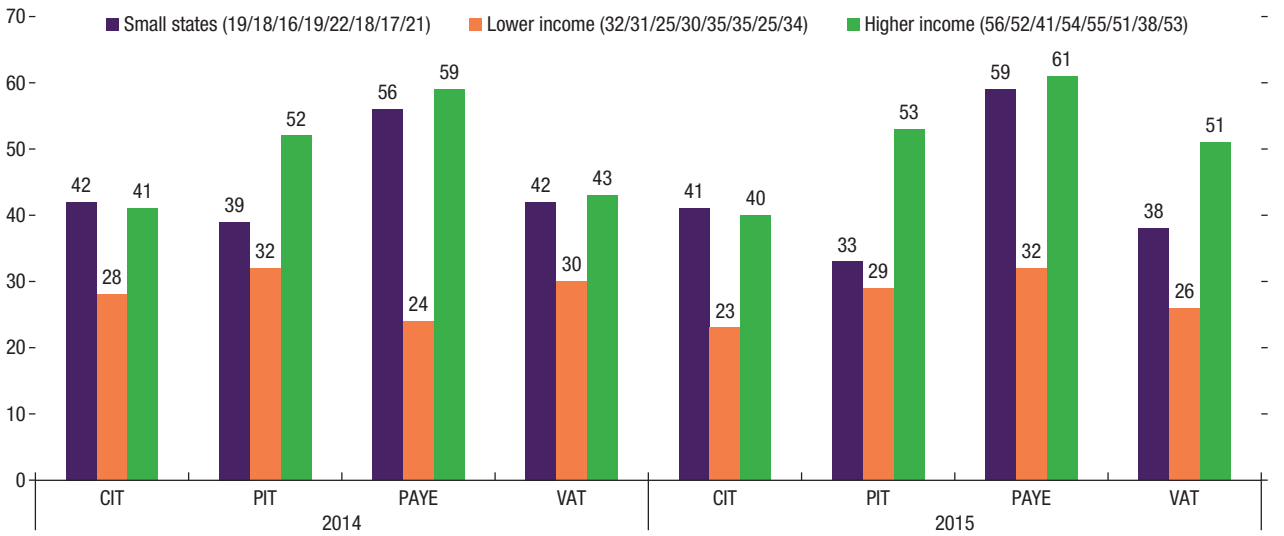


Table 37. Participants not Providing Data for Both Total and Active Taxpayers

	2014				2015			
Group	**CIT**	**PIT**	**PAYE**	**VAT**	**CIT**	**PIT**	**PAYE**	**VAT**
Small states (19/18/16/19/22/18/17/21)	42	39	56	42	41	33	59	38
Lower income (32/31/25/30/35/35/25/34)	28	32	24	30	23	29	32	26
Higher income (56/52/41/54/55/51/38/53)	41	52	59	43	40	53	61	51
All (107/101/82/103/112/104/80/108)	**37**	**44**	**48**	**39**	**35**	**41**	**51**	**41**

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; PAYE = pay as you earn; PIT = personal income tax; VAT = value-added tax.

For those participants who provided total taxpayers and active taxpayers, Figure 25 shows the median ratio of inactive taxpayers to total registered taxpayers, excluding administrations who provided the exact same number for both. Appendix Table 30 provides a breakdown of where participants only provided active taxpayers using World Bank–defined income groups.

From Figure 25, it is clear that the lower-income grouping carries a larger proportion of inactive taxpayers on their registers for all taxes except PIT in both years, and PAYE in 2014 only. This is not surprising—many of these administrations have less developed registration systems and are known to have problems with basic register quality and specific issues such as deregistration. The PIT situation is likely mitigated by the number of lower-income participants operating a final withholding system for PIT.

Figure 25. Median Percentage of Inactive Taxpayers to Total Registered Taxpayers

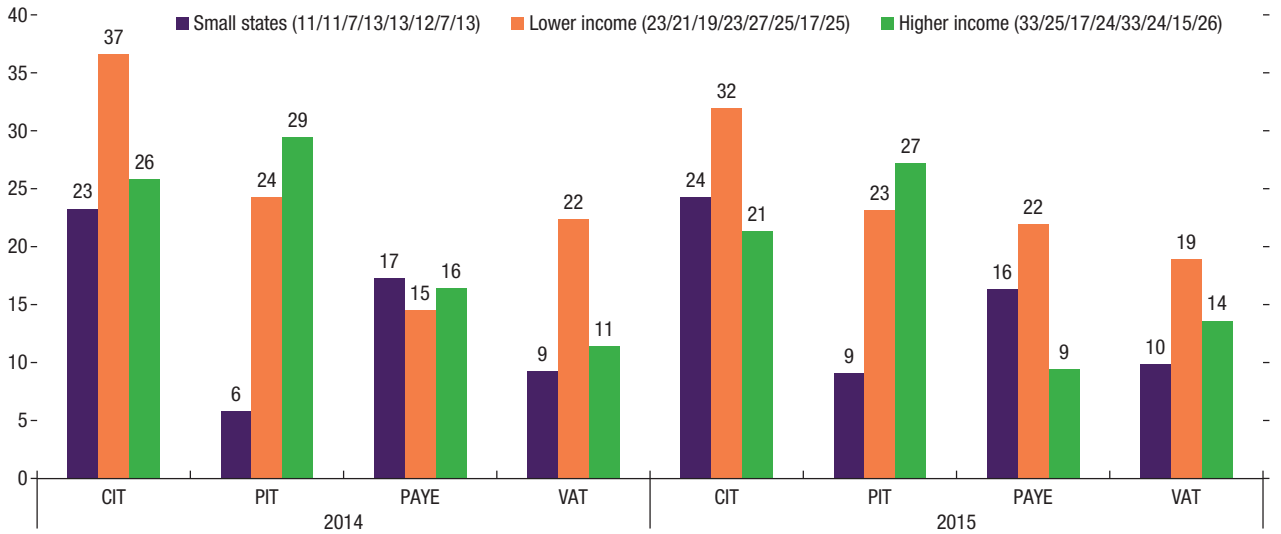


Table 38. Taxpayers as a Percentage of Citizens, 2015

	2015 (percent)			
Group	**CIT**	**PIT**	**PAYE**	**VAT**
Small States (19/16/14/20)	10.2	39.0	3.0	5.4
Lower Income (33/33/24/32)	0.2	1.5	0.3	0.5
Higher Income (51/49/36/49)	3.9	42.3	3.0	5.3
All (103/98/74/101)	**3.9**	**28.0**	**2.1**	**3.8**

Note: Numbers in parentheses equal the sample size for data supplied in each column.
CIT = corporate income tax; PAYE = pay as you earn; PIT = personal income tax; VAT = value-added tax.

It can also be useful to examine the ratio of taxpayers to citizens.[33] Table 38 provides, for 2015, taxpayers as a percentage of citizens.

Lower-income participants have consistently lower values by at least an order of magnitude. There can be many reasons for this: poor quality tax registries, significant gray economy issues (nonregistrants), general economic conditions, final withholding PIT systems, higher VAT thresholds, and other factors.

Information Gathering Powers

Tax administrations require legislative powers to obtain information that enables them to administer and enforce the tax laws for which they have

[33]This calculation uses active taxpayers where that data is provided, or total taxpayers where active is not provided.

Figure 26. Specific Information Gathering Powers, 2015
(Percent)

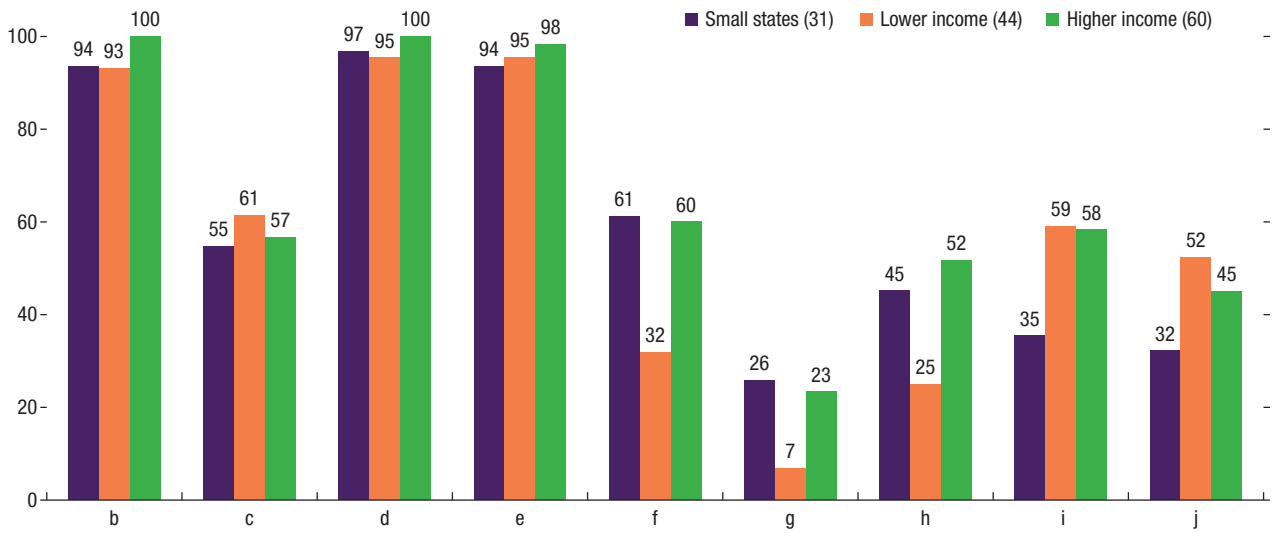


Table 39. Specific Information Gathering Powers, 2015
(Frequency of occurrence for respondents with the powers)

Information-gathering Power	Frequency (percent)
(a) To obtain all relevant information	100
(b) To request information from third parties	96
(c) To extend powers to third parties	58
(d) To require taxpayers to produce all records on request	98
(e) To obtain information from other government departments or agencies	96
(f) To enter taxpayers' business premises without taxpayers' consent or search warrant	51
(g) To enter taxpayers' dwellings without taxpayers' consent or search warrant	19
(h) To seize taxpayers' documents without taxpayers' consent or search warrant	41
(i) To request a court to issue a search warrant without assistance from other government agencies	53
(j) To serve search warrants without assistance from other government agencies	44

responsibility. ISORA collects data about the extent to which tax legislation provides for specific powers to gather required information.

All 135 ISORA participants indicated their legislation provided for such powers. They were asked to comment on whether specific powers existed. Those powers, and the frequency (in percentage) of their existence in participating jurisdictions, is presented at Table 39. Similar information broken down by standard grouping is found in Figure 26.

All administrations indicate that they can "obtain all relevant information," whereas over 95 percent of administrations have the powers (b), (d), and (e) (to request information from third parties, require taxpayers to produce

records on request, and obtain information from other government departments and agencies, respectively).

Information-gathering powers exist in higher-income jurisdictions to a greater extent than they do for small-state and lower-income participants for many of the powers listed. Certain information-gathering powers are less likely to exist in small states (the powers to obtain or serve search warrants without assistance from other government agencies) and in lower-income jurisdictions (the power to enter taxpayers' business premises or dwellings or to seize documents without consent or a search warrant).

In addition, it is concluded that (a) (to obtain all relevant information) is not really a legislated power as are the other items in Table 39. Finally, it is noted that the ISORA forms also asked about the frequency of "other" information-gathering powers that might exist. Narrative responses to this question were quite diverse and suggest that the legal structure of information-gathering powers from jurisdiction to jurisdiction may be quite different and that finding a common basis for comparison will be difficult.

Debt Collection Powers

The ISORA survey lists 20 debt collection powers and asks participants to indicate whether the power is not applicable (that is, does not exist), is never used, is infrequently used, or is frequently used. The specific powers referred to are the following:

1. To grant extensions of time to pay tax debts;
2. To formulate payment arrangements;
3. To collect taxes owed via third parties (for example, banks, employers);
4. To impose restrictions on overseas travel;
5. To garnishee salaries/wages or other property;
6. To affect a temporary closure of a business/withdrawal of a license;
7. To offset tax debts against excess/overpayments arising under other taxes;
8. To obtain a lien over a taxpayer's assets;
9. To withhold payments owing to a delinquent taxpayer by the government;
10. To require businesses to obtain a tax clearance certificate when bidding for government contracts;
11. To have delinquent taxpayers denied access to certain government services;
12. To impose liability on company directors for certain tax debts (for example, employee withholdings, VAT) arising from a company's operations;

13. To publicize the names of debtor taxpayers in the media or by some other manner;
14. To initiate bankruptcy or asset liquidation actions;
15. To remit interest and penalties;
16. To collect any disputed tax while the dispute case is under judicial review;
17. To collect any disputed tax while the dispute case is open and under judicial review;
18. To offer reduced penalties to the general taxpaying population;
19. To offer reduced interest payments to the general taxpaying population; and
20. To collect tax debts through agreements with other tax administrations.

For the purposes of analysis, these powers can be grouped as follows:

1. Powers to facilitate debt payment by the taxpayer (1, 2, 15, 18, and 19, for a total of five);
2. Direct enforcement powers (3, 5, 7, 12, 14, 16, 17, and 20, for a total of eight); and
3. Indirect enforcement powers (4, 6, 8, 9, 10, 11, and 13, for a total of seven).

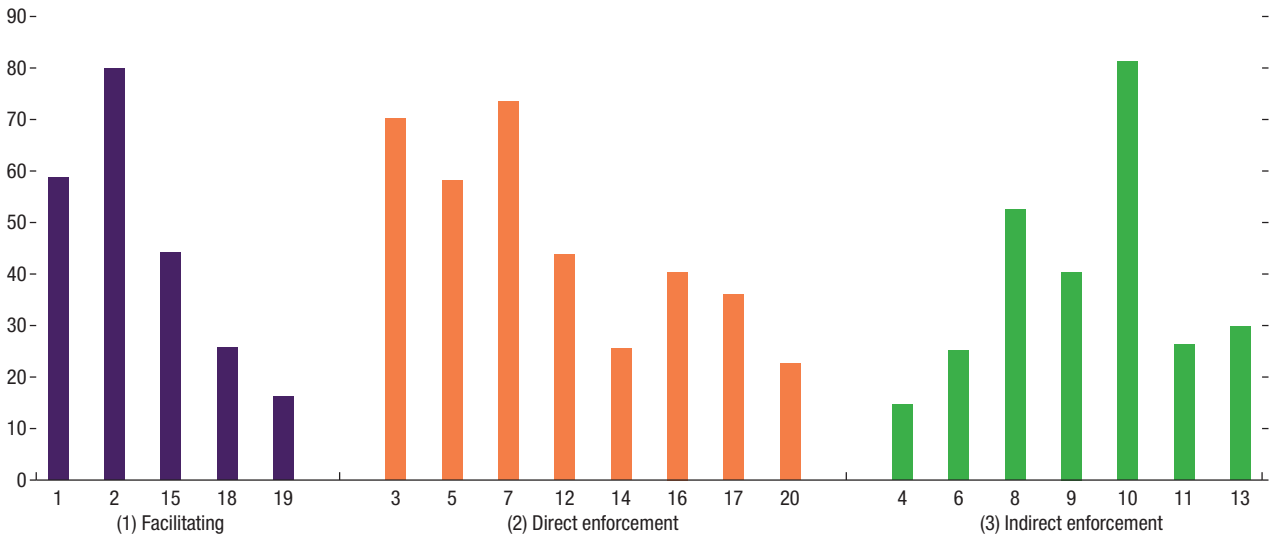
All ISORA respondents indicate that they do have specific powers in legislation or regulation to assist in collecting tax arrears. Figure 27 shows instances where participants have indicated that particular powers are frequently used. The inverse of this bar chart, of course, would indicate instances where participants are not using the power frequently. This would include cases where the ISORA participant did not have the power in question, and where that power was "never used" or "infrequently" used.

In the group of powers that can facilitate the payment of tax arrears, only two are used frequently by more than 50 percent of the ISORA participants, namely, to grant time extensions to pay, and to make payment arrangements (that is, installments). It is perhaps a bit surprising that some 45 percent of participants frequently use the power to remit interest and penalties on tax arrears.

The direct enforcement powers group has three powers where more than 50 percent of participants indicate frequent use: to collect taxes owed through third parties, to offset tax arrears against overpayments or credits in other taxes, and to garnishee salaries and wages.

In the indirect enforcement powers group, only two exceed the 50 percent frequency rate: to obtain a lien against a taxpayer's assets and to require

Figure 27. Administrations that Use Debt Powers Frequently by Type of Powers, 2015
(Percent)



a business to obtain a tax clearance certificate when bidding on a government contract.

In general, the majority of powers (13 of 20) identified by ISORA 2016 are not used frequently.

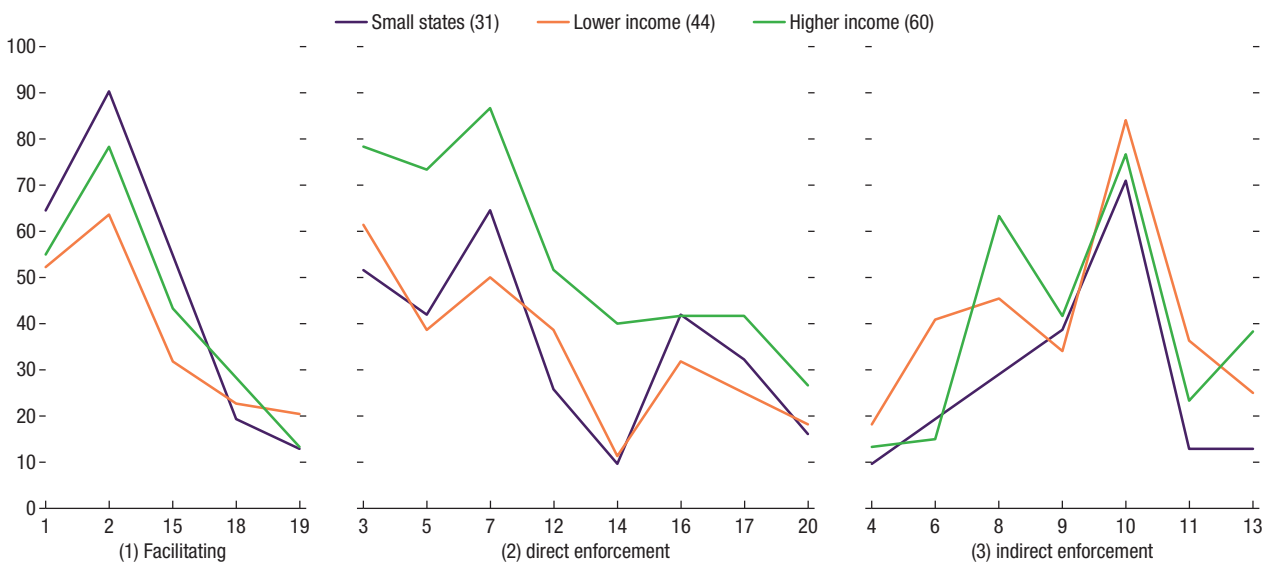
Figure 28 shows the percentage of participants that use each power frequently broken down by small-state, lower-income, and higher-income ISORA participants and by the three groups discussed in the preceding paragraphs.

For both the facilitating and the indirect collection powers, there is no discernable pattern or marked differences among the three standard groups: small state, lower income, and higher income. However, for the direct powers, the higher-income participants use the powers more frequently in every instance than do the small-state and lower-income participants. This suggests a greater readiness on the part of the higher-income jurisdictions to use direct measures such as garnishment or forced bankruptcy. It is quite clear that these tools are significantly less used in the lower-income and small-state jurisdictions.

Management Issues

ISORA asks a number of questions about general management issues that have not been covered in other sections of this publication. As a group, these

Figure 28. Debt Powers Used Frequently by Type of Power and by Standard Group, 2015
(Percent)



Note: Numbers in parentheses equal the sample size for data supplied.

could be labeled "good" management practices, and all are taken into account during TADAT assessments.

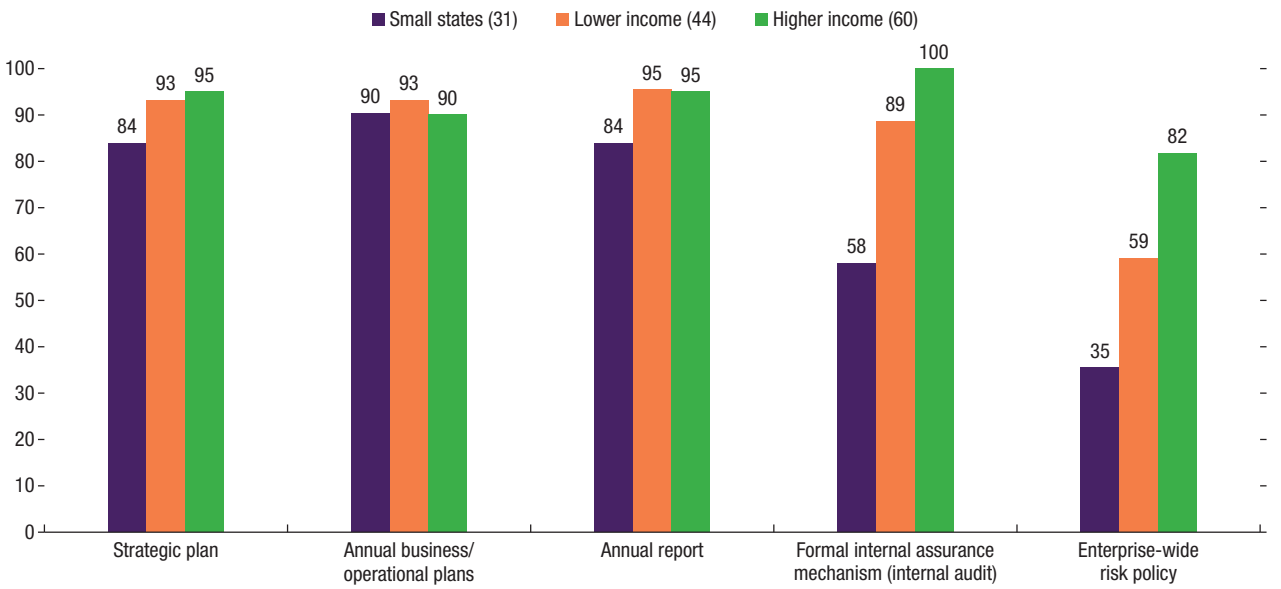
The key examples of these general management practices are shown by standard grouping in Figure 29. Appendix Table 31 provides a breakdown of this same data using World Bank–defined income groups.

The small states are almost as likely as administrations in lower-income and higher-income jurisdictions to have formal plans and reporting in place. However, they lag significantly in having an internal audit function as well as an enterprise-wide risk policy.

Human Resource Management

In addition to questions related to human resources autonomy (discussed in "Administrative and Operational Practices"), the ISORA survey asks several "Yes/No" questions related to human resources management practices. For analysis, these have been organized into three groups that describe approaches to (1) human resources management (seven questions), (2) performance management (eight questions), and (3) staff engagement (four questions).

Figure 29. Selected Good Management Practices, 2015
(Percent of "Yes" answers)



Note: Numbers in parentheses equal the sample size for data supplied.

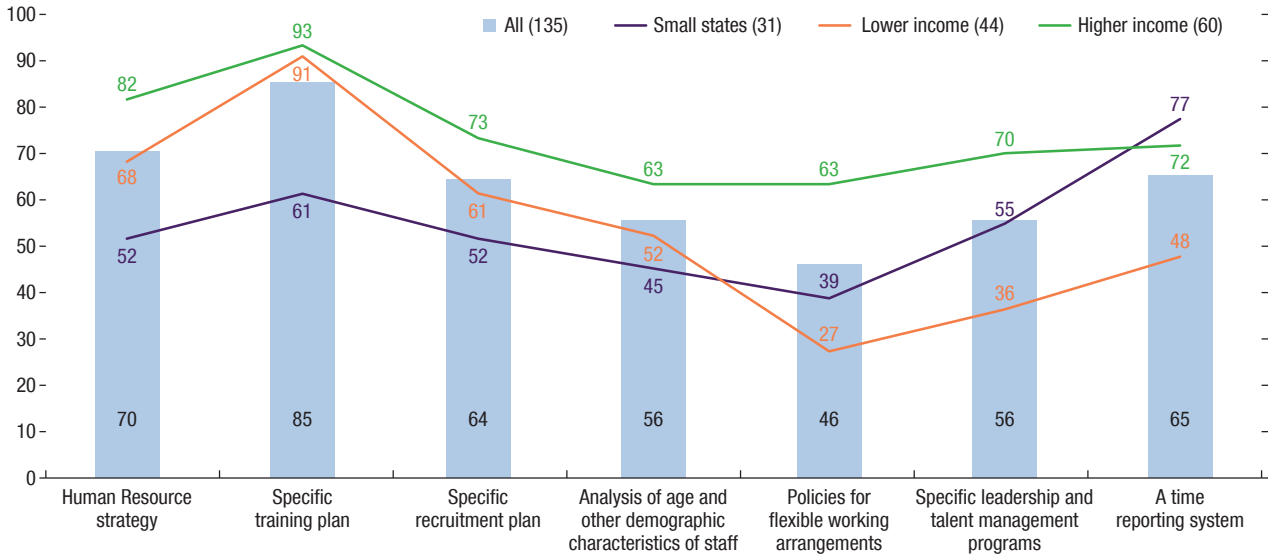
Human Resource Management Approach and Components

This group deals with the elements of "good practice" in human resources. Figure 30 provides information on the seven ISORA questions in this area. Appendix Table 31 provides a breakdown by World Bank–defined income groups.

From the data in Figure 30, it can be concluded that:

- In general, the higher-income group consistently outperforms the other two groups.
- Only half the small states have a human resources strategy—this may be due to the very small scale of some of these administrations (100 or fewer employees) where a formal human resources strategy could be less useful than for larger organizations.
- More administrations have a training plan than a human resources strategy.
- Lower-income jurisdictions lag in the introduction of more modern approaches to human resources management (flexible working arrangements, leadership and talent management programs, and a time reporting system).

Figure 30. Elements of Good Practice in Human Resources, 2015
(Percent of "Yes" answers)



Note: Numbers in parentheses equal the sample size for data supplied.

- Most administrations indicate that staff age and other demographic characteristics are important and taken account of in their human resources approach; it is surprising that some of these administrations were unable to provide data on their staff (in other places in the ISORA forms).

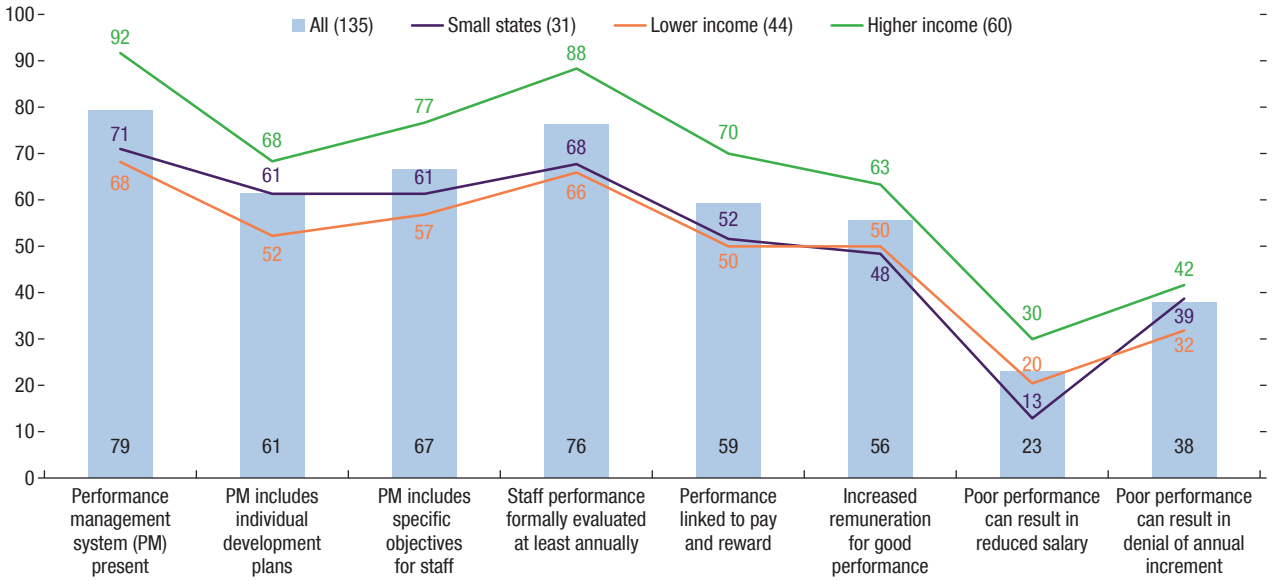
Performance Management Approach

The ISORA survey poses a total of eight "Yes/No" questions that address the general issue of performance management (for staff) and that can be considered elements of "good practice." The percentage of participants answering "Yes" to these questions is set out in Figure 31. Appendix Table 32 provides the same information broken down by World Bank–defined income groups.

Again, the higher-income jurisdictions consistently outperform the other two, albeit not by a significantly large margin. It is interesting to note that all participants have difficulty in reducing salary in the case of poor performance, or even denying annual increments in such circumstances.

On a more positive note, more than 75 percent of ISORA participants indicate they formally assess all staff performance at least once a year.

Figure 31. Elements of Good Practice in Performance Management, 2015
(Percent of "Yes" answers)



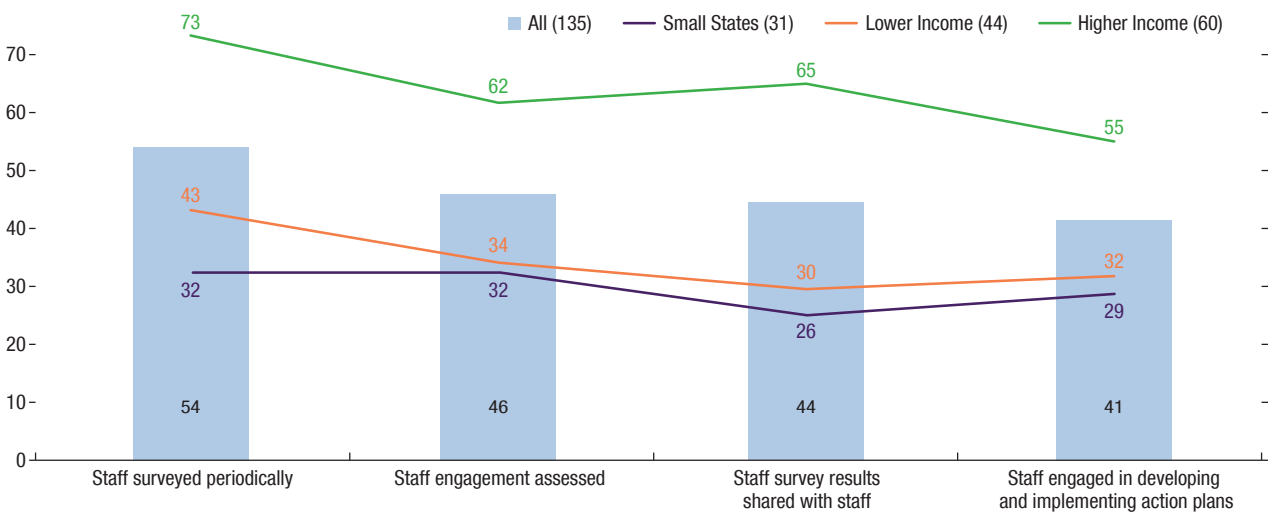
Note: Numbers in parentheses equal the sample size for data supplied.

Staff Engagement Approach

The ISORA survey asks four "Yes/No" questions dealing with "good practice" in the area of staff engagement. These questions deal with elements of the staff engagement process. Generally, in both government and nongovernment organizations, staff engagement has become increasingly used as a means of listening to and motivating staff in the workplace. The percentage of ISORA participants answering "Yes" to these questions is presented in Figure 32. Appendix Table 33 provides the same information broken down by World Bank–defined income groups.

Higher-income participants are significantly ahead of the other two groups when it comes to staff engagement, with almost double the "Yes" rate in virtually all areas. One surprising result, even for the higher-income jurisdictions, is that while 54 percent of ISORA participants survey their staff, only 44 percent share those results with the staff, and even fewer (41 percent) involve their staff in implementing related action plans.

Figure 32. Elements of Good Practice in Staff Engagement, 2015
(Percent of "Yes" answers)



Note: Numbers in parentheses equal the sample size for data supplied.

Analysis by IMF Region

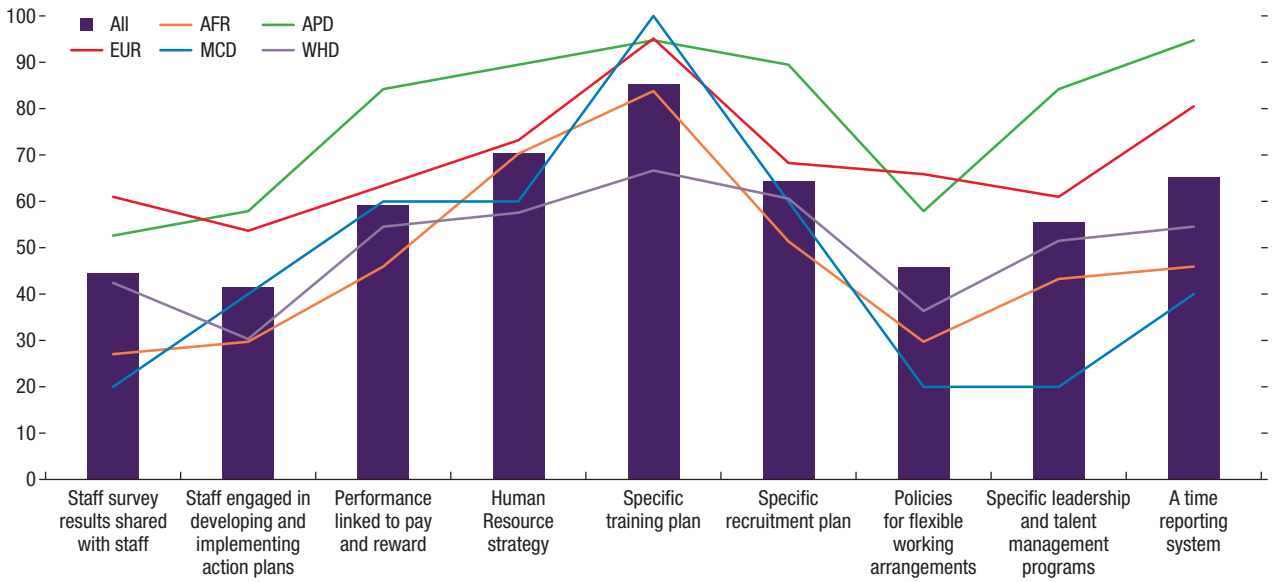
In general, the income level of the jurisdiction associated with a tax administration strongly influences its profile and practices more so than the geographical region in which it lies. In looking at certain elements of human resource management, however, it is apparent that there do appear to be regional differences in some areas. Figure 33 highlights the areas in which the sharpest regional differences are observed from the responses to various human resource questions by ISORA 2016 participants.

From Figure 33, it can be observed that[34]:

- Administrations in Europe and the Asia Pacific region are more likely to engage with their staff in relation to surveys and developing plans than their counterparts in sub-Saharan Africa and the Western Hemisphere.
- Administrations in sub-Saharan Africa and the Western Hemisphere lag administrations elsewhere in the adoption of policies for flexible working hours and a using a time-reporting system.
- Administrations in the Asia Pacific region appear to be leading in respect of providing specific leadership and talent management programs.

[34]Due to the limited responses available for the Middle East and Central Asia, the percentage of "Yes" responses ranges more widely than it does for other regions.

Figure 33. Various Human Resource Management Related Questions by Region, 2015
(Percent of "Yes" answers)



Note: All = all administrations participating in ISORA; AFR = Africa; APD = Asia and Pacific; EUR = Europe; MCD = Middle East and Central Asia; and WHD = Western Hemisphere.

Compliance Risk Management

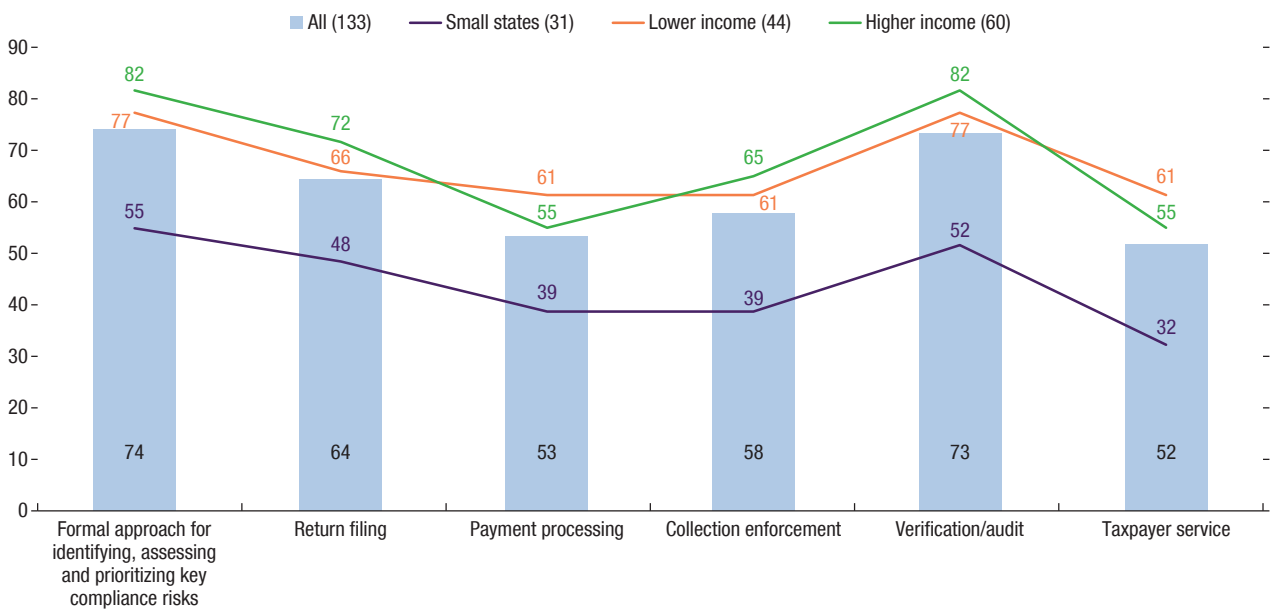
This section provides information and some basic observations on five aspects of compliance risk management that are covered in the ISORA survey:

1. The formal approach to managing compliance risk;
2. Compliance strategy priorities;
3. Priority focus areas;
4. Tax gap and random audits;
5. Criteria for audit case selection; and
6. Electronic audit methods.

Formal Approach to Managing Compliance Risk

ISORA participants were asked to indicate whether they had a formal approach for identifying, assessing, and prioritizing key compliance risks, and, if so, in which areas they had such a formal approach. The percentage of participants answering "Yes" to the overall question and the percentage answering "Yes" for each area are shown at Figure 34. Appendix Table 35

Figure 34. Formal Approaches to Compliance Risk, 2015
(Percent)



Note: Numbers in parentheses equal the sample size for data supplied.

provides a breakdown of the same information using World Bank–defined income groups.

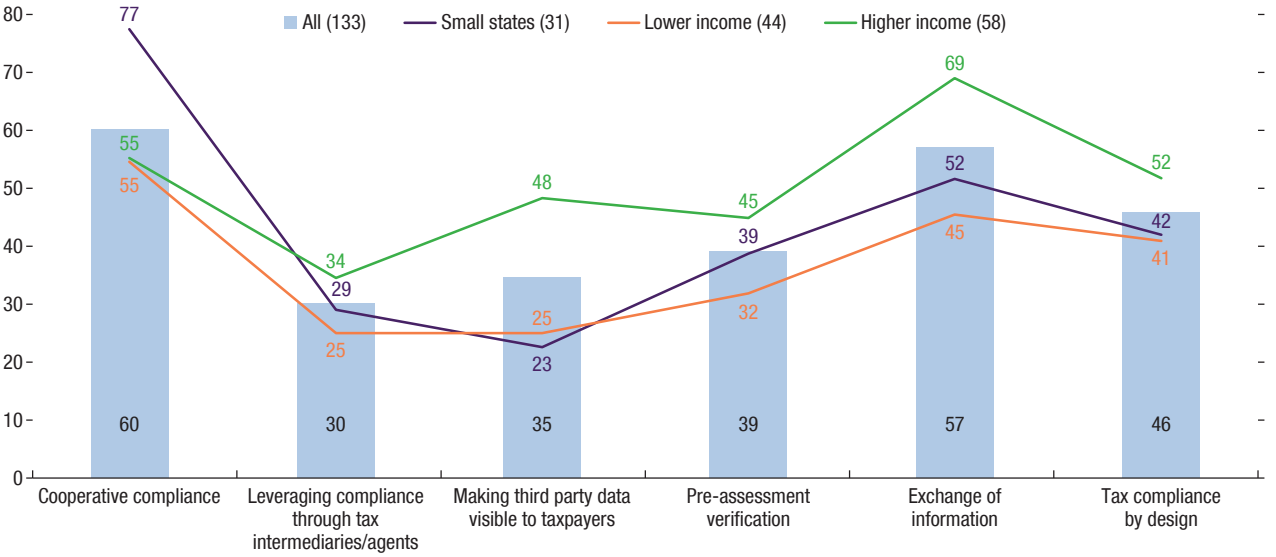
From the data in Figure 34, it can be observed that:

- Administrations in both lower-income and higher-income jurisdictions are more likely to have a formal approach to identifying, assessing, and prioritizing key compliance risks across a range of tax administration functions than are administrations in small states.
- Across all groups, audit and verification activities are most likely to have formal compliance risk approaches (73 percent overall), whereas taxpayer service and payment processing are least likely (52 percent and 53 percent, respectively) to have formal compliance risk approaches.

Compliance Strategy Priorities

Administrations were asked whether various approaches used in compliance strategies were high, medium, or low priority. The focus is on which strategies were identified as high priority. The percentage of participants identifying various compliance approaches as high priority are set out in Figure 35.

Figure 35. High Priority Compliance Approaches, 2015
(Percent)



Note: Numbers in parentheses equal the sample size for data supplied.

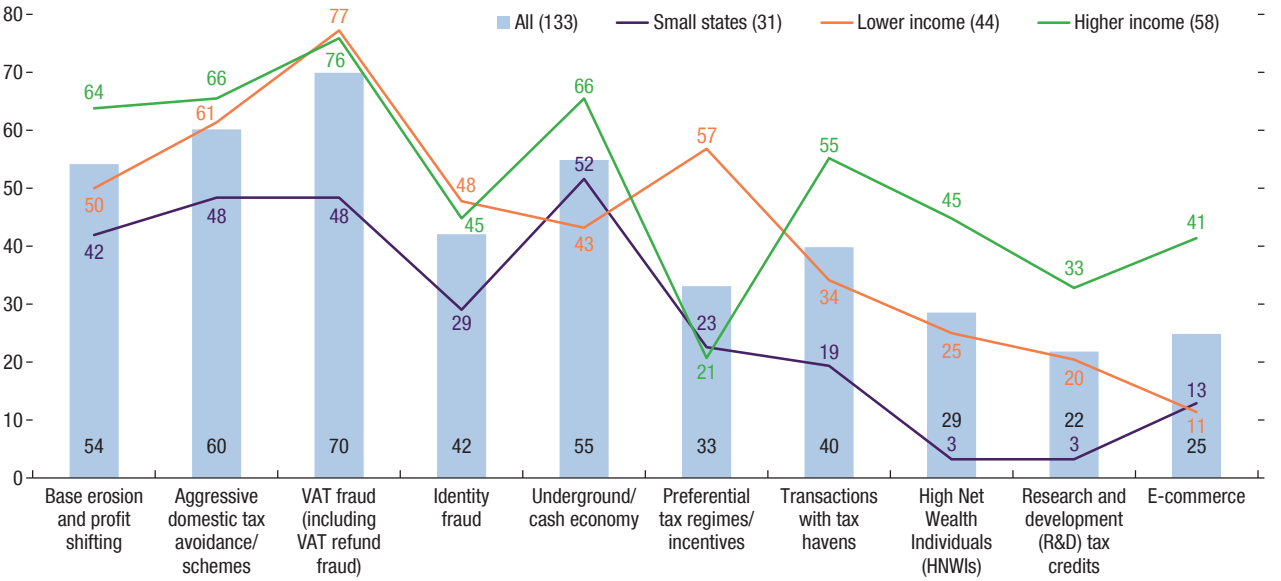
Appendix Table 36 provides a breakdown of the same information using World Bank–defined income groups.

This issue follows the normal pattern that has been established (that is, higher-income jurisdictions are generally making more modern approaches a higher priority in managing risk).

The data in Figure 35 indicate that a higher percentage of small states make cooperative compliance a high priority compared to the other two groups. However, less than half indicate later in the ISORA survey that a cooperative compliance approach for large taxpayers exists or is planned. There are two possible explanations for this: small states often do not isolate the large taxpayers as a separate segment and thus would not have a separate cooperative compliance program for them, or some participants have misunderstood the question.

The biggest differences seen among the groupings is in the priority associated with making third-party data visible to taxpayers and in the exchange of information, where administrations in high-income jurisdictions are considerably more likely to attach a high priority to these approaches. The greater emphasis on utilizing third-party data among the higher-income group is

Figure 36. High Priority Focus Areas, 2015
(Percent)



Note: Numbers in parentheses equal the sample size for data supplied.

consistent with the picture of administrations in these groupings having the capacity to and hence making use of electronic channels to obtain information from taxpayers and other third parties.

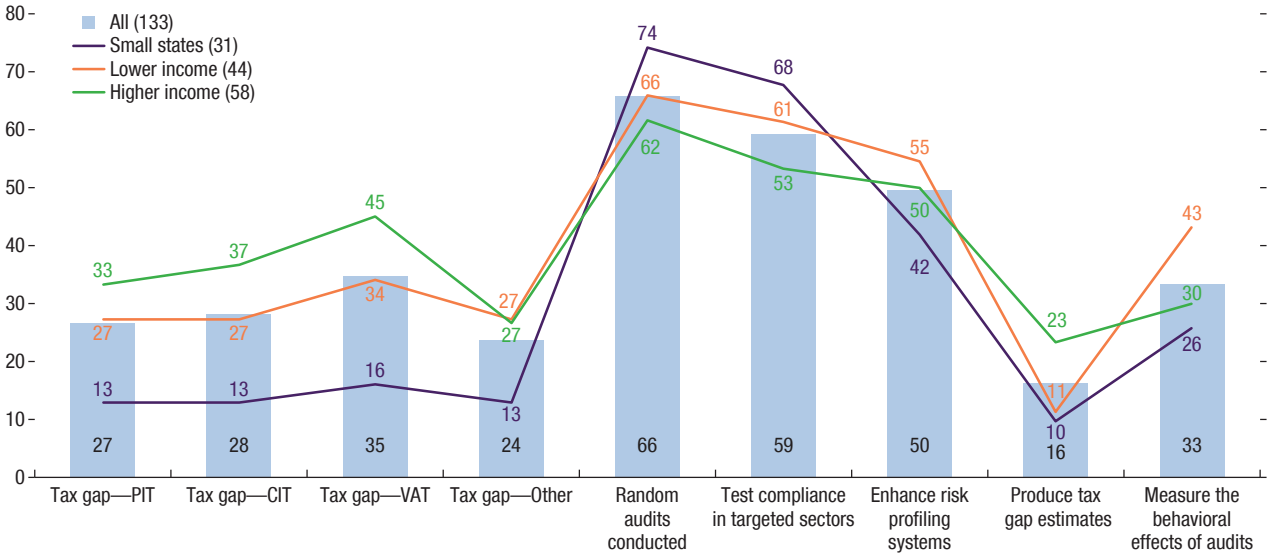
Priority Focus Areas

Administrations were also asked to denote whether a dozen focus areas for compliance were regarded as high, medium, or low priority. Ten areas were indicated as high priority by more than 20 percent of the ISORA participants. These are included in Figure 36.

From the data in Figure 36, it can be seen that:

- VAT fraud is a high priority for 70 percent of ISORA's participants. This is consistent with higher coverage levels of VAT audits in comparison with income tax (see the audit section). The lower frequency of prioritization of VAT fraud by small states is in line with a lower proportion of small states collecting VAT (74 percent) than in lower-income and higher-income jurisdictions (both over 90 percent). Appendix Table 37 provides a breakdown of the same information using World Bank–defined income groups.
- While relatively high proportions of adminstrations place a high priority on a focus on base erosion and profit shifting, VAT fraud and other domes-

Figure 37. Tax Gap Estimates by Tax Type and Conduct of Random Audits and Uses, 2015
(Percent)



Note: Numbers in parentheses equal the sample size for data supplied.

tic issues remain a high priority for a larger proportion of administrations across all groupings.

- For lower-income jurisdictions, "preferential tax regimes and incentives" is a high priority focus area, which is not surprising as many lower income jurisdictions offer tax incentives.
- Tax administrations in higher-income jurisdictions are more likely to focus on aggressive domestic tax avoidance schemes and the underground or cash economy than the peers in other groupings.

The Tax Gap and Random Audits

The ISORA survey asks participants to indicate whether they produce tax gap estimates for PIT, CIT, VAT, or other taxes. It also asks whether random audits are conducted, and, if so, their main uses. Responses to these questions are presented in Figure 37. Appendix Table 38 provides a breakdown of the same information using World Bank–defined income groups.

Figure 37 shows higher-income jurisdictions most likely to formally estimate tax gaps for all major tax types (33 percent for PIT, 37 percent for CIT, and 44 percent for VAT). Small-state jurisdictions are least likely to produce tax gap estimates.

Table 40. Administrations Using Specified Case Selection Criteria, 2015
(Percent)

Group	Small States (31)	Lower Income (44)	Higher Income (60)	All (135)
Economic Sector	81	95	88	89
Third-Party Information	77	91	92	88
Taxpayer Behavior	77	84	88	84
Taxpayer Category (for example, self-employed)	71	77	88	81
Information Cross-Checking	61	84	87	80
Significant Changes to Taxpayer	65	77	87	79
Selected Based on Judgment	77	70	73	73
Internal Intelligence Function	61	80	73	73
Risk Profiling—Business Rules	42	70	82	69
Compliance Checks (for example, payroll checks)	71	64	70	68
Collected Tax	55	66	68	64
Frequency (time between audits)	42	75	62	61
BEPS or Aggressive Tax Planning Issues	23	57	67	53
Random	58	50	52	53
Location	39	48	62	52
International Exchange of Information	26	39	75	52
Tax Control Framework–based "Audits"	23	61	52	48
Ownership in a Corporate Entity	39	41	52	45
Risk Profiling—Predictive Modeling	19	45	50	41
Commercial Register	19	25	42	31
Other	6	7	10	8

Note: Numbers in parentheses equal the sample size for data supplied in each column. BEPS = base erosion and profit shifting.

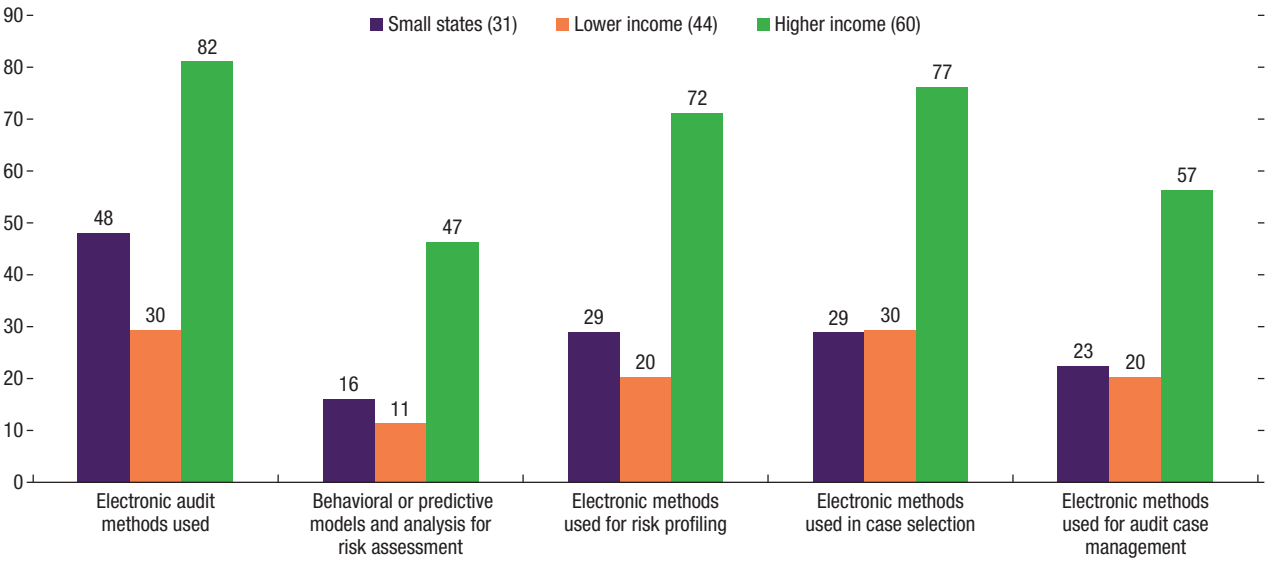
More administrations indicate that they estimate the VAT gap than any other tax gap. Better established methodologies exist for VAT gap measurement (for example, the IMF's RA-GAP program) than for the direct taxes. Tax gaps other than for VAT are estimated only by administrations that also estimate their VAT gap.

Administrations in small states are more likely than their peers in other groups to conduct random audits, which is perhaps surprising given the limitation in resources. The use of random audits is similar across all groupings. Fewer administrations indicate that they use random audits in producing tax gap estimates than those that make VAT gap estimates.

Audit Case Selection

The ISORA survey asks participants whether the administration makes use of any of 19 specified selection processes or other criteria to formally initiate a verification or audit intervention. A total of 96 percent of the participants indicated that they did make use of one or more of the listed criteria. Table 40 provides the percentage of administrations indicating use of a specific process or criterion, ordered by the proportion of administrations making use of the respective process/criterion. Appendix Table 39 provides a breakdown of the same information using World Bank–defined income groups.

Figure 38. Electronic Methods in Audit and Specific Uses, 2015
(Percent)



Note: Numbers in parentheses equal the sample size for data supplied.

Tax administrations employ multiple processes and/or criteria in selecting cases for verification interventions. More than half the ISORA participants use one or more of 15 processes/criteria, whereas the top 8 are used by over 70 percent. The top three criteria for all the standard groups are economic sector, third-party information, and taxpayer behavior. Taxpayer category, information cross-checking, and significant changes to a taxpayer are also relied upon by almost 90 percent of administrations in higher-income jurisdictions.

Auditor judgment is used by 70 percent or more administrations in all three groups. Risk profiling using business rules is used overall by a similar proportion—69 percent—of ISORA participants. However, auditor judgment is used by a higher proportion of administrations in small-state and lower-income jurisdictions than business rule–based risk profiling.

Electronic Audit Methods

The ISORA survey asks participants if they make use of electronic audit methods and, if so, for what purpose. Figure 38 shows the percentage of participants that use electronic audit methods and the percentage for each type of use. Appendix Table 40 provides a breakdown of the same information using World Bank–defined income groups.

Not unexpectedly, administrations in higher-income jurisdictions utilize digital technology far more in every aspect of auditing covered in ISORA. Administrations in lower-income jurisdictions are least likely to use digital technologies.

The use of behavioral or predictive models in risk assessment is not yet used widely; even among higher-income jurisdictions, less than half the ISORA participants made use of such models in assessing risk.

Conclusion

Some key conclusions from the data in this section are as follows:

- Half of participating administrations (68 of 135) self-identified as semiautonomous organizations (8 small states, 23 lower income, 37 higher income).
- About 36 percent of participants (49 of 135) are responsible for tax administration and customs administration.
- Noncore taxes, SSC, and nontax revenues account for close to 40 percent of all revenues for small-state jurisdictions, and about 30 percent for the others.
- In addition to core taxes (PIT, CIT, VAT, and SSC), 66 percent of participants collect domestic excise taxes; 40 percent collect motor vehicle taxes; 46 percent are involved in real property taxes; 22 percent collect wealth taxes; 37 percent collect estate, inheritance, and gift taxes; and another 59 percent report collecting at least one other tax not included in this list.
- By tax administration function, participants overall reported the following: front office functions (registration, service, returns, and payment processing)—about 30 percent of staff; back office functions (audit, verification, and enforced debt collection)—about 40 percent of staff; disputes (objections and appeals)—about 3 percent of staff; and other operational and support functions—about 27 percent of staff.
- More than 85 percent of respondents report having dedicated LTO/Ps.
- The higher-income group has 22 percent of employees aged 55 years or older. The comparable figures for small-state and lower-income participants are 12 percent and 10 percent, respectively.
- Overall, female staff make up 53 percent of tax administration employees, but only 40 percent of executives.
- Lower-income and higher-income jurisdictions are more likely to have a formal approach to identifying, assessing, and prioritizing key compliance

risks across a range of tax administration functions than are administrations in small states.
- Across all groups, audit and verification activities are most likely to have formal compliance risk approaches (73 percent overall), whereas taxpayer service and payment processing are least likely (52 percent and 53 percent, respectively) to have formal compliance risk approaches.
- VAT fraud is a high priority for 70 percent of ISORA's participants. For both lower- and higher-income jurisdictions, "aggressive domestic tax avoidance schemes" is also a high priority. For lower income jurisdictions, "preferential tax regimes and incentives" is also high-priority focus area; while for higher-income jurisdictions, "the underground or cash economy" was identified as a high-priority focus area.

Administrative and Operational Practices

Introduction

As noted in the first part of this publication, this section includes four indices on different subjects that provide perspectives on a wide range of administrative and operational practices adopted by tax administrations, based on ISORA responses to certain questions. The subject areas are:

1. Performance standards: administrations' self-assessment of the extent to which they have met 10 typical performance standards that span the major functions of tax administration.
2. Management and human resources autonomy: the authority delegated to tax administrations in relation to managing budget and human resources.
3. Public accountability: the publishing of information and practices making visible a commitment to accountability.
4. Taxpayer service orientation: practices demonstrating taxpayer-centric planning and service provision.

There are at least 10 questions that relate to each of these topics, and so each is associated with a large amount of data. The use of an index is an attempt to distill this large amount of data into a format suitable for monitoring changes over time and facilitating self-evaluation by a tax administration of its practices based on comparisons with other jurisdictions.

Except for the first index on performance standards, the indices are calculated on the basis of a participating jurisdiction's responses to a series of yes/no questions related to the topic at hand, where a "yes" response is essentially considered a "good practice." The higher the number of "yes" responses, the higher the resulting index. The resulting index is thus a reflection of the degree of "good practice." The index for performance stan-

dards is based on a series of questions on the topic including a participant's self-evaluation of their current progress on meeting the performance standards they have adopted. The construction of these indices is described in more detail in the chapters that follow.

The ISORA data set was not specifically designed to produce indices of this nature. However, they are a direct by-product of the ISORA responses and considered to be a useful indicator for administrations to compare their situations with peers.

All the indices are presented based on the standard groupings for this publication, and the results for individual jurisdictions are not provided.

The final chapter in this section is a discussion of the interrelationships of the various indices and commentary on other selected correlations.

Meeting Performance Standards Index

The development of performance standards and their implementation has become very important for tax administration over recent years. ISORA 2016 asked participants several questions about performance standards in their organizations (Form 2A, question 3):

- Can the administration establish standards?
- For 10 typical standards: have you established a standard in the area in question, and if so is it "not met," "partially met," or "mostly met"?

The 10 typical tax administration performance standards against which jurisdictions are asked to self-assess the extent to which they meet the standard(s) are as follows:

a. Processing personal income tax returns and refunds;

b. Processing VAT returns and refunds;

c. Sending a substantive response to a written request on a routine matter;

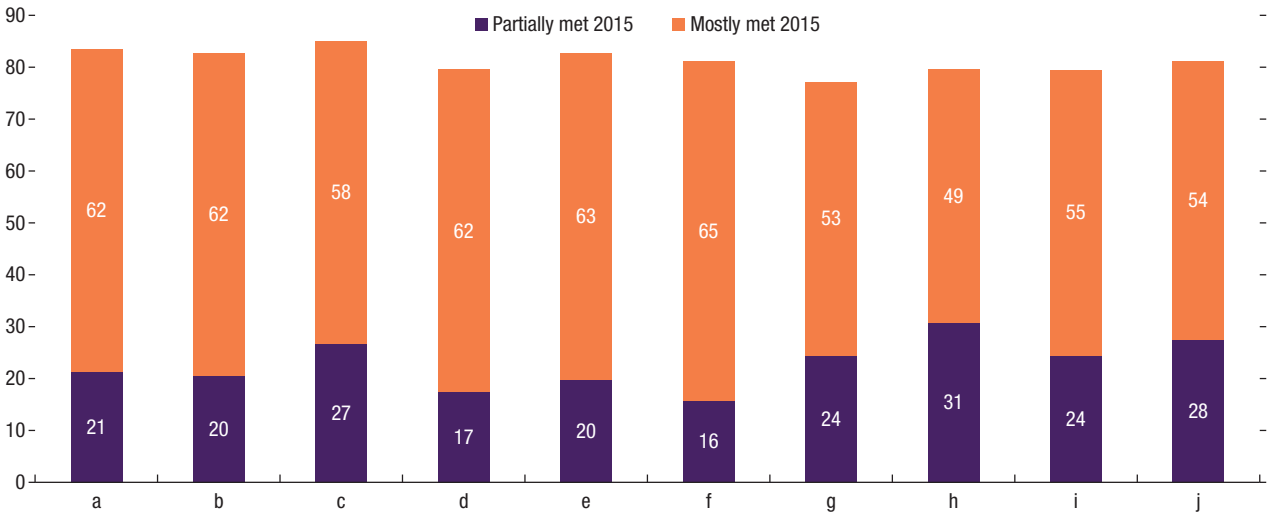
d. Dealing with taxpayers' in-person (face-to-face) enquiries at tax office;

e. Answering telephone calls;

f. Resolving taxpayers' complaints;

g. Collecting outstanding tax returns;

Figure 39. Administrations Indicating Standard Is Partially Met or Mostly Met, 2015
(Percent)



h. Collecting outstanding tax arrears;

i. Resolving tax dispute cases via administrative reviews; and

j. Completion of audits within agreed timeframes.

Almost all ISORA participants indicated they had the authority to establish performance standards (127 out of 135). It should be noted that ISORA does not ask what the particular standards are in each area; rather, it asks participating administrations with authority to establish performance standards (the 127) to select, for each of the 10 areas in question, one of the following choices:

- There is no standard (that is, no standard has been established in the area).
- A standard has been established but the standard is "not met."
- The standard is "partially met."
- The standard is "mostly met."

The percentage of administrations providing "partially met" and "mostly met" self-evaluations for each standard[35] is depicted in Figure 39. This figure does not show ratings of "no standard" or "not met," and therefore does not sum to 100 percent. It can be seen from Figure 39 that administrations have made better progress on certain standards as opposed to others. For example, the

[35]For each of the 10 subject areas there could be a single standard or a group of standards. Participants are asked to self-evaluate the extent to which they have met the standard or standards for each area.

Table 41. Mean Values for the Meeting Performance Standards Index, 2015

Group	Mean Values (percent)
Small States (28)	51.8
Lower Income (43)	48.6
Higher Income (56)	69.1
All (127)	**58.3**

Note: Numbers in parentheses equal the sample size for data supplied.

"mostly met" percentage for standards related to collecting outstanding tax arrears is less than 50 percent. At the other end of the progress spectrum, in more than 65 percent of jurisdictions standards related to resolving taxpayer complaints are "mostly met." These are the two extremes, and it has to be concluded that there is not a large differentiation among the 10 standards.

However, if both "mostly met" and "partially met" are taken into account, the differentiation is even less (a range of 77 percent for standards related to collecting outstanding returns to 85 percent for standards related to substantive responses to written requests).

Given these comments, for purposes of calculating the *Meeting Performance Standards Index* it will be more demonstrative to use "mostly met" only. A percentage of how many of the 10 standards were "mostly met" is thus calculated for each ISORA participant, and then an average of these indices is computed for standard groupings of administrations.

Table 41 sets out the mean values for the Meeting Performance Standards Index constructed from participants' self-assessments of the extent to which they "mostly meet" their standards for 2015. Appendix Table 41 provides the same information broken down by World Bank–defined income groups.

According to these results, there is not much difference between the values for small-state participants and those from the lower-income group. Both groups self-assess at a level of about 50 percent in terms of their progress in at least mostly meeting performance standards in the 10 areas covered in ISORA. The higher-income group, on the other hand, assesses its comparable progress to achieving performance standards at the 70 percent level.

This Meeting Performance Standards Index also has a relationship with taxpayers' experience of the tax administration, and hence perceptions of the efficiency and effectiveness of the organization. The index should in principle be related to the outcomes of taxpayer surveys/perception surveys. If this is not the case, the reasons for the lack of linkage gives pause for questions.

A Meeting Performance Standards Index along these lines may prove useful for monitoring the extent to which jurisdictions are meeting their own standards over time. If a jurisdiction's index is either far below or far above the average for a peer group, it could give pause for question: could there be an issue with standards that have been set? Are these unrealistically high, or are the standards set too low to be relevant in ensuring that strategic objectives are achieved or revenue targets met? Or should there be concern about the efficiency of a particular aspect of taxpayer service or enforcement activities? A few more iterations of ISORA may provide a time series that will assist in studying these questions.

Management and Human Resources Autonomy Index

ISORA asks a number of questions, each requiring a "Yes/No" response, on the general subject of management autonomy, specifically on human resources autonomy.

There are four management autonomy questions as follows:

Does the tax administration:

(a) Exercise discretion over the operating budget?

(b) Exercise discretion over the capital budget?

(c) Establish performance standards?

(d) Determine its own management structure?

In addition, there are seven human resources autonomy questions:

Can the tax administration:

(a) Determine work requirements?

(b) Make appointments of new staff?

(c) Decide on promotion of existing staff?

(d) Decide skills and qualifications required for appointment or promotion?

(e) Determine whether work is carried out by permanent staff or contractually?

(f) Place staff within a salary range?

(g) Terminate employment.

Table 42. Combined Management and Human Resources Autonomy Index, 2015
(Percent)

Group	Average Value of Management Autonomy Index	Average Value of Human Resources Autonomy Index	Average Value of Overall Index
Semiautonomous	79.0	94.9	89.2
Within Ministry	62.3	63.7	63.2
All	**70.7**	**79.4**	**76.3**

Good tax administration practice would see a "Yes" response for each of the 11 questions in the two-part index, as autonomy in these areas will impact the ability to manage and allocate financial and human resources optimally and is generally coupled with greater accountability. The net result is expected to be greater effectiveness and efficiency.

The sample size for all the tables in this section is all 135 participants as all "Yes/No" questions must be answered in the survey. Figures 40 and 41 show the index values (in percent, rather than "out of 11") for each question in the two separate components of the index for 2015. The information in the two tables is set against a grouping of semiautonomous versus within-ministry tax administrations.

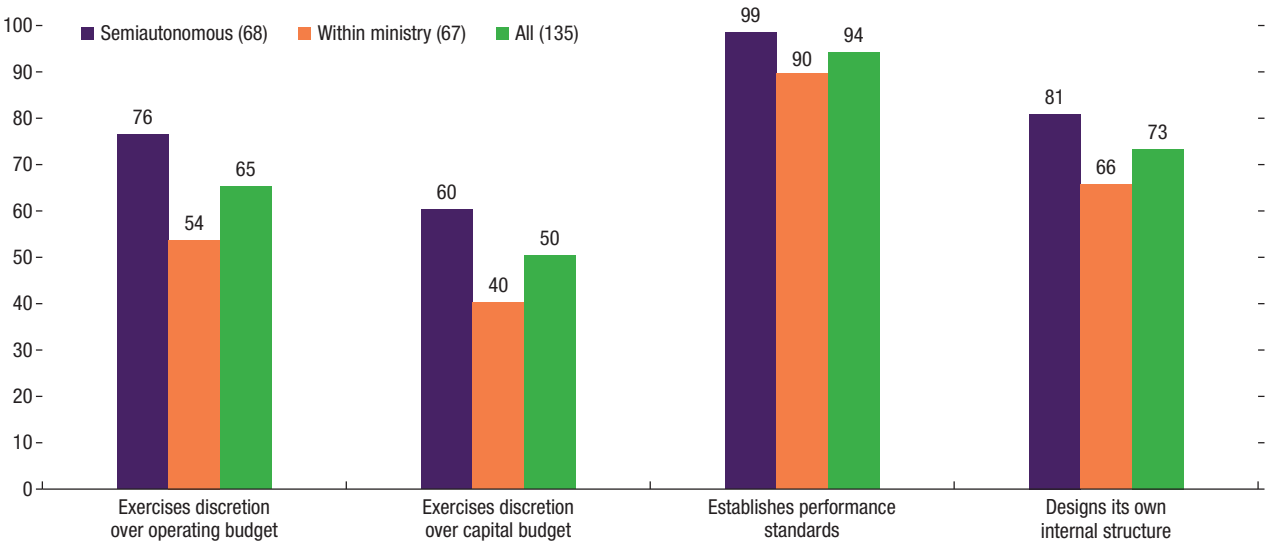
It can be seen from these figures that the semiautonomous group scores higher than the within-ministry group in every single question in both components of the index. This is not surprising given that the semiautonomous group would be expected to have more autonomy. The biggest difference is seen in the authority to place staff within a salary range.

From the percentages in Figures 40 and 41, the index values of the two components (management autonomy and human resources autonomy) and the overall index values can be computed (see Table 42). Appendix Table 42 presents the same information broken down by World Bank–defined income groups.

The semiautonomous group scores 17 percentage points higher than the within-ministry group on the management autonomy index, and more than 30 percentage points higher on the human resources autonomy index. Overall, the semiautonomous group scores 26 percentage points higher.

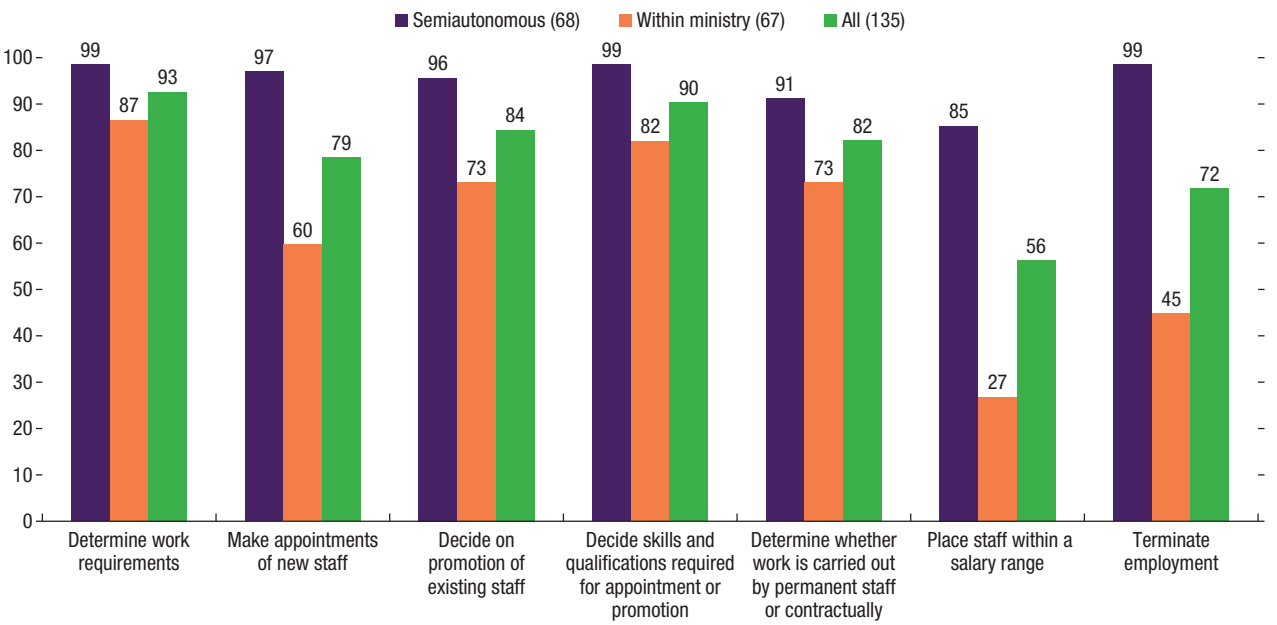
Figure 42 presents the overall Autonomy Index figures for 2015 by grouping of small-state, lower-income, and higher-income participant. Within each grouping, tax administrations operating as semiautonomous bodies have a far higher degree of autonomy. The degree of autonomy afforded to tax administrations operating within a ministry is generally greater in higher-income

Figure 40. Participants Responding Yes to Management Autonomy Questions, 2015
(Percent)



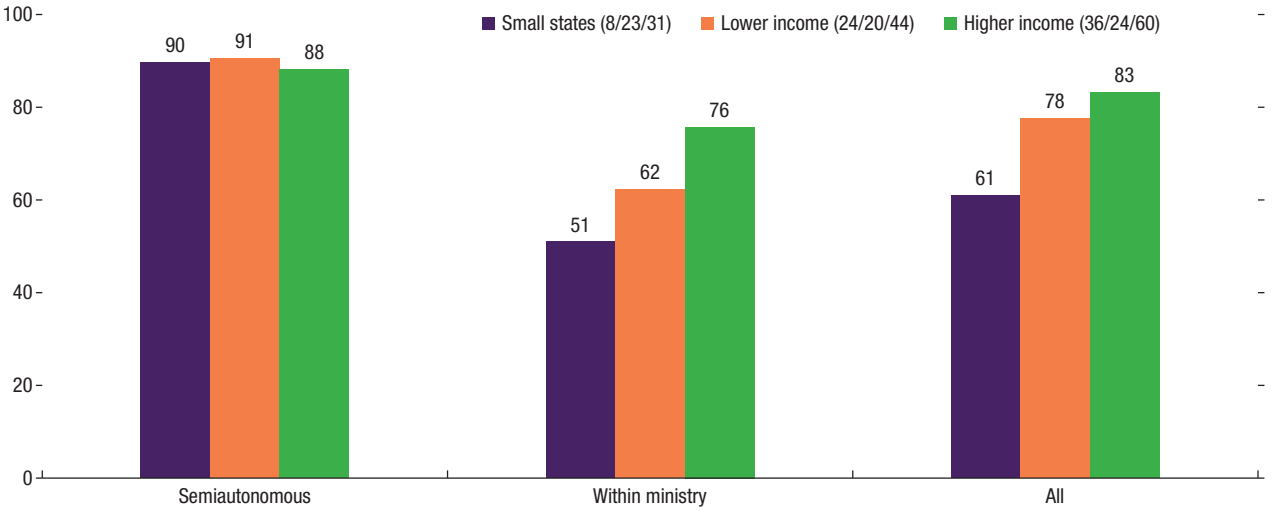
Note: Numbers in parentheses equal the sample size for data supplied.

Figure 41. Participants Responding Yes to Human Resources Autonomy Questions, 2015
(Percent)



Note: Numbers in parentheses equal the sample size for data supplied.

Figure 42. Overall Autonomy Index by Type and Standard Grouping, 2015
(Percent)



Note: Numbers in parentheses equal the sample size for data supplied in each bar.

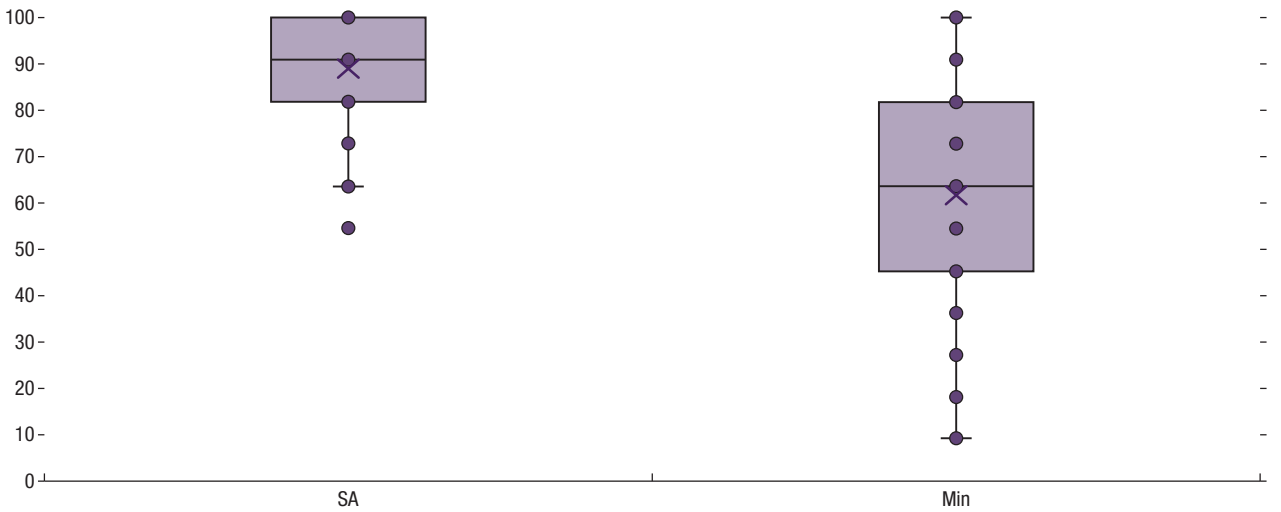
jurisdictions compared to those within small-state or lower-income jurisdictions.

A more detailed look at the ISORA data highlights key differences in the scores for the two groups. Figure 43 demonstrates clearly the wider range in the autonomy index for tax administrations operating within ministries.

The minimum value for an administration that self-classifies as semiautonomous is 6 out of 11 or 55 percent, and 53 of them score 9 or above, so very few—less than a quarter—have little autonomy.

On the other hand, for administrations operating within ministries, six of them have "Yes" scores of 11 out of 11 (100 percent), but there are also two that score only 9 percent, another one with 18 percent, and a further seven that score only 27 percent. There is a wide spread in possible values. In other words, for a tax administration operating within a ministry, depending on the jurisdiction, there is a chance of having high autonomy or extremely limited autonomy.

Figure 43. Distribution of Autonomy Index Values by Institutional Arrangement, 2015



Note: "Min" denotes tax administrations that operate within a Ministry; "SA" denotes tax administrations that are semiautonomous bodies.

Public Accountability Index

As was the case for autonomy, ISORA also asks a number of questions concerning public accountability. There are 12 such questions relating to public accountability, each requiring a "Yes/No" response.

The 12 questions are as follows:

Does the tax administration:

(a) Publish its strategic plan?

(b) Publish its annual business/operations plans?

(c) Make public a formal set of service delivery standards?

(d) Publish the results it achieves against the formal service delivery standards?

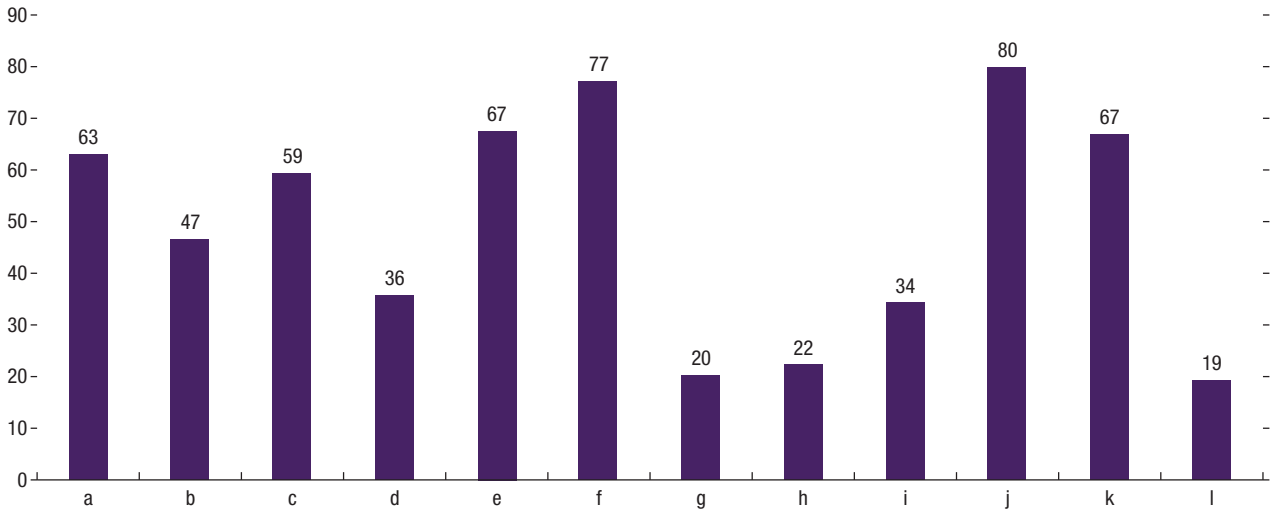
(e) Publish its annual report?

(f) Have an external auditor?

(g) Make key compliance risks public regularly?

(h) Make reports of outcomes in addressing compliance risks public regularly?

Figure 44. Percentage of Yes Responses for the 12 Public Accountability Questions, 2015



(i) Publish the results of taxpayer satisfaction surveys?

(j) Have a document that formally sets out taxpayer rights?

(k) Have a specific mechanism for managing taxpayer complaints?

(l)Publish periodic estimates of the tax gap?

Taken together, these potential activities or practices of the tax administration can be an indication of the commitment to public accountability in operations and an important element of efforts to provide accountability.

Good tax administration practice to ensure public accountability would see a "Yes" response for each of the 12 questions. The sample size for all the tables in this section is all 135 participants as all "Yes/No" questions must be answered in the survey. Figure 44 provides the "Yes" response rate for the 12 questions.

Five questions (a, e, f, j, and k) have a "Yes" response rate of more than 60 percent, whereas five (d, g, h, I, and l) have a "Yes" response rate of less than 40 percent.

The Public Accountability Index values (in percent, rather than "out of 12") for each question for 2015 for the small-state, lower-income, and higher-income groupings and for semiautonomous versus ministry jurisdictions are shown in Tables 43 and 44, respectively. Appendix Table 43 presents the same information broken down by World Bank–defined income groups.

Table 43. Public Accountability Index Average for Standard Groups, 2015

Group	Public Accountability Index Average (percent)
Small States (31)	31.2
Lower Income (44)	47.3
Higher Income (60)	60.0
All (135)	**49.3**

Note: Numbers in parentheses equal the sample size for data supplied.

Table 44. Public Accountability Index Average for Semiautonomous/In-Ministry, 2015

Group	Public Accountability Index Average (percent)
Semiautonomous (68)	61.5
Within Ministry (67)	36.8
All (135)	**49.3**

Note: Numbers in parentheses equal the sample size for data supplied.

In terms of the standard grouping of participant jurisdictions, there is a clear progression in this Public Accountability Index, moving from 31 percent for small states to 47 percent for lower-income jurisdictions and finally to 60 percent for those at the higher-income levels. The lower Public Accountability Index for small states (and to a lesser extent, jurisdictions in the lower-income grouping) may be partly a function of inadequate resourcing as the production of "publication-ready" documents may be expensive and time-consuming for these administrations.

Further analysis indicates that there are no particular questions that tend to drag down the averages of the small-state and lower-income jurisdictions. Figure 45 shows the percentage of "Yes" responses for the three groups (small states, lower income, and higher income) for each question in the index.

It is clear from Figure 45 that the differences among the three groupings in terms of the overall Public Accountability Index for 2015 are not attributable to any single question or even a set of questions. The same pattern is evident within each of the three groups of jurisdictions. This would suggest that part of the "price" for increased autonomy is increased public accountability, which would be consistent with most of the literature on this topic.

This positive relationship between the semiautonomous group and the public accountability index will also be seen in the strong correlation between the public accountability index and the autonomy index (discussed later in this section).

Figure 45. Percentage of Yes Responses for Each Question for Standard Groups, 2015

	a	b	c	d	e	f	g	h	i	j	k	l
Small states (31)	39	26	29	16	55	68	10	10	13	61	39	10
Lower income (44)	64	48	59	27	57	70	16	18	34	89	66	20
Higher income (60)	75	57	75	52	82	87	28	32	45	83	82	23

Note: Numbers in parentheses equal the sample size for data supplied.

Service Orientation Index

Spread throughout the ISORA 2016 survey are questions related to services provided to taxpayers. As was the case for the previous indices, some of the "Yes/No" questions have been identified to create a Service Orientation Index. The following 13 questions have been weighted equally to create the index:

(a) Does the administration have a formal set of service standards?

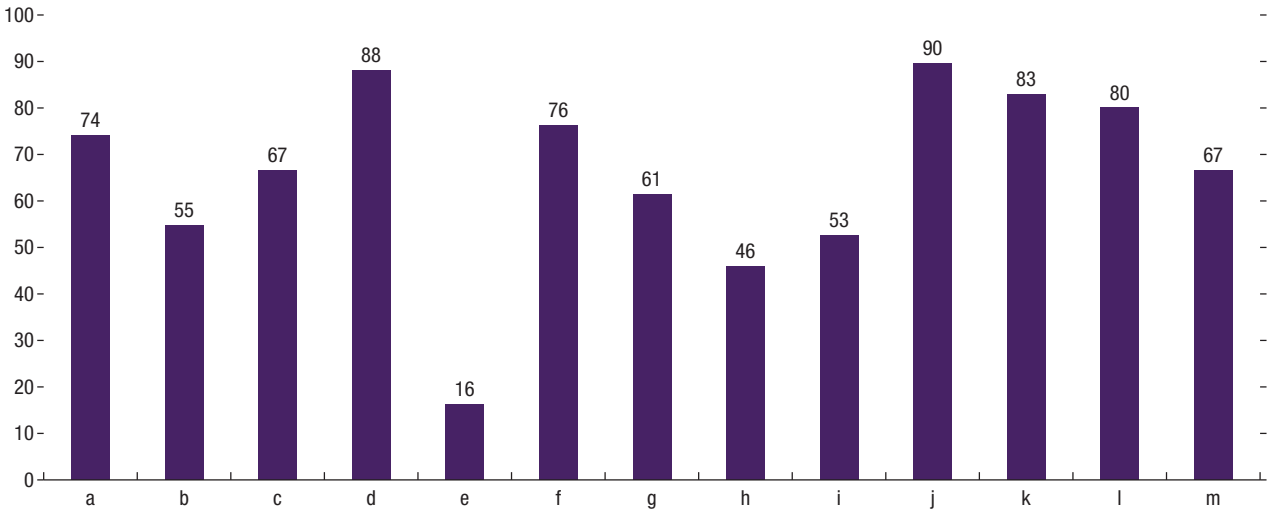
(b) Does the administration use information on compliance burden to stakeholders?

(c) Are users involved in the testing and design of services? (This is a compound indicator, comprised of responses to stakeholders being involved in the end-user testing of e-services and the design of services: if either response is a "yes," this indicator is taken to be a "yes.")

(d) Can taxpayers register simultaneously for multiple tax types?

(e) Can taxpayers register through other agencies?

Figure 46. Percentage of Yes Responses for the 13 Service Orientation Questions, 2015



(f) Does the administration have a formal taxpayer service and assistance strategy?

(g) Does the administration conduct taxpayer satisfaction surveys?

(h) Is special provision made for taxpayers with disabilities?

(i) Are services provided in languages other than official languages? (This is a compound indicator, comprised of the response on whether languages other than official languages are available telephonically or on the web: if either response is a "yes," this indicator is taken to be a "yes.")

(j) Are e-services provided? (While there are several questions about e-services, from the responses received it is evident that only administrations that have a website provide any other e-services, and hence the existence of a website is used as a proxy for the provision of any e-services.)

(k) Are rulings provided to taxpayers?

(l) Are taxpayer rights set out in a formal document?

(m) Does the administration have a specific mechanism for managing taxpayer complaints?

The proportion of "Yes" responses by administrations as to the practice or existence of the elements listed is shown in Figure 46. As these questions are mandatory, responses are available from all 135 respondents.

Table 45. Service Orientation Index Average for Standard Groups, 2015

Group	Service Orientation Index Average (percent)
Small States (31)	50.4
Lower Income (44)	58.7
Higher Income (60)	79.0
All (135)	**65.8**

Note: Numbers in parentheses equal the sample size for data supplied in each column.

The percentage of "Yes" responses varies from a low of about 18 percent (for taxpayers being able to register through other agencies) to a high of about 90 percent (for providing e-services including a website). Excluding these two extremes, the range is somewhat narrower—from 45 percent to 85 percent.

The Service Orientation Index values (in percent, rather than "out of 13") for each question for 2015 for the small-states, lower-income, and higher-income groupings are shown in Table 45. Appendix Table 44 presents the same information broken down by World Bank–defined income groups.

In terms of the standard grouping of participant jurisdictions, and like the other indices, there is a clear progression in the Service Orientation Index, moving from 50 percent for small states to 59 percent for lower-income jurisdictions and finally to 79 percent for those at the higher-income levels.

Further analysis indicates that there are no particular questions that tend to drag down the averages of the small-state and lower-income jurisdictions. Figure 47 shows the percentage of "Yes" responses for the three groups (small-state, lower-income, and higher-income jurisdictions) for each question in the index. It is clear from Figure 47 that the differences among the three groupings in terms of the overall Service Orientation Index for 2015 are not attributable to any single question or even a set of questions.

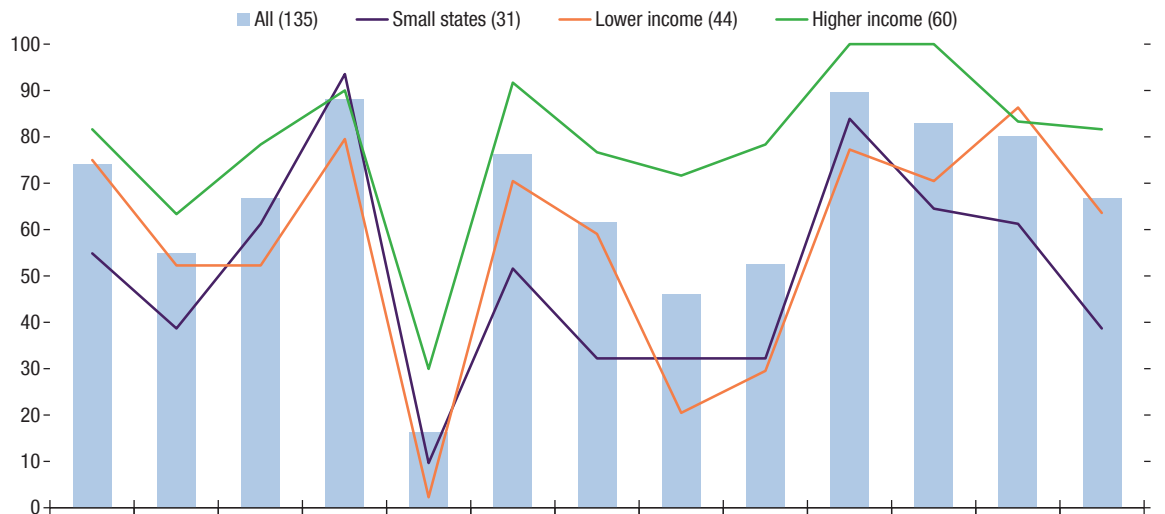
Table 46 shows a significant difference in Service Orientation Index averages for semiautonomous versus within-ministry jurisdictions. This would suggest a link between autonomy and service, a subject that is explored later in this section.

Table 46. Service Orientation Index Average for Semiautonomous/In-Ministry, 2015

Group	Service Orientation Index Average (in percent)
Semiautonomous (68)	76.5
Within Ministry (67)	55.0
All (135)	**65.8**

Note: Numbers in parentheses equal the sample size for data supplied.

Figure 47. Percentage of Yes Responses for each Question by Standard Grouping, 2015



	a	b	c	d	e	f	g	h	i	j	k	l	m
All (135)	74	55	67	88	16	76	61	46	53	90	83	80	67
Small states (31)	55	39	61	94	10	52	32	32	32	84	65	61	39
Lower income (44)	75	52	52	80	2	70	59	20	30	77	70	86	64
Higher income (60)	82	63	78	90	30	92	77	72	78	100	100	83	82

Note: Numbers in parentheses equal the sample size for data supplied.

Table 47. Correlation Between the Practices Indices, 2015

	Management and Human Resources Autonomy	Public Accountability	Service Orientation
Meeting Performance Standards	0.27	0.44	0.52
Management and Human Resources Autonomy		0.52	0.53
Public Accountability			0.74[1]

[1]The existence of a document setting out taxpayer rights was omitted from the Service Orientation Index in performing this correlation, as this also appears in the Public Accountability Index.

Relationships among the Four Indices and Performance Measures

Given the patterns that are evident from the three standard groups and the semiautonomous versus ministry split, the question arises as to whether there is any correlation between pairs of these indices at the level of individual administrations. The correlation coefficients are shown in Table 47.

The strongest relationship is seen between the Public Accountability and Service Orientation Indices. This is not merely a function of these indices each being positively correlated with income,[36] as the respective correlation

[36]GDP per capita was used as a measure of income.

coefficients with income are lower. The Public Accountability Index provides a measure of an administration's demonstration of public accountability. Whereas the Service Orientation Index reflects practices to encourage voluntary compliance, these indices may both be related to the degree of commitment by the administration's management to demonstrate accountability and responsiveness to taxpayers and citizens in general. The weakest relationships between the indices involve the Meeting Performance Standards Index: it is useful to recall that this index measures *self-assessed* performance by the administrations against its *own* performance standards, and these performance standards may vary considerably amongst jurisdictions.

Once a longer time series of quantitative performance measures becomes available through ISORA, it will become more feasible to probe the relationships between administrative and operational practices and performance measures. The likely complexity of these relationships, a reflection of the intricacies of tax administration, is illustrated through focusing on the fragile states group. Box 7 highlights select performance measures and profile elements for the fragile states group, together with how the fragile states are assessed against the four administrative and operational practices indices.

Box 7. Administrative and Operational Practices of Fragile States

International Survey on Revenue Administration (ISORA) 2016's responses generally show limited differences between the tax administrations of fragile states and the rest of the ISORA participants. There are strong similarities to low-income countries (LICs) in particular (see subsequent examples), as might be expected given that just over two-thirds (13 out of 18) are LICs and a further 3 are lower-middle-income countries. Close to 84 percent of the fragile states fall into the lower-income grouping. Table 48 demonstrates sample results.

Table 48. Comparing Fragile States—Sample Indicators, 2015
(Percent)

Group	Semiautonomous	LTO/P	Corporate Taxpayers Managed Through LTO/P	Simplified Regime for Small Taxpayers	VAT On-Time Filing Rate
Fragile States (18/18/11/18/10)	45	100	10	78	89
Nonfragile States (117/117/67/117/76)	51	84	2	56	84
LICs (22/22/12/22/11)	55	100	9	91	85

Note: Numbers in parentheses equal the sample size for data supplied in each column. LIC = low-income country; LTO/P = large taxpayer office/program; VAT = value-added tax.

The are no striking differences in respect of institutional arrangements for tax administrations in fragile states versus nonfragile states. All fragile states that participated in

Box 7. Administrative and Operational Practices of Fragile States *(continued)*

ISORA have a large taxpayer office/program (LTO/P), and fragile states are more likely than nonfragile states to administer a simplified regime for small taxpayers, along with LICs. The higher proportion of corporate taxpayers managed through the LTO/P is in part due to the relatively small base of active corporate taxpayers in fragile states, which is also the case for LICs.

Not only were responses similar to lower-income jurisdictions, but the ISORA survey response rates were similar as well. There are many examples, including the inability to provide responses related to staff demographic data or data relating to audits.

The administrative and operational practice indices, however, do show differences between administrations in the lower-income group and LICs and those that are in fragile states. Table 49 compares the average values of the indices of the fragile state participants with all other participants, and also with LICs.

Table 49. Comparing Fragile States—Indices, 2015
(Index values)

Group	Meeting Performance Standards	Management and Human Resources Autonomy	Public Accountability	Service Orientation
Fragile States (18)	43	69	32	44
Nonfragile States (117)	61	77	52	69
LICs (22)	42	80	42	52

Note: Numbers in parentheses equal the sample size for data supplied in each column. LIC = low-income country.

Across the board, the average index values for fragile states fall well below the averages for all other participants.

The low average value of the Management and Human Resources Autonomy Index for fragile states shown in Table 49 persists when considering administrations that are semi-autonomous and those that operate within ministries separately: for both subgroups the index is lower than the corresponding averages (84 percent versus 89 percent, and 57 percent versus 63 percent, respectively).

Whereas the Public Accountability and Service Orientation Indices values are lower than average for LICs, they are even lower for fragile states. Despite similar organizational features, tax administrations in fragile states do not make information about their plans and performance available to the same extent as their peers in nonfragile states. They also do not accommodate taxpayers through their approach to services and in the range of service offerings to the same extent as other tax administrations.

Conclusions

Four indices have been introduced that cover a range of administrative and operational practices of tax administrations. Appendix Table 45 presents a consolidated view of these practice indices broken down by various groupings, including the World Bank–defined income groups.

In summary, all these indices demonstrate a similar pattern, revealing that in general administrations in higher-income jurisdictions are further ahead of small-state and lower-income jurisdictions in implementing a range of practices considered to be "good practice." Tax administrations that self-identify as semiautonomous also score higher on all four indices than do tax administrations that operate within a ministry.

There are correlations between these indices. The strongest relationship is between the Public Accountability and the Service Orientation indices. The Management and Human Resource Autonomy index is also positively correlated with both these indices. Consistent time series data will facilitate further exploration of these relationships, and of the relationships between these indices, that reflect a range of administrative and operational practices, and performance outcomes.

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Appendix Tables

Chapter 2—Performance-related Data

Appendix Table 1. Median On-time Filing Rates

	2014 (percent)				2015 (percent)			
Group	CIT	PIT	Employers	VAT	CIT	PIT	Employers	VAT
Small States (14/14/11/19/14/15/12/19)	43	72	67	78	40	63	61	81
Lower Income (28/25/22/29/27/22/20/25)	85	81	79	78	72	80	72	84
Higher Income (47/44/26/41/42/40/27/42)	83	90	91	90	81	86	88	90
All (89/83/59/89/83/77/59/86)	**81**	**81**	**79**	**83**	**75**	**81**	**74**	**85**

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; PIT = personal income tax; VAT = value-added tax.

Appendix Table 2. Average On-time Filing Rates

	2014 (percent)				2015 (percent)			
Group	CIT	PIT	Employers	VAT	CIT	PIT	Employers	VAT
LICs (12/11/11/13/11/10/9/11)	85	81	78	80	80	78	57	85
LMICs (19/16/13/19/19/14/13/17)	72	77	79	77	65	74	72	76
UMICs (30/28/20/30/29/26/20/30)	67	70	75	79	69	64	72	76
HICs (28/28/15/27/24/27/17/28)	91	96	91	91	87	96	90	91
All (89/83/59/89/83/77/59/86)	**81**	**81**	**79**	**83**	**75**	**81**	**74**	**85**
Small States (14/14/11/19/14/15/12/19)	43	72	67	78	40	63	61	81
Nonsmall States (75/69/48/70/69/62/47/67)	84	83	87	86	79	84	83	86
Fragile States (12/10/10/12/10/8/8/10)	85	89	83	80	73	89	75	89
Nonfragile States (77/73/49/77/73/69/51/76)	80	80	79	83	75	79	74	84

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; PIT = personal income tax; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 3. Median On-time Payment Rate for Core Taxes by Value

	Median On-time Payment Rate (percent)							
	2014				2015			
Group	CIT	PIT	PAYE	VAT	CIT	PIT	PAYE	VAT
Small States (6/5/5/8/8/8/6/8)	79	84	98	84	84	89	101	84
Lower Income (17/17/13/19/21/21/16/19)	90	91	95	98	88	88	95	93
Higher Income (24/23/20/25/26/24/20/26)	94	89	96	94	94	86	97	93
All (47/45/38/52/55/53/42/53)	**90**	**89**	**96**	**94**	**90**	**88**	**97**	**92**

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; PAYE = pay as you earn; PIT = personal income tax; VAT = value-added tax.

Appendix Table 4. Average On-time Payment Rates for Core Taxes by Value

	2014 (percent)				2015 (percent)			
Group	CIT	PIT	Employers	VAT	CIT	PIT	Employers	VAT
LICs (6/6/6/7/10/10/10/8)	84	87	94	99	82	79	96	83
LMICs (12/12/8/14/12/12/7/13)	91	91	101	91	91	87	101	93
UMICs (14/14/13/16/16/17/12/16)	89	86	96	95	90	75	98	91
HICs (15/13/11/15/17/14/13/16)	93	89	97	95	95	90	97	95
All (47/45/38/52/55/53/42/53)	**90**	**89**	**96**	**94**	**90**	**88**	**97**	**92**
Small States (6/5/5/8/8/8/6/8)	79	84	98	84	84	89	101	84
Nonsmall States (41/40/33/44/47/45/36/45)	92	90	96	95	91	88	97	93
Fragile States (12/10/10/12/10/8/8/10)	84	87	95	101	82	75	96	74
Nonfragile States (35/35/28/40/45/45/34/43)	92	89	97	93	90	89	97	93

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; PIT = personal income tax; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 5. Median Proportion of Returns Filed Electronically

	2014 (percent)			2015 (percent)		
Group	**CIT**	**PIT**	**VAT**	**CIT**	**PIT**	**VAT**
LICs (1/1/1/1/1/1)	—	—	—	—	—	—
LMICs (8/6/8/6/5/4)	34	34	18	92	97	—
UMICs (15/14/12/12/11/10)	97	77	98	95	80	99
HICs (26/26/27/24/26/27)	87	76	93	93	83	98
All (50/47/48/43/43/42)	**87**	**76**	**93**	**93**	**83**	**98**
Small States (6/6/8/4/5/7)	2	25	28	3	34	53
Nonsmall States (44/41/40/39/38/35)	88	77	96	94	83	99
Fragile States (1/1/2/1/1/2)	—	—	—	—	—	—
Nonfragile States (49/46/46/42/42/40)	88	76	94	94	83	99

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; PIT = personal income tax; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 6. Median Proportion of Payments Made Electronically

	2014 (percent)			2015 (percent)		
Group	**CIT**	**PIT**	**VAT**	**CIT**	**PIT**	**VAT**
LICs (0/0/0/0/0/0)	—	—	—	—	—	—
LMICs (6/4/6/5/3/5)	2	—	1	6	—	2
UMICs (7/6/7/6/6/6)	44	30	11	27	15	19
HICs (8/8/7/8/8/6)	42	64	66	50	69	83
All (21/18/20/19/17/17)	**12**	**30**	**7**	**13**	**27**	**14**
Small States (3/3/3/1/2/1)	—	—	—	—	—	—
Nonsmall States (18/15/17/18/15/16)	30	54	22	15	37	19
Fragile States (0/0/0/0/0/0)	—	—	—	—	—	—
Nonfragile States (21/18/20/19/17/17)	12	30	7	13	27	14

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; PIT = personal income tax; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 7. Debt at Year-end as Percentage of Total Tax Collected

Group	2014 (percent)	2015 (percent)
LICs (13/13)	15	12
LMICs (12/14)	14	17
UMICs (21/21)	20	23
HICs (37/37)	13	12
All (83/85)	**15**	**17**
Small States (12/14)	25	20
Nonsmall States (61/61)	15	15
Fragile States (7/7)	10	6
Nonfragile States (76/78)	15	17

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 8. Audits per 100 Active Taxpayers

	2014				2015			
Group	**CIT**	**PIT**	**Employers**	**VAT**	**CIT**	**PIT**	**Employers**	**VAT**
LICs (1/1/1/1/1/1/1/1)	—	—	—	—	—	—	—	—
LMICs (5/2/4/5/4/3/4/5)	5.38	—	—	12.29	—	—	—	7.88
UMICs (21/18/9/20/20/16/8/19)	1.51	0.34	0.60	7.20	1.72	0.39	0.60	5.25
HICs (17/17/9/19/18/19/10/21)	1.72	0.59	1.02	3.80	1.45	0.59	1.85	2.71
All (43/38/23/45/43/39/23/46)	**1.72**	**0.38**	**1.02**	**5.01**	**1.65**	**0.45**	**0.92**	**4.02**
Small States (6/5/5/8/7/6/4/8)	1.46	0.13	0.60	6.59	1.77	0.28	—	2.29
Nonsmall States (37/33/18/37/36/33/19/38)	1.77	0.47	1.29	4.01	1.65	0.54	0.92	4.28
Fragile States (1/1/1/2/1/1/1/2)	—	—	—	—	—	—	—	—
Nonfragile States (42/37/22/43/42/38/22/44)	1.67	0.37	1.19	4.01	1.65	0.42	0.98	3.83

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; PIT = personal income tax; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 9. Proportion of Audits Leading to Adjustment

	2014 (percent)				2015 (percent)			
Group	**CIT**	**PIT**	**Employers**	**VAT**	**CIT**	**PIT**	**Employers**	**VAT**
LICs (1/1/1/1/1/1/1/1)	—	—	—	—	—	—	—	—
LMICs (6/5/5/5/4/4/4/4)	100	100	100	100	—	—	—	—
UMICs (20/18/11/22/19/18/11/21)	64	72	57	72	73	72	86	68
HICs (16/16/14/19/18/18/15/21)	51	66	67	55	45	53	64	56
All (43/40/31/47/42/41/31/47)	**58**	**71**	**67**	**61**	**53**	**67**	**64**	**58**
Small States (7/6/5/9/7/7/5/9)	67	98	100	78	54	89	100	76
Nonsmall States (36/34/26/38/35/34/26/38)	54	60	50	56	53	64	53	49
Fragile States (1/1/1/2/1/1/1/2)	—	—	—	—	—	—	—	—
Nonfragile States (42/39/30/45/41/40/30/45)	58	71	67	66	54	66	64	61

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; PIT = personal income tax; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 10. Median Assessments Raised through Audits as Percentage of Revenue

	2014 (percent)			2015 (percent)		
Group	**CIT**	**PIT**	**VAT**	**CIT**	**PIT**	**VAT**
LICs (1/1/1/1/1/1)	—	—	—	—	—	—
LMICs (6/4/6/4/2/4)	2.1	—	1.0	—	—	—
UMICs (20/18/18/20/17/17)	6.4	2.0	2.4	13.3	3.3	2.6
HICs (18/18/21/19/19/22)	3.3	1.0	2.2	3.2	1.0	3.2
All (45/41/46/44/39/44)	**3.6**	**1.4**	**1.9**	**7.1**	**1.9**	**2.6**
Small States (7/7/7/9/7/7)	7.9	3.5	1.7	18.5	2.0	2.5
Nonsmall States (38/34/39/35/32/37)	3.5	1.1	1.9	4.6	1.5	2.6
Fragile States (1/1/1/1/1/1)	—	—	—	—	—	—
Nonfragile States (44/40/45/43/38/43)	3.9	1.4	1.9	7.5	1.5	2.6

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; PIT = personal income tax; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 11. Value of Objections as Percentage of Total Tax Collected

Group	2014 (percent)	2015 (percent)
LICs (6/6)	1.08	2.25
LMICs (10/10)	4.57	3.84
UMICs (13/14)	2.84	2.10
HICs (9/10)	0.07	0.21
All (38/40)	**1.99**	**1.50**
Small States (9/11)	0.04	0.11
Nonsmall States (29/29)	2.13	1.53
Fragile States (5/5)	0.36	1.44
Nonfragile States (33/35)	2.13	1.53

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 12. Cost of Collection
(Percent)

	Average Recurrent Budget to Revenue Collected (less VAT and excise on imports)		Median Recurrent Budget to Revenue Collected (less VAT and excise on imports)	
Group	2014	2015	2014	2015
LICs (5/6)	2.0	1.3	1.5	0.7
LMICs (15/15)	1.5	1.6	1.0	0.9
UMICs (19/18)	1.0	0.9	1.0	0.9
HICs (38/36)	1.0	0.9	0.9	0.8
All (77/76)	**1.3**	**1.1**	**1.0**	**0.9**
Small States (11/11)	1.7	1.9	1.3	1.2
Nonsmall States (66/65)	1.1	1.0	0.9	0.9
Fragile States (2/2)	—	—	—	—
Nonfragile States (75/74)	1.1	1.1	0.9	0.9

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 13. Active Core Taxpayers per Full-time Equivalent
(Median)

Group	2014	2015
LICs (10/11)	11	23
LMICs (16/19)	44	63
UMICs (30/29)	497	537
HICs (39/41)	673	703
All (95/100)	**439**	**426**
Small States (18/20)	90	120
Nonsmall States (77/80)	364	309
Fragile States (11/11)	11	23
Nonfragile States (84/89)	400	426

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 14. Citizens per Full-time Equivalent *(Median)*

Group	2014	2015
LICs (13/15)	21,575	14,902
LMICs (22/21)	6,109	5,348
UMICs (34/34)	2,274	2,260
HICs (44/45)	1,125	1,124
All (113/115)	**2,167**	**2,192**
Small States (25/26)	1,461	1,430
Nonsmall States (88/89)	3,221	3,402
Fragile States (13/15)	13,075	13,044
Nonfragile States (100/100)	1,867	1,839

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Chapter 2—Profile Data

Appendix Table 15. Institutional Arrangements—Autonomy and Tax Only/Tax and Customs, 2015

	Tax (percent)		Tax and Customs (percent)	
Group	Semiautonomous	Within Ministry	Semiautonomous	Within Ministry
LICs (22)	4.5	45.5	50.0	0.0
LMICs (26)	26.9	38.5	26.9	7.7
UMICs (40)	17.5	50.0	27.5	5.0
HICs (47)	29.8	36.2	21.3	12.8
All (135)	**21.5**	**42.2**	**28.9**	**7.4**
Small States (31)	12.9	64.5	12.9	9.7
Nonsmall States (104)	24.0	35.6	33.7	6.7
Fragile States (18)	5.6	55.6	38.9	0.0
Nonfragile States (117)	23.9	40.2	27.4	8.5

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 16. Institutional Arrangements—Type of Institution, 2015 *(Percent)*

Group	Single Directorate in Ministry	Multiple Directorates in Ministry	Unified Semiautonomous Body	Unified Semiautonomous Body with Board	Other
LICs (22)	31.8	13.6	4.5	50.0	0.0
LMICs (26)	34.6	11.5	23.1	30.8	0.0
UMICs (40)	45.0	5.0	15.0	30.0	5.0
HICs (47)	27.7	14.9	40.4	10.6	6.4
All (135)	**34.8**	**11.1**	**23.7**	**26.7**	**3.7**
Small States (31)	51.6	22.6	9.7	16.1	0.0
Nonsmall States (104)	29.8	7.7	27.9	29.8	4.8
Fragile States (18)	33.3	22.2	5.6	38.9	0.0
Nonfragile States (117)	35.0	9.4	26.5	24.8	4.3

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 17. Proportion of Administrations Collecting Each Revenue Type
(Percent)

Group	Taxes on Payroll and Workforce	Income Tax—Individuals	Income Tax—Corporate and Other Entities	VAT (domestic)	VAT (import)	Excises (domestic)	Excises (import)	Other Taxes on Goods and Services	Motor Vehicle Taxes	Real Property	Wealth Taxes	Estate, Inheritance, Gift, and Other Taxes	Other Taxes	Social Security Contributions	Nontax Revenue
LICs (22)	91	100	100	100	68	86	59	82	41	41	23	23	32	23	73
LMICs (26)	69	81	96	88	69	69	50	58	38	35	27	35	54	27	42
UMICs (40)	58	95	98	83	53	70	43	63	38	40	18	28	70	48	73
HICs (47)	30	96	98	89	28	51	15	43	43	60	23	53	64	32	57
Total (135)	**56**	**93**	**98**	**89**	**50**	**66**	**37**	**58**	**40**	**46**	**22**	**37**	**59**	**34**	**61**
Small States (31)	58	77	90	74	52	48	39	42	45	42	16	23	61	23	58
Nonsmall States (104)	55	98	100	93	49	71	37	63	38	47	24	41	58	38	63
Fragile States (18)	94	89	100	89	61	72	50	78	39	44	28	28	44	28	56
Nonfragile States (117)	50	94	97	89	48	65	35	55	40	46	21	38	61	35	62

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 18. Proportion of Administrations by Region Collecting Each Revenue Type
(Percent)

Region	Taxes on Payroll and Workforce	Income Tax—Individuals	Income Tax—Corporate and Other Entities	VAT (domestic)	VAT (import)	Excises (domestic)	Excises (import)	Other Taxes on Goods and Services	Motor Vehicle Taxes	Real Property	Wealth Taxes	Estate, Inheritance, Gift, and Other Taxes	Other Taxes	Social Security Contributions	Nontax Revenue
AFR (37)	81	95	100	97	68	78	51	76	46	41	30	38	51	27	59
APD (19)	37	84	95	68	42	42	26	37	11	26	5	16	47	5	47
EUR (41)	39	100	100	98	34	54	20	51	46	51	22	56	68	54	66
MCD (5)	80	100	100	100	60	80	60	80	40	60	0	20	40	40	60
WHD (33)	55	88	94	79	52	79	45	55	42	55	27	27	64	33	67
All (135)	**56**	**93**	**98**	**89**	**50**	**66**	**37**	**58**	**40**	**46**	**22**	**37**	**59**	**34**	**61**

Note: Numbers in parentheses equal the sample size for data supplied in each column. AFR = sub-Saharan Africa; APD = Asia Pacific; EUR = Europe; MCD = Middle East and Central Asia; VAT = value-added tax; WHD = Western Hemisphere.

Appendix Table 19. Nontax Roles, 2015
(Percent)

Group	Collection of SSC	Welfare Benefits	Child Support	Property Valuation	Student Loans	Population Register	Retirement Savings	Lotteries/ Gambling/ Gaming	Other
LICs (22)	4.5	0.0	0.0	22.7	4.5	0.0	4.5	50.0	27.3
LMICs (26)	11.5	0.0	0.0	11.5	0.0	0.0	0.0	26.9	38.5
UMICs (40)	37.5	7.5	5.0	30.0	5.0	2.5	7.5	42.5	25.0
HICs (47)	42.6	12.8	10.6	44.7	10.6	4.3	10.6	31.9	57.4
All (135)	**28.9**	**6.7**	**5.2**	**30.4**	**5.9**	**2.2**	**6.7**	**37.0**	**39.3**
Small States (31)	25.8	3.2	3.2	41.9	3.2	0.0	6.5	38.7	25.8
Nonsmall States (104)	29.8	7.7	5.8	26.9	6.7	2.9	6.7	36.5	43.3
Fragile States (18)	0.0	0.0	0.0	22.2	0.0	0.0	0.0	33.3	22.2
Nonfragile States (117)	33.3	7.7	6.0	31.6	6.8	2.6	7.7	37.6	41.9

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; SSC = social security contributions; UMICs = upper-middle-income countries.

Appendix Table 20. Average Percentage of Staff by Function, 2015

Group	Registration and Taxpayer Service	Payment and Returns Processing	Audit and Verification	Enforcement and Debt Collection	Disputes and Appeals	Other Tax Operations	Support Functions
LICs (9)	9	12	19	18	4	21	16
LMICs (12)	13	18	24	11	3	11	20
UMICs (28)	15	11	30	12	3	8	20
HICs (38)	14	18	31	9	4	6	19
All (87)	**14**	**15**	**28**	**11**	**3**	**9**	**19**
Small States (21)	15	15	30	11	2	9	18
Nonsmall States (66)	14	15	28	11	4	9	19
Fragile States (10)	12	12	22	12	3	20	18
Nonfragile States (77)	14	14	29	11	3	7	19

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 21. Average Percentage of Staff by Office Type, 2015

Group	Headquarters	Regional Offices	Local/Branch Offices	Data Processing Centers	Service Centers (including call centers)	Other Offices
LICs (7)	35	13	34	2	3	14
LMICs (10)	41	20	34	3	2	0
UMICs (22)	34	22	33	2	7	3
HICs (37)	28	20	44	2	5	1
All (76)	**32**	**20**	**39**	**2**	**5**	**3**
Small States (17)	53	10	30	0	6	1
Nonsmall States (59)	26	23	41	3	5	3
Fragile States (6)	33	20	26	2	3	16
Nonfragile States (76)	32	20	40	2	5	1

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 22. Age Distribution of Staff, 2015

Group	Under 25 Years	25 to 34 Years	35 to 44 Years	45 to 54 Years	55 to 64 Years	65 Years and Older
LICs (10)	1	28	43	20	8	0
LMICs (22)	4	29	33	24	10	0
UMICs (33)	6	25	28	25	15	2
HICs (43)	2	16	25	31	23	2
All (108)	**4**	**23**	**30**	**27**	**16**	**1**
Small States (25)	8	27	29	22	12	2
Nonsmall States (83)	2	21	30	28	18	1
Fragile States (10)	1	26	42	21	11	0
Nonfragile States (98)	4	22	28	27	17	1

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 23. Average Percentage of Staff by Length of Service, 2015

Group	Less than 5 Years	5 to 9 Years	10 to 19 Years	20 Years or More
LICs (9)	1	28	8	0
LMICs (21)	4	29	10	0
UMICs (31)	6	25	15	2
HICs (41)	2	16	23	2
All (102)	**4**	**23**	**16**	**1**
Small States (23)	8	27	12	2
Nonsmall States (79)	2	21	18	1
Fragile States (10)	1	26	11	0
Nonfragile States (92)	4	22	17	1

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 24. Average Percentage of Female Staff, 2015

Group	All Staff	Executives
LICs (15/11)	32	30
LMICs (23/22)	42	32
UMICs (38/32)	54	44
HICs (45/38)	63	46
All (121/103)	**52**	**41**
Small States (29/23)	60	42
Nonsmall States (92/80)	50	40
Fragile States (13/12)	35	30
Nonfragile States (108/91)	54	42

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 25. Differentiated Treatment of Taxpayer Segments

	Percentage of Administrations with . . .		
Group	LTO/P	HNWI Program	Simplified Tax Regime(s) for Small Taxpayers
LICs (22)	100	5	91
LMICs (26)	96	15	65
UMICs (40)	83	18	55
HICs (47)	77	32	36
All (135)	**86**	**20**	**56**
Small States (31)	52	13	26
Nonsmall States (104)	96	22	65
Fragile States (18)	100	11	78
Nonfragile States (117)	84	21	53

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; HNWI = high-net-wealth individual; LICs = low-income countries; LMICs = low-middle-income countries; LTO/P = large taxpayer office/program; UMICs = upper-middle-income countries.

Appendix Table 26. Characteristics of the Large Taxpayer Office or Program

	Median Percentage of Revenue Collected Through LTO		Median Percentage of Corporate Taxpayers Managed Through LTO		Median Number of Corporate Taxpayers per FTE	
Group	**2014**	**2015**	**2014**	**2015**	**2014**	**2015**
LICs (9/9/12/12/15/16)	54	63	11.2	8.5	6.0	5.7
LMICs (14/10/14/17/21/20)	39	37	4.3	4.1	9.6	7.0
UMICs (15/13/25/24/29/28)	43	48	0.5	0.4	8.5	8.0
HICs (18/17/25/25/31/31)	44	43	0.5	0.4	11.0	9.9
All (56/49/76/78/96/95)	**44**	**45**	**1.6**	**2.0**	**8.5**	**7.8**
Small States (2/2/6/7/13/13)	—	—	2.2	2.7	16.3	18.8
Nonsmall States (54/47/70/71/83/82)	44	45	1.6	1.9	7.4	7.3
(Fragile States (5/4/11/11/14/17)	47	—	13.7	9.5	7.7	6.7
Nonfragile States (51/45/65/67/82/78)	44	44	1.6	1.9	8.6	8.5

Note: Numbers in parentheses equal the sample size for data supplied in each column. FTE = full-time equivalent; HICs = high-income countries; HNWI = high-net-wealth individual; LICs = low-income countries; LMICs = low-middle-income countries; LTO = large taxpayer office; UMICs = upper-middle-income countries.

Appendix Table 27. Criteria Used to Identify Large Taxpayers, 2015

	Percentage of Administrations Identifying Large Taxpayer Through . . .					
Group	**Turnover/Revenue**	**Economic Sector/Activity**	**Other Criteria**	**Taxes (assessed/paid)**	**Assets**	**Income**
LICs (22)	100	32	27	9	5	0
LMICs (25)	96	36	24	32	4	8
UMICs (33)	79	45	39	39	12	15
HICs (36)	86	53	58	22	17	14
All (116)	**89**	**43**	**40**	**27**	**10**	**10**
Small States (16)	94	19	19	19	0	13
Nonsmall States (100)	88	47	43	28	12	10
Fragile States (18)	100	22	22	11	6	0
Nonfragile States (98)	87	47	43	30	11	12

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 28. Functions Carried Out in Large Taxpayer Office or Program, 2015

	Percentage of Administrations Executing Various Functions Within their LTO					
Group	**Audit**	**Services (for example, telephone calls, contacts, and rulings)**	**Collection, Enforcement, and Management of Arrears**	**Return and Payment Processing**	**Dispute Resolution**	**Registration**
LICs (22)	82	82	100	95	45	41
LMICs (25)	84	88	84	64	40	52
UMICs (33)	94	85	67	58	39	48
HICs (36)	97	83	42	56	61	42
All (116)	**91**	**84**	**69**	**66**	**47**	**46**
Small States (16)	88	81	69	50	50	25
Nonsmall States (100)	91	85	69	68	47	49
Fragile States (18)	72	78	89	94	39	44
Nonfragile States (98)	94	86	65	60	49	46

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 29. Incidence of Simplified Regimes in Tax Administrations, 2015

	Proportion Administering Various Simplified Regimes					
Group	Flat Rate Turnover Regime	Other	Simplified Participation in Regular Regimes	*Forfait* (Agreed) Regime	Simple Patent	Indicator-based Regime
LICs (20)	75	15	30	25	15	10
LMICs (17)	47	35	18	24	24	0
UMICs (22)	50	18	27	18	14	18
HICs (17)	47	35	18	12	24	18
All (76)	**55**	**25**	**24**	**20**	**18**	**12**
Small States (8)	75	0	13	0	13	0
Nonsmall States (68)	53	28	25	22	19	13
Fragile States (14)	71	7	29	36	7	7
Nonfragile States (62)	52	29	23	16	21	13

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 30. Proportion of Administrations with Active Taxpayers Only on Register

	2014 (percent)				2015 (percent)			
Group	CIT	PIT	Employers	VAT	CIT	PIT	Employers	VAT
LICs (6/6/6/7/10/10/10/8)	84	87	94	99	82	79	96	83
LMICs (12/12/8/14/12/12/7/13)	91	91	101	91	91	87	101	93
UMICs (14/14/13/16/16/17/12/16)	89	86	96	95	90	75	98	91
HICs (15/13/11/15/17/14/13/16)	93	89	97	95	95	90	97	95
All (47/45/38/52/55/53/42/53)	**90**	**89**	**96**	**94**	**90**	**88**	**97**	**92**
Small States (6/5/5/8/8/8/6/8)	79	84	98	84	84	89	101	84
Nonsmall States (41/40/33/44/47/45/36/45)	92	90	96	95	91	88	97	93
Fragile States (12/10/10/12/10/8/8/10)	84	87	95	101	82	75	96	74
Nonfragile States (5/35/28/40/45/45/34/43)	92	89	97	93	90	89	97	93

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; PIT = personal income tax; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 31. Management Approach of Tax Administrations, 2015

	Percentage of Administrations that have a/an . . .				
Group	Strategic Plan	Annual Business/ Operational Plans	Annual Report	Formal Internal Assurance Mechanism (Internal Audit)	Enterprise-wide Risk Policy
LICs (22)	100	95	95	82	59
LMICs (26)	88	92	96	92	62
UMICs (40)	90	93	90	80	58
HICs (47)	91	87	91	91	72
All (135)	**92**	**91**	**93**	**87**	**64**
Small States (31)	84	90	84	58	35
Nonsmall States (104)	94	91	95	95	72
Fragile States (18)	94	89	89	83	44
Nonfragile States (117)	91	91	93	87	67

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 32. Human Resources Strategy and Approach: Percentage Responding Yes, 2015

Group	Human Resources Strategy Exists	Training Plan Exists	Recruitment Plan Exists	Demographic Characteristics of Staff are Taken into Account	Polices for Flexible Working Arrangements Exist	Leadership and Talent Management Programs Exist	A Time Reporting System Is in Place
LICs (22)	64	91	59	55	32	32	45
LMICs (26)	73	88	65	54	27	50	58
UMICs (40)	60	75	58	48	30	48	55
HICs (47)	81	89	72	64	77	77	87
All (135)	**70**	**85**	**64**	**56**	**46**	**56**	**65**
Small States (31)	52	61	52	45	39	55	77
Nonsmall States (104)	76	92	68	59	48	56	62
Fragile States (18)	72	89	50	33	17	33	50
Nonfragile States (117)	70	85	67	59	50	59	68

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 33. Performance Management: Percentage Responding Yes, 2015

Group	PM Present	PM Includes Individual Development Plans	PM Includes Specific Objectives for Staff	Staff Performance Is Evaluated Annually	Performance Is Linked to Pay and Reward	Increased Remuneration for Good Performance Possible	Poor Performance can Result in Reduced Salary	Poor Performance can Result in Denial of Annual Increment
LICs (22)	59	55	50	55	41	41	18	36
LMICs (26)	81	58	69	81	65	62	27	27
UMICs (40)	83	60	65	80	53	50	10	33
HICs (47)	85	68	74	81	70	64	34	49
All (135)	**79**	**61**	**67**	**76**	**59**	**56**	**23**	**38**
Small States (31)	71	61	61	68	52	48	13	39
Nonsmall States (104)	82	62	68	79	62	58	26	38
Fragile States (18)	50	44	33	50	39	39	22	33
Nonfragile States (117)	84	64	72	80	62	58	23	38

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; PM = performance management system; UMICs = upper-middle-income countries.

Appendix Table 34. Staff Engagement: Percentage Answering Yes, 2015

Group	Staff are Surveyed Periodically	Staff Engagement Is Assessed	Staff Survey Results are Shared with Staff	Staff are Engaged in Developing and Implementing Action Plans
LICs (22)	36	27	27	27
LMICs (26)	54	46	38	38
UMICs (40)	48	43	38	35
HICs (47)	68	57	62	55
All (135)	**54**	**46**	**44**	**41**
Small States (31)	32	32	26	29
Nonsmall States (104)	61	50	50	45
Fragile States (18)	33	28	28	22
Nonfragile States (117)	57	49	47	44

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 35. Formal Approaches to Compliance Risk, 2015
(Percent)

Group	Formal Approach for Identifying, Assessing, and Prioritizing Key Compliance Risks	Return Filing	Payment Processing	Collection Enforcement	Verification/ Audit	Taxpayer Service
LICs (22)	77	73	73	68	77	64
LMICs (26)	77	62	50	58	77	58
UMICs (40)	70	58	45	53	68	45
HICs (47)	74	68	53	57	74	49
All (135)	**74**	**64**	**53**	**58**	**73**	**52**
Small States (31)	55	48	39	39	52	32
Nonsmall States (104)	80	69	58	63	80	58
Fragile States (18)	72	67	61	61	72	61
Nonfragile States (117)	74	64	52	57	74	50

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 36. High-Priority Compliance Approaches, 2015
(Percent)

Group	Cooperative Compliance	Leveraging Compliance through Tax Intermediaries/ Agents	Making Third-Party Data Visible to Taxpayers (for example, Prefilled Returns, Online Services, etc.)	Preassessment Verification	Exchange of Information	Tax Compliance by Design
LICs (22)	55	18	18	36	32	50
LMICs (26)	58	38	35	35	58	31
UMICs (39)	62	28	18	44	56	51
HICs (46)	63	33	57	39	70	48
All (133)	**60**	**30**	**35**	**39**	**57**	**46**
Small States (31)	77	29	23	39	52	42
Nonsmall States (102)	54	30	38	38	58	46
Fragile States (18)	61	33	11	39	44	33
Nonfragile States (115)	59	29	38	38	58	47

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 37. High-Priority Focus Areas, 2015
(Percent)

Group	Base Erosion and Profit Shifting	Aggressive Domestic Tax Avoidance/ Schemes	VAT Fraud (including VAT Refund Fraud)	Identity Fraud	Underground/ Cash Economy	Amortization of Goodwill	Preferential Tax Regimes/ Incentives	Transactions with Tax Havens	High-Net-Wealth Individuals	Research and Development Tax Credits	E-commerce
LICs (22)	59	64	77	45	27	9	50	36	9	14	5
LMICs (26)	42	62	73	46	62	4	62	38	38	27	19
UMICs (39)	49	54	62	36	46	8	26	23	31	21	18
HICs (46)	63	63	72	43	72	11	15	57	30	24	43
All (133)	**54**	**60**	**70**	**42**	**55**	**8**	**33**	**40**	**29**	22	25
Small States (31)	42	48	48	29	52	3	23	19	3	3	13
Nonsmall States (102)	57	63	75	45	55	10	36	45	36	27	28
Fragile States (18)	56	56	67	44	50	6	44	28	11	6	0
Nonfragile States (115)	53	60	69	41	55	9	31	41	31	24	28

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 38. Tax Gap Estimates and Conduct of Random Audits and Uses, 2015
(Percent)

Group	Tax Gap—PIT	Tax Gap—CIT	Tax Gap—VAT	Tax Gap—Other	Random Audits Conducted	Test Compliance in Targeted Sectors	Enhance Risk Profiling Systems	Produce Tax Gap Estimates	Measure the Behavioral Effects of Audits
LICs (22)	27	27	32	27	59	59	55	14	50
LMICs (26)	27	27	35	23	77	69	58	15	42
UMICs (40)	33	35	35	25	68	60	50	18	30
HICs (47)	21	23	36	21	62	53	43	17	23
All (135)	**27**	**28**	**35**	**24**	**66**	**59**	**50**	**16**	**33**
Small States (31)	13	13	16	13	74	68	42	10	26
Nonsmall States (104)	31	33	40	27	63	57	52	18	36
Fragile States (18)	28	28	28	28	67	67	50	17	44
Nonfragile States (117)	26	28	36	23	66	58	50	16	32

Note: Numbers in parentheses equal the sample size for data supplied in each column. CIT = corporate income tax; HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; PIT = personal income tax; UMICs = upper-middle-income countries; VAT = value-added tax.

Appendix Table 39. Administrations Using Specified Case Selection Criteria, 2015
(Percent)

Group	LICs (22)	LMICs (26)	UMICs (40)	HICs (47)	All (135)	Small States (31)	Nonsmall States (104)	Fragile States (18)	Nonfragile States (117)
Economic Sector	95	92	88	85	**89**	81	91	94	88
Third-Party Information	86	96	80	91	**88**	77	91	89	88
Taxpayer Behavior	73	96	83	85	**84**	77	87	78	85
Taxpayer Category (for example, self-employed)	82	77	80	83	**81**	71	84	83	80
Information Cross-checking	77	88	68	87	**80**	61	86	83	79
Significant Changes to Taxpayer	77	81	78	79	**79**	65	83	89	77
Selected Based on Judgment	64	81	68	79	**73**	77	72	61	75
Internal Intelligence Function	77	81	65	72	**73**	61	76	78	72
Risk Profiling—Business Rules	68	73	58	77	**69**	42	77	72	68
Compliance Checks (for example, payroll)	64	65	63	77	**68**	71	67	50	71
Collected Tax	59	73	70	57	**64**	55	67	61	65
Frequency (time between audits)	77	69	53	57	**61**	42	67	67	61
BEPS or Aggressive Tax Planning	59	46	53	55	**53**	23	63	39	56
Random	36	65	55	51	**53**	58	51	39	55
Location	32	62	55	53	**52**	39	56	44	53
International Exchange of Information	32	42	48	70	**52**	26	60	17	57
Tax Control Framework	50	69	35	47	**48**	23	56	50	48
Ownership in a Corporate Entity	27	58	45	47	**45**	39	47	22	49
Risk Profiling—Predictive Modelling	36	50	43	38	**41**	19	48	50	40
Commercial Register	14	35	33	36	**31**	19	35	17	33
Other	0	12	10	9	**8**	6	9	0	9

Note: Numbers in parentheses equal the sample size for data supplied in each column. BEPS = base erosion and profit shifting; HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 40. Electronic Methods in Audit and Specific Uses, 2015 *(Percent)*

Group	Electronic Audit Methods Used	Behavioral or Predictive Models and Analysis for Risk Assessment	Electronic Methods Used for Risk Profiling	Electronic Methods Used in Case Selection	Electronic Methods Used for Audit Case Management
LICs (22)	27	14	18	27	18
LMICs (26)	31	8	19	31	19
UMICs (40)	58	28	48	48	35
HICs (47)	85	47	70	74	57
All (135)	**57**	**28**	**45**	**50**	**37**
Small States (31)	48	16	29	29	23
Nonsmall States (104)	60	32	50	57	41
Fragile States (18)	28	11	17	28	17
Nonfragile States (117)	62	31	50	54	40

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Chapter 2—Administrative and Operational Practices

Appendix Table 41. Meeting Performance Standards Index

	Mean Performance Indicator Value	
Group	2014	2015
LICs (21/22)	48.1	42.3
LMICs (25/24)	58.0	58.3
UMICs (36)	59.4	60.6
HICs (45)	65.3	64.4
All (127)	**59.4**	**58.3**
Small States (28)	50.7	51.8
Nonsmall States (99)	61.8	60.2
Fragile States (17)	44.7	42.9
Nonfragile States (110)	61.6	60.7

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 42. Autonomy Index, 2015 Averages

Group	Semiautonomous	Within Ministry	All
LICs (22)	94.7	61.8	79.8
LMICs (26)	87.0	62.9	75.9
UMICs (40)	86.4	55.0	69.1
HICs (47)	89.8	71.9	81.0
All (135)	**89.2**	**63.2**	**76.3**
Small States (8/23/31)	89.8	51.0	61.0
Nonsmall States (60/44/104)	89.1	69.6	80.9
Fragile States (8/10/18)	84.1	57.3	69.2
Nonfragile States (60/57/117)	89.8	64.3	77.4

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 43. Public Accountability Index

Group	2015 Average
LICs (22)	42.0
LMICs (26)	51.9
UMICs (40)	44.6
HICs (47)	55.1
All (135)	**49.3**
Small States (31)	31.2
Nonsmall States (104)	54.6
Fragile States (18)	32.4
Nonfragile States (117)	51.9

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 44. Service Orientation Index

Group	2015 Average
LICs (22)	51.7
LMICs (26)	64.2
UMICs (40)	65.0
HICs (47)	74.0
All (135)	**65.8**
Small States (31)	50.4
Nonsmall States (104)	70.4
Fragile States (18)	43.6
Nonfragile States (117)	69.2

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.

Appendix Table 45. Consolidation of All Indices, 2015

	Index Averages for 2015			
Group	Meeting Performance Standards	Management and Human Resource Autonomy	Public Accountability	Service Orientation
LICs (22/22/22/22)	42.3	79.8	42.0	51.7
LMICs (24/26/26/26)	58.3	75.9	51.9	64.2
UMICs (36/40/40/40)	60.6	69.1	44.6	65.0
HICs (45/47/47/47)	64.4	81.0	55.1	74.0
All (127/135/135/135)	**58.3**	**76.3**	**49.3**	**65.8**
Small States (28/31/31/31)	51.8	61.0	31.2	50.4
Nonsmall States (99/104/104/104)	60.2	80.9	54.6	70.4
Fragile States (17/18/18/18)	42.9	69.2	32.4	43.6
Nonfragile States (110/117/117/117)	60.7	77.4	51.9	69.2

Note: Numbers in parentheses equal the sample size for data supplied in each column. HICs = high-income countries; LICs = low-income countries; LMICs = low-middle-income countries; UMICs = upper-middle-income countries.