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CURRENT CHALLENGES IN REVENUE MOBILIZATION: IMPROVING TAX COMPLIANCE

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CURRENT CHALLENGES IN REVENUE MOBILIZATION: IMPROVING TAX COMPLIANCE

EXECUTIVE SUMMARY

This paper addresses core challenges that all tax administrations face in dealing with noncompliance—which are now receiving renewed attention. Long a priority in developing countries, assuring strong compliance has acquired greater priority in countries facing intensified revenue needs, and is critical for fairness and statebuilding.

Measuring and analyzing ‘compliance gaps’ is a powerful first step to addressing noncompliance—and reducing them can raise significant amounts. Estimating and dissecting the difference between tax due and collected is becoming more common, but remains the exception—even in advanced economies. The aim is not to eliminate gaps, but reducing them can raise significant amounts: reduced VAT gaps in Latin America in the early 2000s, for example, may have raised revenue by about 15 percent.

Compliance worsened markedly in countries most affected by the crisis, which exposed structural weaknesses in many tax administrations. There are tentative signs that the effect may be short-lived, perhaps reflecting policy responses, but the need to address wider vulnerabilities remains.

Some basic instruments to deter evasion and facilitate compliance—and supportive tax policies—are critical for strong compliance. The value of withholding and third party information is well-established: where both apply, compliance in advanced countries is around 99 percent; even with only the latter it is over 90 percent. Taxpayer segmentation—primarily by size, but also in regard to ‘hard-to-tax’ segments such as high wealth individuals—is increasingly recognized as key for tailoring enforcement actions and the provision of taxpayer services. And policy design needs to be sensitive to compliance challenges, pointing to broad bases and potentially blunter tools in lower income countries.

Much remains to be done in many countries to build effective tax administrations. High turnover of senior staff, weak HQs, inadequate/unstable financing are recurrent concerns, as—especially in developing countries—are weaknesses in auditing, taxpayer services and legal frameworks. IT developments offer considerable opportunities—but also pose new compliance problems. Tax administrations also face increased pressure to take on non-revenue roles that can present considerable difficulty.

New tools can help countries address compliance problems by analyzing gaps, comparing indicators with peers, and assessing their own performance.

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Glossary

(A)EOI	(Automatic) Exchange of Information
AML	Anti-Money Laundering
AS	Allingham and Sandmo (1972)
ATAF	African Tax Administration Forum
ATO	Australian Tax Office
B2B	Business to Business
B2C	Business to Consumer
CIAT	Inter-American Center of Tax Administrations
CIS	Commonwealth of Independent States
CIT	Corporate Income Tax
CRM	Compliance Risk Management
DTA	Double Tax Agreement
EFD	Electronic Fiscal Device
EI	Extractive Industry
EITC	Earned Income Tax Credit
FATCA	Foreign Account Tax Compliance Act
GF	Global Forum on Transparency and Exchange of Information for Tax Purposes
HMRC	Her Majesty's Revenue and Customs (U.K.)
HWI	High Wealth Individuals
IOTA	Intra-European Organization for Tax Administration
IRS	Internal Revenue Service (U.S.)
ITD	International Tax Dialogue
LTO	Large Taxpayer Office
MIMIC	Multiple Indicator Multiple Cause
NFP	Nota Fiscal Paulista
PEFA	Public Expenditure and Financial Accountability
PIT	Personal Income Tax
RA	Revenue Administration
RA-GAP	Revenue Administration Gap Analysis Program
RA-FIT	Revenue Administration Fiscal Information Tool
SARA	Semi-Autonomous Revenue Agency
SKAT	Danish Tax and Customs Administration
TA	Technical Assistance
TADAT	Tax Administration Diagnostic Tool
TIEA	Tax Information Exchange Agreement
TIN	Taxpayer Identification Number
WCO	World Customs Organization

INTRODUCTION

1. **The extent of compliance with the legal obligations it imposes powerfully affects the revenue yield, efficiency and fairness of any tax system.** Noncompliance undermines revenue, distorts competition (putting the noncompliant at an advantage), and compromises equity (both horizontally—between taxpayers otherwise alike, but differing in their degrees of compliance—and, potentially, vertically—to the extent that the better off escape their obligations more extensively). These effects interact. Governments anxious for revenue may concentrate their efforts on more compliant taxpayers, amplifying the distortions. And a perception of unequal treatment can jeopardize wider willingness to comply.
2. **Long a central concern in developing countries, strengthening compliance has become a greater priority in many advanced and emerging economies since the financial crisis....** Improving compliance has long been a core development objective, both to enhance revenue and as essential to building strong, trusted public institutions.¹ In countries most severely affected by the crisis, compliance often declined sharply, revealing deeper weaknesses of revenue administrations (RAs); and its improvement has attracted attention as a potentially more equitable, efficient and politically palatable alternative to policy measures as a way of meeting intensified revenue needs.
3. **...and the Fund has been closely involved in advising member countries,** through both its extensive, long-established technical assistance (TA) work and Fund-supported programs in both developing and crisis-affected countries.
4. **Priorities and circumstances vary widely across countries, but there is considerable commonality in the compliance challenges that RAs face.** What ‘small’ businesses look like is very different, for instance, in low income and advanced economies—but the difficulties of ensuring they register, file and pay on time have many similarities. More generally, all countries face the same challenges of assessing the compliance risks they face and designing measures to address them.
5. **This paper takes stock of recent experiences with tax compliance, and draws lessons for improving it,** complementing other recent work and drawing on an upsurge of academic interest. Tax challenges, for both administration and policy, but with some emphasis on the latter, are addressed in the contexts of restoring fiscal sustainability, developing countries, the extractive industries (EIs) and avoidance by multinational enterprises—including transfer pricing and other issues related to the G20-OECD ‘BEPS’ project—in, respectively, IMF (2010, 2011a, 2012, 2014a). This paper is not intended as a ‘toolkit’ of measures; detailed guidance and analysis is offered elsewhere.² Rather it focuses on core strategic issues in improving tax compliance, primarily from an

¹ The centrality of the tax system, not least its implementation, in wider state building, has received considerable attention in recent years: see, notably, Bräutigam and others (2009) and Besley and Persson (2011, 2013).

² See for example Calder (2014) on administration issues for the EIs; Montagnat-Rentier and Parent (2012), Zake (2011) and Keen (2003) on customs administration; and a series of ‘how to’ technical notes available at www.imf.org.

administrative perspective, drawing on the Fund’s extensive TA experience in the area and with particular reference to experiences during and since the crisis.³

6. The wider revenue developments that frame the discussion are summarized in Figure 1: a sharp downturn and recovery of tax ratios⁴ in higher income economies, a robust upward trend in developing countries, and a weaker outlook for resource-rich economies.

7. The structure of the paper is as follows. Having first set the scene by analyzing the measurement of and trends in compliance, including during the crisis, the paper assesses what is known about the drivers of compliance and core instruments that RAs can use to control it. This leads to consideration of emerging issues in some ‘hard to tax’ segments. Institutional and managerial issues, central to the effective functioning of RAs, are then addressed, followed by a discussion of new tools that can help RAs improve their performance. There is a brief conclusion.

TAX COMPLIANCE—MEASUREMENT AND TRENDS

Key Messages

- Widely-cited estimates of the level of unrecorded activity are unreliable, and ‘informality’ is not synonymous with ‘noncompliant.’
- Explicit estimation of ‘compliance gaps’ is much more informative, especially when supplemented by granular assessment of compliance challenges.
- But many RAs fail to produce such estimates, particularly but not only in developing countries.
- Compliance gaps are generally greater in developing countries, and were widened by the crisis in the countries most affected.
- Many RAs were ill-prepared to cope with the crisis, which exposed structural weaknesses.

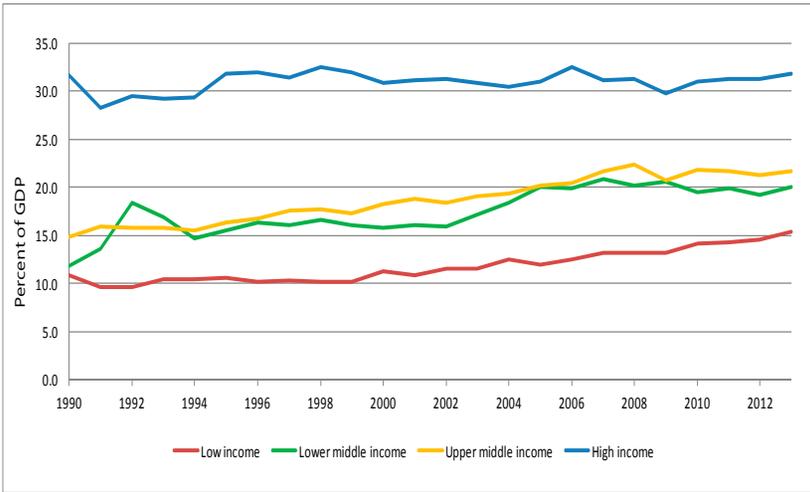
8. By compliance is meant, broadly, meeting legal obligations imposed by the tax system. The focus is thus on (illegal) evasion—deliberate, or from ignorance and error—rather than (legal) avoidance. But the distinction is not always clear-cut, and among the risks that RAs must manage—more for some taxpayer groups (the very wealthy, for instance) than others—are those from avoidance activities which cross some line of legal acceptability.

³ Appendix I provides an update on the extent of Fund advice, and evidence on its effectiveness.

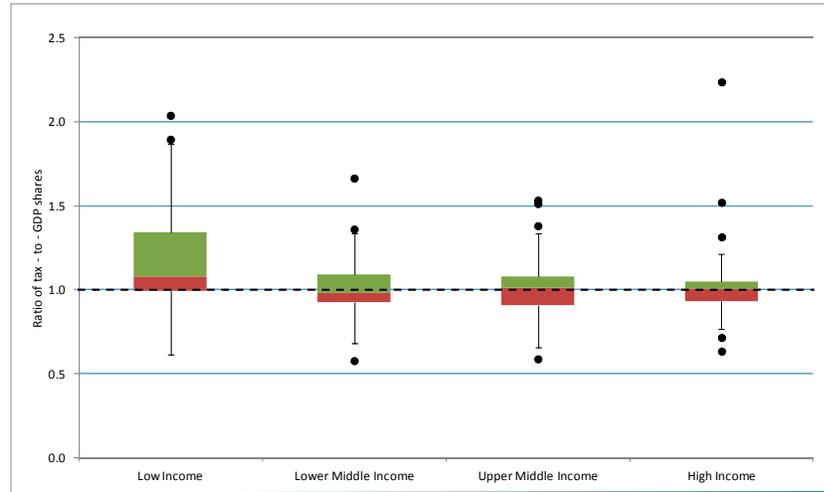
⁴ The ratio of tax revenues, including social contributions, to GDP.

Figure 1. Developments in Tax Revenues

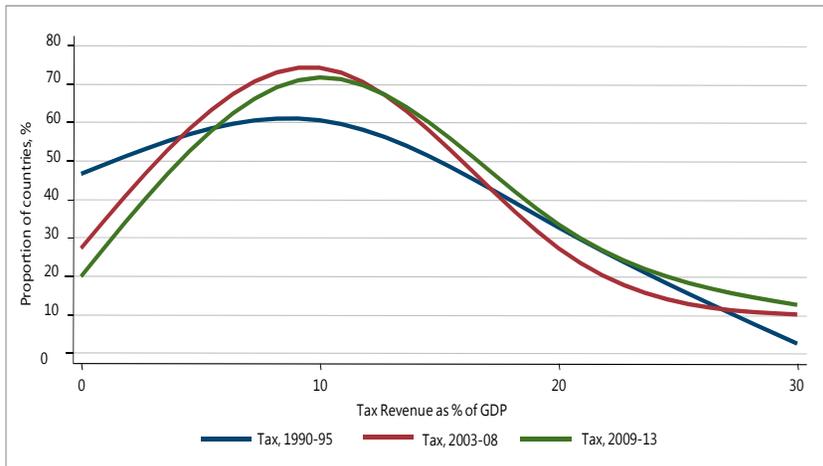
The longer term perspective (median tax ratios by income group)



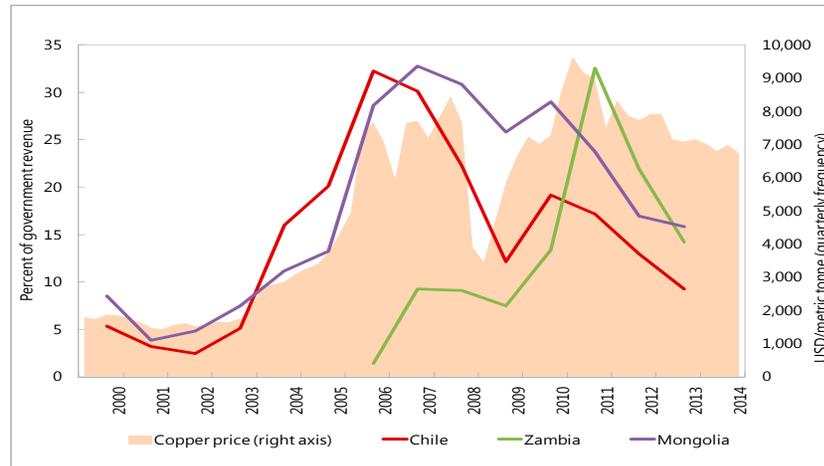
Decline and recovery around the crisis (tax ratios 2010–12/2003–7)



Continued strengthening in developing countries



But challenges for the resource-rich



Source: Staff compilation from GFS, WEO and OECD sources; mining revenues provided by IMF country teams.

Note: All tax revenues, including social contributions.

A. Measuring Noncompliance

9. Most much-cited attempts to quantify informal/unrecorded/shadow/underground activity can detect—at best—only broad changes in level. National accounts commonly include some adjustment for unrecorded activities,⁵ but these are rarely made public.⁶ Analysts have instead used a wide range of methods to estimate them—taking the use of cash or electricity as indicating the extent of true activity, for instance—but these, at best, can infer changes only relative to some arbitrary benchmark and, at worst, can be entirely meaningless.⁷ One econometric method that has generated widely noted estimates is reviewed in Appendix II, highlighting the weaknesses that have led many to doubt their value. There is simply no method of estimating these activities that is reliable on levels or for cross-country comparisons.⁸

10. A sharper focus is needed, in any event, to identify the extent and nature of noncompliance...As the plethora of labels suggests, it is not always clear in empirical work precisely what it is intended to measure. In the tax context, however, the focus should be squarely on the extent to which legal obligations are not fulfilled: the ‘compliance gap.’⁹

11. ...which, in particular, is not well captured by notions of ‘informality.’ Although ‘informality’ is often presented as a central challenge in strengthening tax systems, especially in developing countries, this is not an especially informative approach for practical policy, lumping together quite different forms of noncompliance—and indeed compliance.¹⁰ Many ‘informal’ enterprises, for instance, are so small that they have no legal liability to remit tax; and failure to register poses quite distinct challenges from registration combined with under-payment or fraud.¹¹

12. An increasing number of RAs measure compliance gaps... Which of various approaches to gap measurement is appropriate depends on the data and resources available (Box 1). Efforts began with the Taxpayer Compliance Measurement Program in the U.S., a highly rigorous random audit program; Denmark has used a similar approach.¹² Several European countries produce gap

⁵ Methods are presented in OECD, IMF, ILO, Statistical Committee of the CIS (2002), and Eurostat (2014).

⁶ An exception: the United Nations Economic Commission for Europe (2008) reports estimates for 43 European countries for 2005–6. These put the unrecorded economy at: typically less than 10 percent for OECD countries (though notably higher in some cases); 10–20 percent in new EU members and 25–30 percent in the CIS.

⁷ Breusch (2005a).

⁸ For reviews, see Fuest and Riedel (2009) and Slemrod and Weber (2012).

⁹ More precisely, by the ‘compliance gap’ is meant (whether for a particular tax or all) the difference between the tax that is legally due and that actually collected, expressed as a proportion of the former. Exact definitions vary, however: the U.K., for instance, includes avoidance as a source of the VAT compliance gap. Where the context is clear, reference is sometimes made simply to the ‘tax gap’ or ‘gap.’

¹⁰ Kanbur and Keen (2014) amplify.

¹¹ It is also important to remember that firms which are unregistered and/or noncompliant in their own obligations to remit tax may be charged customs or VAT on their inputs—and the amounts can be substantial.

¹² Brown and Mark (2003) and SKAT (2010a,b).

estimates, but only the U.K. publishes them routinely.¹³ Estimated VAT gaps for 26 EU members (from 2000), prepared for the European Commission, are provided in Center for Social and Economic Research and others (henceforth ‘CASE’; 2013, 2014).¹⁴ Since 2000, many Latin American countries have regularly estimated their total tax gaps; CIAT (2012) reports VAT and CIT tax gaps in Latin America that, updated for this paper,¹⁵ are examined below. The Australian Tax Office (ATO, 2012) has also published its estimated GST compliance gap.

Box 1. Estimating Compliance Gaps

There is a broad distinction between:

- **‘Bottom up’** approaches—which gross up from audit results or other operational information. This may involve random audits, whether intended to identify the full range of noncompliant behavior or drawn from populations known to be problematic. Random audits can be costly, but provide direct intelligence on the nature of noncompliance.
- **‘Top down’** approaches—which use national accounts and perhaps other data to model the tax base and estimate revenue under perfect compliance, subtracting actual collections to arrive at the compliance gap. This has the advantage of using fairly readily available data, but its accuracy depends on that of those data, and may provide little insight into how compliance might be improved.

The bottom-up approach is most often used for income tax gap estimates, and top-down more commonly for consumption tax gap estimates. For income taxes, good independent data on the base is not usually available (income statistics often derive from tax data), so bottom-up methods will likely be more accurate. For consumption taxes there are usually sufficiently good independent data available—indeed the VAT gap is the most commonly estimated.

Within each approach a variety of methods can be employed. Among top-down approaches, the most common way to estimate the VAT gap, for instance, is by comparing actual VAT revenue with that implied by survey-based estimates of aggregate consumption (with adjustments for such items as tax due on inputs purchased by exempt sectors). An alternative approach, developed and applied in FAD’s ‘RA-GAP’ program (described further in Appendix XII) uses supply-use tables from national accounts to estimate potential revenue. This provides a sectoral breakdown of the gap that can guide compliance interventions.

13. ...but gap estimates are very rare in developing economies—and even some of the most advanced tax administrations do not construct them. In Africa, Kenya, Uganda and South Africa have all estimated VAT compliance gaps; but these are rare examples. The main obstacles that many lower income countries face is in assembling appropriate data, whether because of inadequacies of national accounts data or the cost of conducting a random audit.

14. FAD’s ‘RA-GAP’ program aims to help countries identify and address compliance gaps. Beginning in 2013, RA-GAP programs for seven countries have been completed, with three reports publicly available: IMF (2014b,c,d). The program (discussed further below) has initially focused on VAT gap estimation, but is being extended to other taxes.

¹³ See <https://www.gov.uk/government/statistics/measuring-tax-gaps-tables>

¹⁴ This updates Reckon (2009).

¹⁵ We thank colleagues at the Inter-American Development Bank.

15. Estimates of compliance gaps need to be interpreted and used carefully:

- **The revenue loss mechanically associated with them may not be recoverable.** The ‘theoretical’ base used to calculate the gap is based on observed activity levels, which would likely change if tax rules were fully complied with: a tax-evading sole trader, for instance, might choose to earn less if their income were to be taxed.¹⁶
- **They are uncertain.** Margins of error are difficult to quantify, but likely material. Since the errors derived from the underlying assumptions are likely to be serially correlated, estimates can be best-suited to indicating changes in compliance rather than levels.
- **They should not be used mechanically as performance indicators,** given this imprecision. They can though be an important supplement to the widely used indicator of changes in collections, better isolating the drivers of revenue changes that the administration can address.

16. And closer analysis is needed to reveal the main compliance risks. An aggregate gap indicates only the scale of the problem, lumping together quite different forms of noncompliance (and, potentially, reflecting also over-payments). Actionable recommendations require more granular analysis of the sources of noncompliance than the most ‘top down’ approaches can provide. RA-GAP does this by providing not only a sectoral breakdown of VAT noncompliance but other tools for compliance analysis (such as decomposing the compliance gap into components relating to collection and assessment). In addition, it analyzes detailed taxpayers’ records to identify the nature and scale of particular compliance risks.

17. There is a general lack of consistent cross-country data on other, more detailed compliance indicators for benchmarking countries’ performance.¹⁷ FAD’s RA-FIT program—also described further below—aims to address this by regularly gathering reliable and consistent data on core aspects of tax and customs administration, such as flows and stocks of arrears.

B. Patterns, Trends and Recent Developments in Compliance

18. Caution is needed in comparing compliance gaps across countries, but the signs are that they vary widely, even within regional groups... Differences in methodology and data quality bedevil cross-country comparisons, especially of levels. But some variations are large. VAT gaps in the EU (calculated by a common methodology), for instance, ranged from under 5 (Sweden)

¹⁶Gemmell and Hasseldine (2014) stress this point.

¹⁷The OECD Forum on Tax Administration publishes a *Comparative Information Series* with detailed tax administration information for OECD and selected non-OECD countries.

to over 40 percent (Romania);¹⁸ and in Latin America, from under 20 (Chile) to over 40 percent (Paraguay).¹⁹

19.and are generally lower in more advanced economies, though estimates for the lowest income groups are sparse. The same data imply, for instance, average VAT gaps of about 20 percent in Europe and 30 percent in Latin America. Firm evidence for low income countries is hard to find, but such evidence as there is tends to confirm that compliance is in many cases very poor. The few estimates for sub-Saharan Africa indicate a broad range, from very high (around 50–60 percent in Uganda, for instance) to low (less than 10 percent in South Africa). For Pakistan, the overall tax gap has been put at 41 percent.²⁰

20. Available estimates, for various advanced and emerging economies, show a general narrowing of compliance gaps since 2000 (Figure 2). These are in some cases marked enough to have significantly impacted revenue. The reduction in the average compliance gap in Latin America from 35 to 25 percent, for instance, would have increased VAT revenue—assuming no change in policy or behavior—by around 15 percent.²¹ Improvement was least marked in the higher income economies, generally starting from positions of stronger compliance. And, bucking trends elsewhere, there is a noticeable widening of the average VAT gap in the EU. This worsening seems to have begun even before the crisis of 2008–9, and was probably associated with large scale fraud²² but was evidently amplified by the crisis.

C. Tax Compliance and the Crisis

21. Compliance appears to have worsened sharply as a consequence of the 2008–09 crisis, though experiences varied widely. Paucity of alternatives means the effect is best assessed (Figure 3) through the panel of VAT gaps for EU members in CASE (2013), which may provide a reasonable proxy for these countries' broader compliance experiences during the crisis. These increased almost everywhere around the immediate crisis, tending to worsen most where the output contraction was greatest. This is as one might expect:²³ cash-strapped firms may well find delaying or omitting payment of their liabilities to be a relatively cheap source of finance.

¹⁸ CASE (2013); averages over 2000–11.

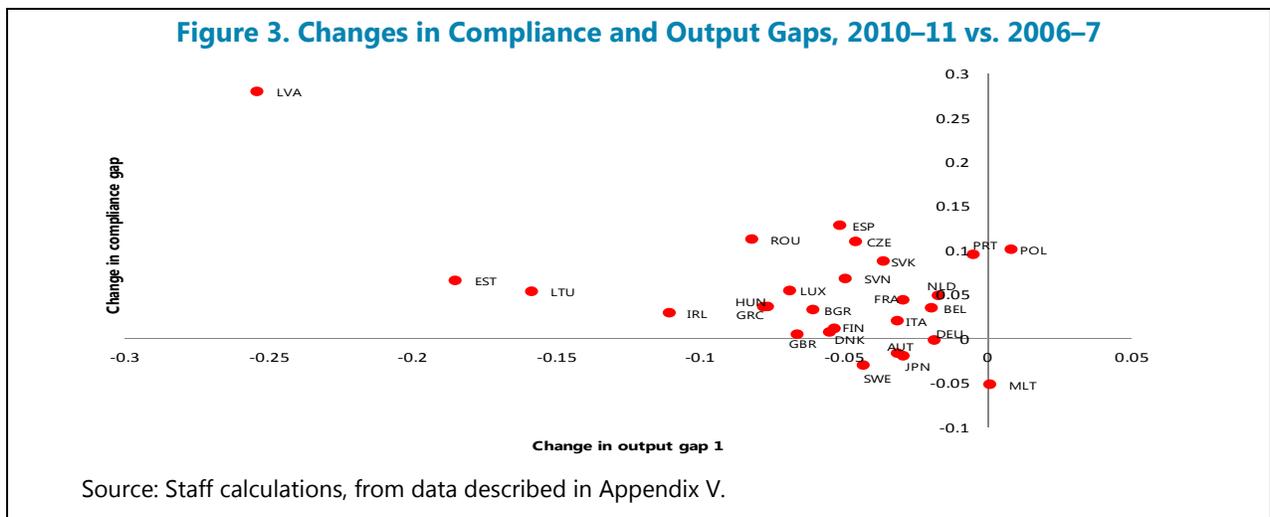
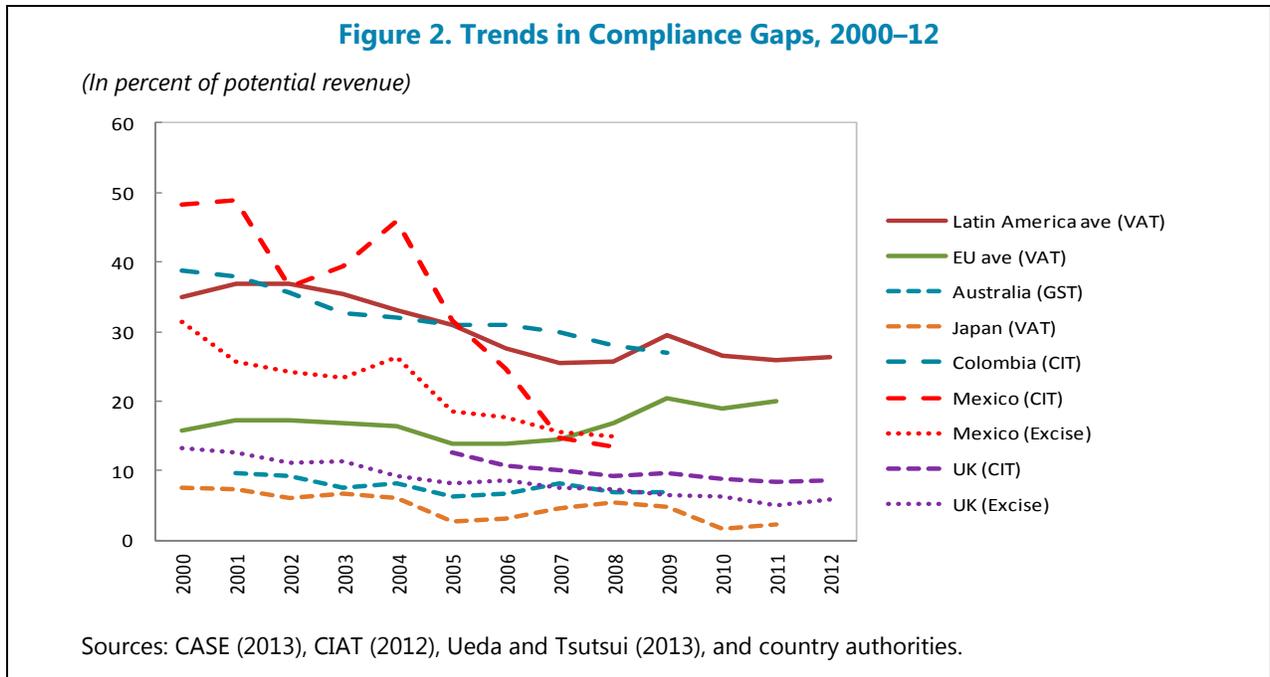
¹⁹ CIAT (2012). Countries covered are Argentina, Chile, Colombia, Dominican Republic, Ecuador, Guatemala, Paraguay, Peru, and Uruguay; averages are over 2000–10.

²⁰ Ahmed and Rider (2008).

²¹ With actual revenue R related to full compliance revenue R^* by $R = R^*(1 - CG)$, where CG is the compliance gap, the revenue effect of a change in the latter, assuming no behavioral response, is given by $\Delta R/R = -\Delta CG/(1 - CG)$.

²² This exploits the effective non-taxation of intra-Community transactions in goods and many services. Some member states, have been badly hit. See Keen and Smith (2006) and <http://www.hmrc.gov.uk/manuals/dmbmanual/dmbm875550.htm>

²³ And consistent too with the evidence of Sancak and others (2010).



22. Increased noncompliance may have acted to some degree as an automatic stabilizer—but a very second-best one. Turning a blind eye to noncompliance might have some beneficial effects on activity. But it risks damaging the credibility of enforcement; rapid rule-based responses—such as lengthened payment periods, or reduced advance tax payments—are more appropriate.

23. The crisis brought significant compliance challenges for RAs, in often difficult environments, and exposed structural weaknesses in many. They often arose in the context of an urgent fiscal consolidation agenda, which in some countries brought management instability and policy changes needing rapid implementation. The political economy was complex, with tensions between the need for additional revenue and fear of further dampening activity; and, not least, pressure to cut spending on RAs. Vulnerabilities of RAs revealed by the crisis included:

- With an increasing focus on taxpayer service, enforcement may have been underplayed;
- Flaws in governance and management, and inappropriate legal constraints, impaired RA's abilities to respond quickly and effectively to emerging compliance challenges;²⁴
- Improved approaches to taxpayer compliance management—such as systematic risk assessment and automated checking and debt management—were not yet fully in place.

24. Meeting immediate challenges while addressing these weaknesses required shorter-term measures embedded in longer-term reform strategies: Box 2 elaborates.

Box 2. Dealing with the Compliance Challenges of the Crisis

Through both its TA and analytical work, the Fund supported members' efforts to address declining collection performance and structural weaknesses,²⁵ Short-term actions were required to safeguard revenue and implement policy changes; long-term structural reforms were needed to achieve sustainable compliance improvement. RAs had to manage both, which also required strengthening their change management capabilities.

To address short-term needs for deficit reduction:

- Focus on leading forms of noncompliance, with tax arrears a priority.
- Monitor large taxpayers closely.
- Tighten control of routine tax obligations.
- Spearhead targeted anti-evasion measures, such as cash economy task forces and arrears collection—often involving organizational changes.
- Improve planning and monitoring of core enforcement actions (such as audit and recovery of debts).
- Implement procedural and tax law changes to improve collection and reduce costs, including extending payment facilities and strengthening anti-evasion laws.

To address longer-term needs for structural reform and sustainable compliance improvement:

- Adopt a compliance risk management approach (elaborated on in the penultimate section below), enabling timely identification and mitigation of risks.
- Modernize headquarters (HQ) and operational levels by strengthening HQ's planning and supervision capabilities, streamlining the local office network, regaining HQ control of operations and creating organizational integrity, with zero tolerance of corruption—more on this later.
- Revamp core operations to align them with, and support, compliance risk management, and revamp IT systems to support core operations.
- Adopt systematic approaches to mitigating compliance risks, with coordinated planning, execution and monitoring.
- Ensure an appropriate legal framework for transformational reform—which may require new RA and tax laws, and new tax procedure laws that modernize and harmonize administrative and procedural provisions across all major taxes

²⁴ The speed of RA response is a particular issue for payment compliance, especially for VAT. The sudden contraction of credit availability in late 2008 caused many otherwise viable, compliant businesses cash-flow difficulties. Quick action was needed to prevent the consequent tax debts from threatening their survival.

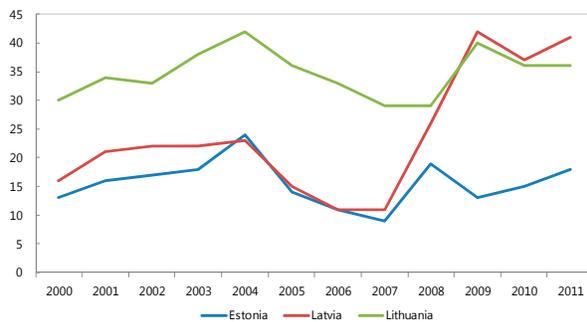
²⁵ Notably Brondolo (2009); widely distributed during the crisis, several RAs report following its advice.

25. Circumstances and responses varied widely. Even among similarly placed countries, the course of noncompliance was often different, reflecting at least in part differing performances and responses. Colombia and Peru, for instance, successfully addressed a crisis-related downturn in compliance by pursuing strategies along the lines of Box 2 (Appendix 3). The contrasting experiences across the Baltics are reported in Box 3.

Box 3. VAT Compliance and the Crisis in the Baltics

Estonia, Latvia and Lithuania have much in common, including major impacts from the 2009 recession, though the impact of the crisis on Latvia was the most severe (Figure 3). But their compliance gaps fared very differently:

Figure. Trends in VAT Compliance Gaps: Baltic States, 2000–11
(In percent of potential VAT)



Source: CASE (2013).

Estonia and Latvia began with comparably low compliance gaps, but Estonia managed to limit the damage from the crisis whereas in Latvia the gap more than tripled; Lithuania, meanwhile, stabilized compliance, albeit at a higher level.

This experience in Latvia reflected exacerbated compliance risks including from increasing arrears (particularly in VAT), high levels of tax evasion by SMEs and smuggling by organized crime. Pre-crisis, the Latvian administration was prioritizing taxpayer services as the preferred compliance tool. FAD's advice was to reallocate

staff to compliance enforcement, especially given the large budget cut (over 35 percent, 2009–10), and seek a budget injection to replace audit and debt collection staff lost due to downsizing. In Lithuania, FAD advised a more taxpayer segment-focused approach to compliance risk, upgrading auditors' skills, and a stronger legal framework to support tax administration, particularly in relation to arrears. Senior management from the Estonia revenue agency report following closely the approach to securing revenue in times of crisis set out in Brondolo (2009). Kuokštis (2012) attributes the lower compliance gap in Estonia to government institutions engaging more effectively with citizens and engendering much higher levels of trust—potentially an instance of behavioral aspects of compliance discussed in the next section.

UNDERSTANDING AND ADDRESSING NONCOMPLIANCE

Key Messages

- Deterring evasion and facilitating compliance are both essential.
- Withholding, the use of third party information and taxpayer segmentation²⁶ are critical for combating noncompliance—but auditing remains crucial.
- Non-pecuniary motives for compliance, long recognized by tax administrators, are attracting increasing interest, but the potential for significant gain by leveraging them remains unclear.
- Tentative empirical evidence suggests that output contractions worsen compliance, though the effect seems short-lived—and sustained spending on RAs can significantly improve compliance.
- Implementation costs mean that the optimal compliance gap may be far from zero.
- The increasing sensitivity of tax bases means optimal spending on RAs is likely to increase.

A. Drivers of Compliance

26. Addressing noncompliance requires understanding its causes. For centuries a daily concern of tax administrators, this has received increased analytical attention in recent years.²⁷

The Calculus of Voluntary Compliance

27. The standard framework for thinking about noncompliance stresses deterrence as the central way to improve it. In the seminal treatment of Allingham and Sandmo (1972; AS), evasion is a Becker-type gamble: individuals choose how much to evade so as to balance the tax potentially saved against the risk of detection and penalty. The incompleteness of focusing only on such ‘extrinsic’ motivations has long been recognized (not least by tax administrators), and is taken up below. Various embellished,²⁸ this model remains, nonetheless, a core element of the framework

²⁶ ‘Withholding’ means that the tax liability of A on a payment made to them by B is met, perhaps in part or provisionally, by remittance of tax by B—the most familiar example is withholding of income tax on wages and salaries; ‘Third party information’ is that provided on to the tax authorities on a taxpayers’ receipts or circumstances by someone other than the taxpayer—as when a bank reports individuals’ interest receipts; ‘Taxpayer segmentation’ is the practice of partitioning taxpayers into distinct groups for different treatment by the tax authorities (often on some measure of size).

²⁷ Useful surveys are Slemrod and Yitzhaki (2002) and, including of recent laboratory experiments, Alm (2014).

²⁸ See for instance Cowell (1990).

for thinking about compliance, and at the heart of much of what RAs do—including by narrowing the scope for its purest application.

28. Audit, which has a key deterrence role in promoting compliance, is most effective when risk-based.... Using scarce administrative resources most effectively involves conditioning the likelihood and nature of audit on taxpayers' characteristics as well as their self-report. Optimal strategies can be complex (in multi-period contexts, for instance) but laboratory evidence suggests merit in simple cut-off rules (auditing reports below some threshold, conditional on other taxpayer features). In practice, advanced RAs apply risk-based audits using a range of information—comparisons with other declarations, industry benchmarking and the like.

29. ...and its indirect effects can be substantial. Increasing the likelihood of audit not only collects additional revenue from those actually audited but, potentially, leads to higher declarations from those not audited. Assessing the magnitude of this effect is difficult, but attempts to do so commonly find it to be up to 8–12 times as large as the direct effect.²⁹

30. Compliance costs are hard to measure, but can be significant.... Meeting their obligations imposes some cost on taxpayers: the opportunity cost of an owner manager's time, for instance, or those of taking professional advice. Measuring these costs is not easy—much harder than measuring aggregate spending on RAs—not least because they vary significantly over taxpayers and taxes.³⁰ There is a strong consensus that they include substantial fixed components³¹—filing a VAT return will cost much the same, whatever the net amount remitted—so are commonly found to be especially large for small businesses, potentially leading to a failure to register (becoming a 'ghost') or a reduction in activities to a level at which tax is not payable.

31. ...and promoting voluntary compliance by reducing them has received increased attention, with a focus on improved taxpayer services. Key elements include, for instance, simplifying reporting, providing ready access to information and advice, and an organizational focus on the distinct needs of different taxpayer segments.

32. Corruption within the RA remains a significant concern in many countries. This may involve bribery by the taxpayer to understate liability or avoid registration, or extortion from them by the threat of over-assessment. The damage to revenue, compliance, and respect for the wider tax system can be chronic, and the effects in shaping its real incidence profound.³²

²⁹ See for instance Plumley (1996).

³⁰ On measuring compliance costs, see for example World Bank (2011), European Commission (2013), and Eichfelder and Vaillancourt (2014).

³¹ See Appendix Figure 1 and Table 3 of Eichfelder and Vaillancourt (2014).

³² Tax ratios and survey measures of willingness to comply are negatively correlated with corruption (OECD, 2013b); distributional aspects of corruption in tax collection are examined in Hindriks and others (1999).

33. A range of policy choices strongly affect compliance; and compliance challenges should shape policy. Though the theory is surprisingly ambiguous,³³ the weight of evidence suggests that higher tax rates generally discourage compliance: the large reduction in higher rates of personal income tax (PIT) with the adoption of the flat tax in Russia, for instance, appears to have improved compliance.³⁴ This argues for minimal exemptions, which also eases administrative burdens on RAs. Policies can also be calibrated to compliance problems: a minimum corporate tax, for instance, and royalties in the case of the EIs, are often recommended, especially but not only in lower income countries, to limit evasion and avoidance.³⁵ Less obvious policy decisions also matter for, and need to be shaped by, compliance consideration, such as the choice of thresholds at which various obligations arise (touched on in Appendix VI).³⁶ Simple tax rules, all else equal, are evidently better for well-informed³⁷ compliance. But assessing the scope for simplification is hampered by the difficulty of quantifying complexity; and, given the wide and subtle circumstances that tax laws must address and the multiple objectives that policy serves, is sometimes over-stated.

Tools of the Trade—Withholding, Information Reporting and Taxpayer Segmentation

34. Effective withholding is critical to strong tax administration... That Addington's 1803 income tax was more successful than Pitt the Younger's original of 1799 was largely because it withheld at source. Tax administrators have recognized the potential value of withholding ever since. It can serve both to secure revenues before sums can be diverted elsewhere and, crucially, by narrowing the number of collection points, limit costs of administration. Implemented in various forms,³⁸ withholding commonly accounts for about 75 percent of personal income tax (PIT) revenue,³⁹ and is also widely applied to interest, dividends and—in some cases—capital gains. The VAT itself has similarities to a (creditable) withholding tax, since output tax charged by the seller is available as a credit to the buyer (Appendix IV). And withholding taxes, levied at some monitorable point—at import, for instance, or by public or large enterprises—are often used to reach those hard to control, such as contractors. All this has placed firms, especially large ones, at the heart of tax

³³ AS predicts that—contrary to the common presumption—a higher tax rate leads to less evasion (so long as the penalty depends on the amount evaded). This is because a higher tax rate implies lower after-tax income, and weak assumptions on how risk aversion varies with income mean that the share of income held in the risky asset—the proportion on which tax is evaded—will then fall. Assuming instead that the costs of evasion depend on the amount of income concealed does imply the positive relation between tax rates and concealment that most find more plausible (Slemrod, 2001).

³⁴ Ivanova and others (2005) and Gorodnichenko and others (2009). Friedman and others (2000) on the other hand find no significant link between tax rates and unofficial activity; and in the modeling of VAT compliance gaps in Appendix V the standard rate of VAT repeatedly proved insignificant.

³⁵ Best and others (2013).

³⁶ Slemrod and Gillitzer (2014) examine a range of issues in the interaction between policy and administration.

³⁷ The caveat is because complexity may lead taxpayers to err on the side of caution and risk over-stating their liabilities.

³⁸ See van der Heeden (1998).

³⁹ France, Paraguay, and a few others are exceptional in not withholding on PIT, though reporting is mandatory.

collection: they remit, for instance around 80 percent of revenue in the U.K. Withholding imposes compliance costs on the withholder, of course, but continuing costs may be relatively modest since the required information is routinely available to them; and in aggregate they are likely to be outweighed by reduced costs for those withheld against.

35. ...but withholding is not foolproof. Collusive evasion is a risk when small numbers are involved,⁴⁰ as with the underreporting of social security contributions in Mexico⁴¹ and on wages in Pakistan.⁴² Withholding does not remove the need for audit (of withholders)⁴³ and its use can become excessive: requiring a large taxpayer to withhold VAT on its purchases from others, for instance, in order to ensure compliance on sales by smaller enterprises, increases the likelihood that those suppliers will build up hard-to-manage excess credits or refund claims. Withholding remains critical for the PIT (though perhaps with increasing challenges as the reduced importance of the physical work place makes it harder to distinguish employment from self-employment) and as a characteristic of the VAT. More generally, the potential for sheer complexity means that the proper scope of withholding can be a difficult judgment.

36. Third party reporting encourages compliance by increasing the probability of false reports being detected, with an important role for financial intermediaries. Reliance on third party information has its limitations—taxpayers may for example respond by focusing their evasion on items not subject to such reporting⁴⁴—but its potential power is proven. Extensive use of financial institutions can be an important source of information for RAs. Internationally, information provided by financial institutions is at the heart of the exchange of information between tax authorities that has emerged as a principal weapon to address cross-border evasion.⁴⁵ In lower income countries, in contrast, limited use of financial intermediaries has been seen as a major obstacle to effective compliance, though the capacity to make use of third party information may also be constrained.⁴⁶

37. Empirical evidence repeatedly confirms the value of withholding and information reporting, including by third parties, in securing compliance. Figure 4 illustrates for the U.S.; and in Denmark, for instance, only around 0.2 percent of employment income is underreported when the information is also provided to the tax authority by employers (Kleven and others, 2011). Withholding and third party reporting now enable the most advanced tax administrations to

⁴⁰ Kleven and others (2014).

⁴¹ Kumler and others (2013).

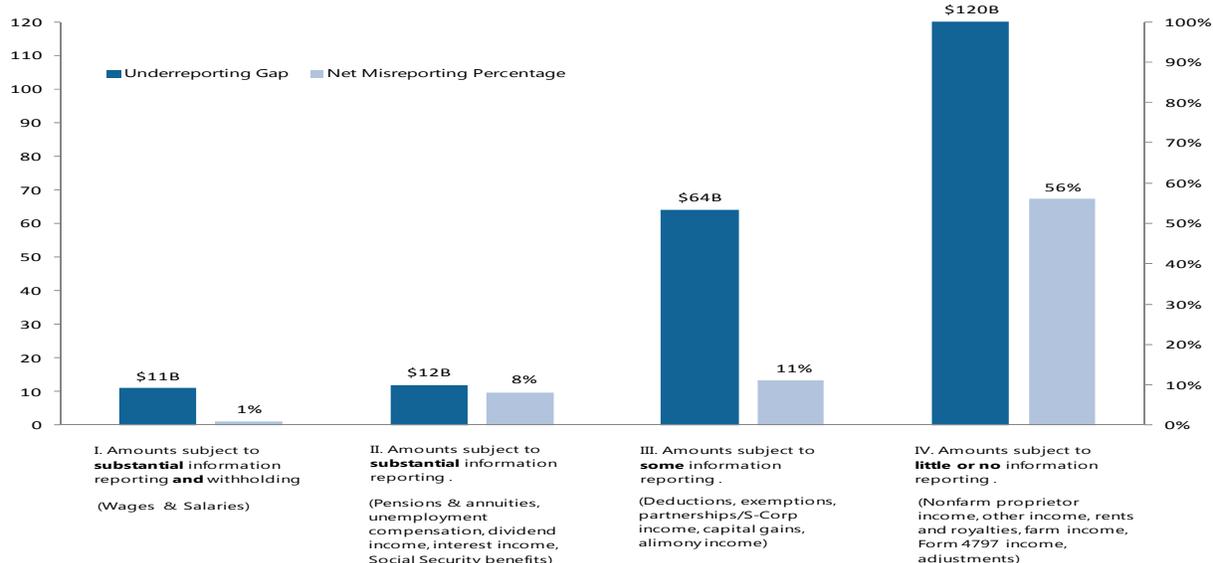
⁴² Kleven and others (2011).

⁴³ Lederman (2010).

⁴⁴ Carillo and others (2014) find that those Ecuadorian firms which responded to a notification that their declared revenues did not match third party information increased their declared costs by 93 cents for each underreported dollar.

⁴⁵ Discussed further below.

⁴⁶ Gordon and Li (2009).

Figure 4. Compliance under Withholding and Information Reporting in the United States

Source: IRS (2012).

Note: Net Misreporting Percentage is net misreported amount of income relative to the true amount.

prepopulate returns, leaving the taxpayer only to confirm or dispute the amounts shown and payable.

38. Segmenting taxpayers into distinct groups, primarily but not only by size, enables the distinct compliance risks they pose to be best addressed. Compliance risks can be expected to vary systematically with size.⁴⁷ Failure to register, for instance, is likely to be a greater issue with the smallest taxpayers than the largest; while ensuring prompt payment and monitoring avoidance is a greater issue with the latter. Tailoring interventions by taxpayer type calls for appropriate organizational structuring and allocation of administrative resources and skills, for example by the creation of large taxpayer offices (LTOs), perhaps with specialized units (for EI companies, say, or financial institutions) within them.

Behavioral aspects

39. In circumstances where it is most applicable, the AS approach predicts much lower compliance than is observed—at least for advanced economies. Where there is no withholding or third party information, the true likelihood of detection and punishment is commonly so low that only extraordinarily high risk aversion (or over-estimation of expected penalties) could explain

⁴⁷ A formal analysis is in Kanbur and Keen (2014).

observed levels of compliance. Evidence to this effect, however, comes only from advanced economies; it remains unclear whether the same is true elsewhere.⁴⁸

40. This suggests an important role for ‘behavioral’ aspects, including optimization errors, intrinsic motivation—feelings of shame, guilt, pride, even patriotism⁴⁹ and social norms⁵⁰—all often lumped together as “tax morale.” Long recognized informally by tax administrators, laboratory and field experiments have begun to probe these motives—and how they might be leveraged to improve compliance—more systematically. Lessons include:

- **Optimization errors offer ways to improve compliance**, the benefits of simplification and information provision being the most obvious, others including the manipulation of apparently misperceived probabilities.⁵¹
- **Individuals’ compliance decisions are interdependent**, implying the possibility of multiple equilibria: escaping a bad equilibrium of low compliance can then require a major push rather than marginal reform.
- **Careful framing may improve voluntary compliance**: reminders which invoke the compliance of taxpayers’ peers or social norms have in some experiments improved timely remittance.⁵²
- **Trusted institutions and valued public spending are good for compliance**, though the evidence is strongly suggestive rather than conclusive.⁵³

41. Motivations interact—and vary widely. Reducing deterrence, for instance, weakens extrinsic motivation to comply, with the consequent generalized reduction in compliance then potentially undermining social norms—a vicious cycle that tax administrators have long been wary of. Attitudes differ significantly both across countries⁵⁴ and within, suggesting a heterogeneity in motivation that RAs have long recognized (Box 4).

⁴⁸ Del Carpio (2013) finds, for instance, that taxpayers in Lima substantially under-estimate enforcement of the property tax.

⁴⁹ Konrad and Qari (2011).

⁵⁰ This literature is reviewed in Luttmer and Singhal (2014) and Alm (2014).

⁵¹ Hashimzade and others (2013) review the implications of non-expected utility maximizing behavior.

⁵² See for instance the work of the Behavioural Insights Team (2012) in the U.K.

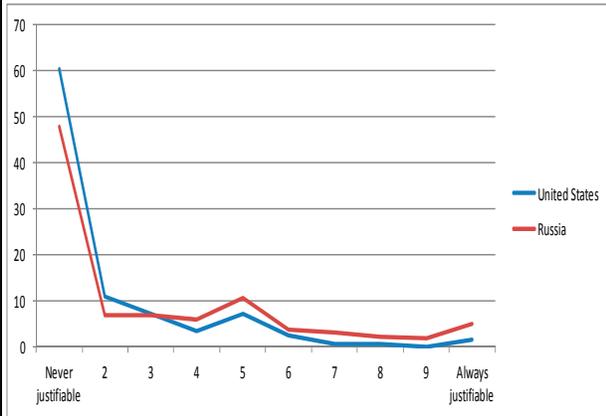
⁵³ DeBacker and others (2012), Halla (2012), OECD (2013b), Torgler (2005).

⁵⁴ De Backer and others (2012) find that the compliance of firms active in the U.S. (so subject to the same enforcement environment) to be weaker among those headquartered in countries with high corruption indicators.

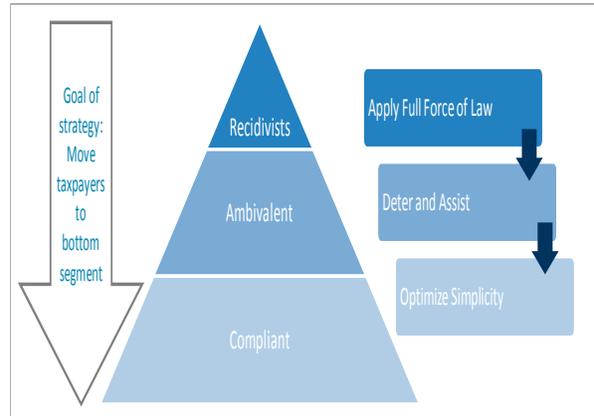
Box 4. Heterogeneous Attitudes

Surveys typically find—as for Russia and the U.S. below—that while most people strongly disapprove of evasion, many have weaker objections; Revenue - Irish Tax & Customs (2013) finds a similar pattern.

RAs also recognize significant differences across individuals in their willingness to comply, and the need to structure their interventions accordingly—commonly visualized in a compliance pyramid:



Source: World Value Survey.

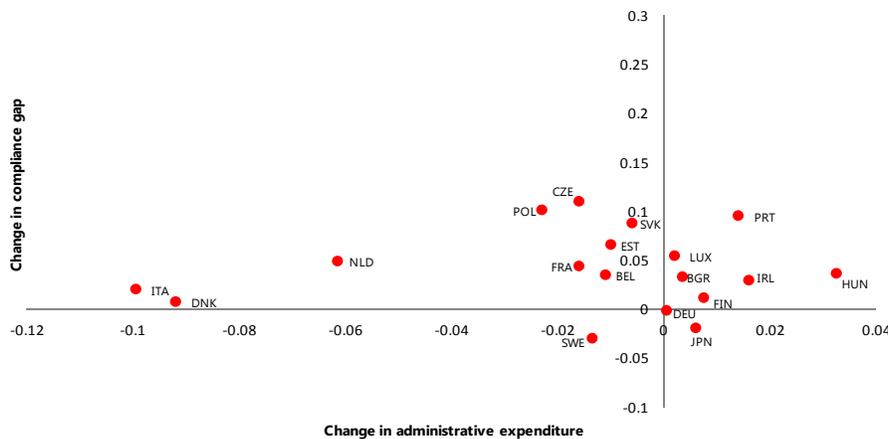


Source: Adapted from OECD 2010.

B. Some Empirics of Compliance Gaps

42. Examination of the links between VAT compliance, output gaps and spending on RA⁵⁵ suggested by Figures 3 and 5 lead to the tentative conclusions (Appendix V):⁵⁶

Figure 5. Changes in Compliance Gaps and Spending on RA, 2010–11 vs. 2006–7

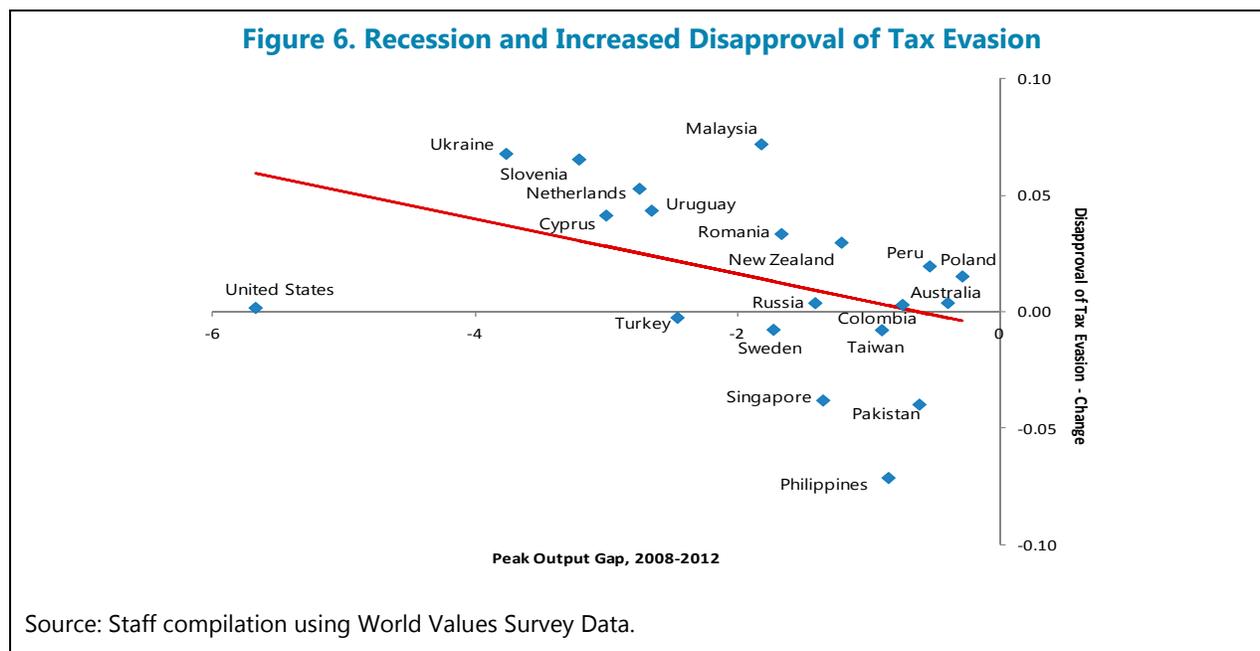


Source: Staff compilation using World Values Survey.

⁵⁵ Using panel data for VAT gaps in the EU and Japan, 2000–11.

⁵⁶ See too Ueda (2014), who also considers the relationship between output and policy gaps.

- **Over the full sample of countries, compliance falls quickly and quite strongly as output falls below potential.** A one point increase in the output gap increases the compliance gap, on average, by around three percentage points (relative to an average gap in the sample of around 15 percent)—a quite substantial effect.
- **The effect is short lived, largely vanishing after two years.** One interpretation is that the immediate difficulties which worsen compliance in the face of adverse shocks do not become entrenched as deeper changes in taxpayer morale (indeed popular attitudes seem if anything to have hardened against tax evasion in many countries most adversely affected during the crisis: Figure 6). But there is no room for complacency. It may be that this result reflects policy responses not controlled for, acting to rapidly check deteriorating noncompliance. It contrasts, in any event, with the finding of a longer-term worsening of compliance after the poll tax experience in the U.K.,⁵⁷ which suggests that measures undermining intrinsic support for the system can indeed have lasting effects.
- **Higher spending on RA has little short run impact, but is associated with significantly better compliance if sustained.**⁵⁸ While focusing on aggregate spending is of course crude—the allocation across activities will also matter—the results are instructive: the elasticity of the VAT base with respect to administrative spending emerges as being in the order of 0.2.



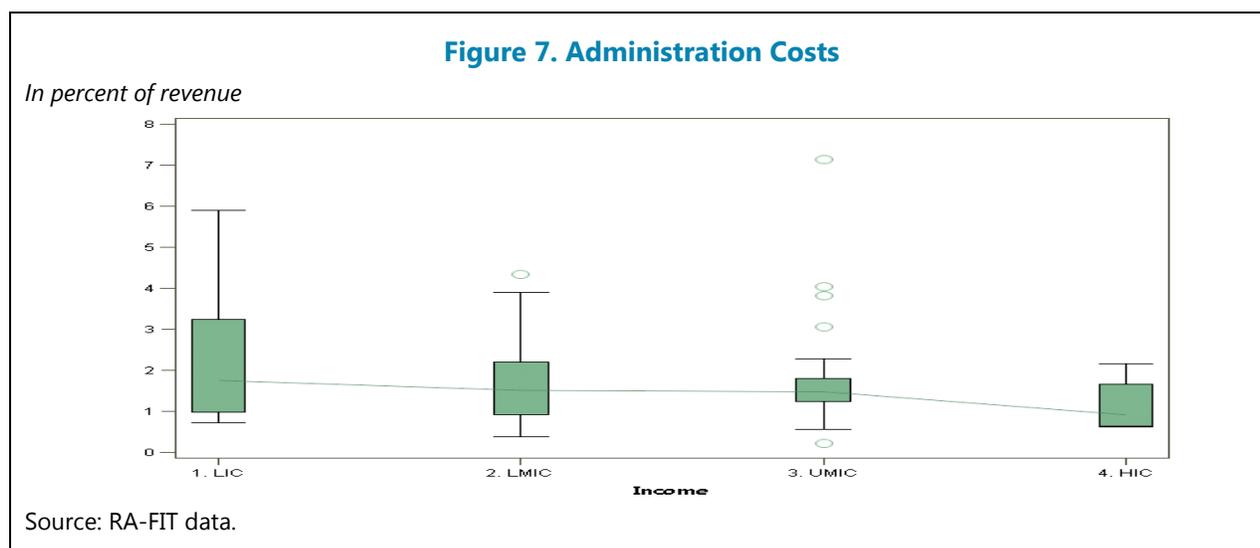
⁵⁷ Besley and others (2014).

⁵⁸ Causality is an issue, since countries with poor compliance might choose to spend more on tax administration to counter it. To the extent that our instruments fail to deal with this, however, we would expect the bias to act against the negative effect found.

C. Optimal Compliance Gaps?

43. Against the benefits of improved compliance must be weighed costs, in terms of potentially reduced output and increased costs to both RA and taxpayer⁵⁹—implying that the gap should not be reduced to the utmost possible. How far it should be reduced depends on ‘enforcement elasticity of taxable income’: the responsiveness of taxed income (reflecting changes in both evasion and real decisions) to increased spending on RA.⁶⁰ This key quantity has been little studied. RAs do occasionally present in their budget submissions estimates of the additional revenue that additional resources would enable them to raise; but this is rarely done on a recurrent basis, and the estimates are rarely made public. The results in Appendix V point, extremely tentatively, to values in the EU around 0.2.

44. The compliance gap is ‘too large’ if the enforcement elasticity of taxable income exceeds the (adjusted) ratio of administration and compliance costs to tax revenue. The intuition is simply that the revenue gain—a sufficient statistic for the direct welfare impact—then exceeds the costs of collection. Importantly, the latter need to be adjusted to recognize that administration costs, unlike costs directly incurred by the taxpayer, must themselves be financed from distortionary tax revenue, and in that sense are socially more costly. Most administrations will have a sense of how their costs compare to the revenue they raise: see for instance the RA-FIT data in Figure 7. Compliance costs are harder to come by, but suppose these are equal to administration costs, and are to be deflated by 1.2. Then—having a high income country in mind—if the initial compliance gap is 15 percent, for a country with administrative costs equal to 1.5 percent of revenue, additional spending is warranted if the enforcement elasticity exceeds 0.16.



⁵⁹ These principles, set out in Keen (forthcoming 2015), are derived in the standard representative individual framework of, for instance, Chetty (2009), so ignore equity considerations.

⁶⁰ This elasticity will generally vary across the uses to which resources can be put within an administration; but at an optimum will be equated across them.

45. Not all ways of reducing compliance gaps have the same economic impact. In terms of cost effectiveness, it is natural to focus effort first on the largest and finally on the smallest taxpayers. Smaller enterprises do indeed seem to account for a large part of measured compliance gaps: SMEs account for 50 percent of the U.K. VAT gap, for instance. Excessive focus on the relatively easy to tax, however, worsens inequities and distortions: efficiency considerations mean, for instance, that taxing small businesses can be desirable even if it raises less revenue than it costs to collect.⁶¹ Enforcement efforts need to balance these considerations in the treatment of different taxpayer types, which a segmentation-based approach, as described above, is well-suited to do.

46. Spending to improve compliance is likely to be a more efficient way to mobilize revenue than raising rates the higher are the enforcement and taxable income elasticities⁶²..., in the latter case because a high elasticity of taxable income indicates significant welfare costs from increasing the tax rate. Lower implementation costs and a higher initial tax rate also argue for greater reliance on administrative measures.

47. ...one implication being that optimal spending on RAs is likely to increase as bases become more sensitive to tax rates, including as a result of increased international mobility.

THE 'HARD-TO-TAX'—EMERGING ISSUES

Key messages

- Effective taxation of high wealth individuals is increasingly important to revenue and wider support for the tax system...
- ...and recent experiences in targeted compliance programs and intensified international cooperation provide bases that many RAs could build on.
- Business to consumer transactions, including international, raise growing concerns...
- ...that lotteries and other incentive schemes will not fully address: effective enforcement actions remain essential.

48. Some 'hard-to-tax' segments pose problems for all RAs, dealing with which requires tailored application of the methods described above. This section focuses on the increasing challenges posed by high wealth individuals (HWIs) and business to consumer (B2C) transactions. Those associated with small businesses (more familiar) and professionals (combining some of the challenges of HWIs and small businesses) are discussed in Appendices VII and VIII.⁶³

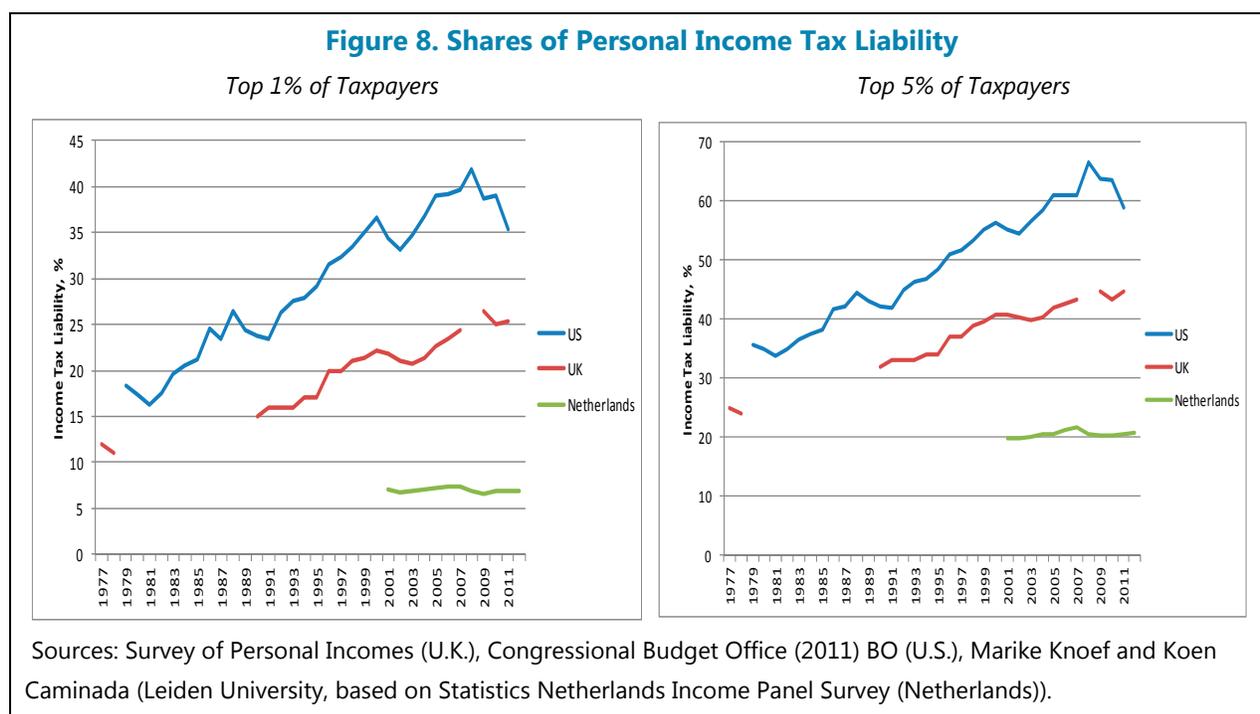
⁶¹ Auriol and Warlters (2005); Keen (2013a).

⁶² The elasticity of taxable income with respect to (unity minus) the tax rate: see for instance Saez and others (2012).

⁶³ Other hard-to-tax segments include multinationals (on which see IMF (2014a)) and the EIs (Calder, 2014)).

A. High Wealth Individuals (HWIs)

49. Reflecting trend increases over recent decades, the highest incomes now account in many advanced countries for a very large share of all PIT revenues (Figure 8): the top one percent in the U.K. and U.S. now account for around one quarter and one third respectively. That income inequality—especially the share at the very top—has increased markedly in recent decades, at least in many Anglo-Saxon countries, is well-known.⁶⁴ So too is that there has been a marked reduction in top marginal PIT rates. Broadly, however, the former have more than offset the latter⁶⁵ (though there are exceptions, such as The Netherlands). While their quantitative significance thus varies, countries are giving greater attention to ensuring strong compliance of those with the highest incomes.



50. Evasion by the best off can thus have a significant direct impact on revenue as well as compromising the perceived fairness of the tax system. Claims that the richest are not paying their ‘fair share,’ long a potent source of tax resistance, have been heard more loudly since the crisis.⁶⁶ Nor is this just an issue for advanced and emerging economies. Figures comparable to those cited above are much harder to find for developing countries. But the revenue concerns are not

⁶⁴ Atkinson and others (2011).

⁶⁵ Ratios of wealth to national income have also increased (Piketty, 2013), adding another dimension of increased inequality, though—since wealth-related taxes generally have only modest revenue yield—with less immediate revenue implications, except perhaps in relation to property taxation.

⁶⁶ Box 2 of IMF (2014e) points, for instance, towards a shift in attitudes towards support for more redistribution.

necessarily less—the richest there may be as rich as those elsewhere—and the motivational ones may be even greater, given the need to entrench the PIT and similar taxes more firmly.

51. HWIs pose considerable revenue risks for all RAs. They often have complex business affairs; are highly mobile internationally; and can afford specialist advice. The AS and related models imply that they may well take tax risks on a larger proportion of their income than will those less well off—meaning substantial sums at stake—through both aggressive planning and evasion.

52. Taxation of HWIs involves some of the most difficult-to-administer provisions in the tax laws (and a thin line between avoidance and evasion), risks including: failure to declare offshore income (a key concern, taken up below); capital gains undeclared or inappropriately reduced; misclassification of ordinary income as capital income (to benefit from lower rates); accessing company profits other than by dividends (including through low interest loans); large “one-off” events such as mergers, acquisitions, IPOs, and asset sales.

53. Leading tax agencies have specialized compliance programs for HWIs..., including:

- A dedicated HWI unit—often within the LTO—with highly skilled officers undertaking risk analysis, audit, and debt collection.⁶⁷
- Expanded information reporting covering entities and assets owned by HWIs, and mandatory disclosure of certain types of transactions.
- Measures encouraging voluntary compliance, such as pre-filing agreements,⁶⁸ a rulings regime, and carefully-designed voluntary disclosure schemes for past non-compliance.⁶⁹
- Comprehensive checks—risk reviews, audits, and prosecutions for the most egregious offenders—applied according to perceived risk level.
- Withholding taxes, those on rental payments having had some success in reaching HWIs in India, for instance.
- Tightening laws, for example to prevent tax-free private use of assets held by companies, using companies and trusts to hold income at lower tax rates, and streaming income to “preferential” beneficiaries.

⁶⁷ OECD countries with HWI units include Australia, Canada, France, Ireland, New Zealand, Japan, South Africa, the U.K. and the U.S. (OECD, 2009a).

⁶⁸ These encourage taxpayers to request consideration of an issue before the tax return is filed and thus resolve potential disputes and controversy earlier in the examination process.

⁶⁹ These schemes take a wide variety of forms; with excessive forgiveness they can take on the considerable disadvantages of outright amnesties, touched on below.

54. ...with significant results. The ATO's HWI audit program yielded Aus\$ 1.2 billion and disallowed losses totaling Aus\$ 490 million over 2006-12 ; in the U.K., the HMRC's High Net Worth Unit has, since 2009, brought in over £1 billion and reduced the proportion of outstanding tax returns from 11.9 to 3.4 percent.

55. Evasion by concealing income and assets abroad has become a major concern. Most countries tax their residents' (nonbusiness) income wherever in the world it arises, typically with a credit for any taxes paid abroad. The temptation is to evade home taxes by placing assets in low tax jurisdictions abroad and failing to report this to the residence authorities. It is hard to assess the extent of this problem, but there are signs that it is substantial. For example, the IRS's voluntary disclosure programs for unreported overseas income have resulted in more than 45,000 disclosures yielding about US\$ 6.5 billion in back taxes, interest and penalties since 2009.⁷⁰ The most credible study of the totals involved suggests that around 6 percent of the global net financial wealth of households—about US\$ 4.5 trillion—is unrecorded and located in tax havens;⁷¹ the unpaid tax might run into some tens of billions of dollars annually.

56. Recent initiatives to address this issue, focused on the international exchange of information (EOI), have advanced substantially since the crisis. These aim to undercut concealment by having countries in which assets are allocated pass information to the authorities of the jurisdiction in which the owner is resident. Provisions enabling forms of EOI have long been standard in double tax treaties, but the structures for cooperation in this area have developed very substantially over the last few years, and continue to do so—spurred by the importance attached to the issue by the G20 since the Pittsburgh and London meetings in 2009 (Appendix VIII).

57. Though there is yet little information on the revenue impact, and issues remain, these are very positive developments. The OECD estimates an increase in tax revenue from offshore compliance initiatives in 20 countries of €14 billion in 2011;⁷² and reports⁷³ that Norway and Denmark identified noncompliance in around 40 percent of the cases in which they received information automatically from others. Issues remain: there are signs of funds moving from jurisdictions meeting international norms to those that do not;⁷⁴ the technical challenges of matching data received can be substantial; there are confidentiality concerns; and it is important that the scarce resources of many lower income countries not be diverted from more productive activities. Nonetheless, the rapid developments in this area are a huge step forward in countering evasion by the wealthiest—and in international tax cooperation more generally.

⁷⁰ As of June 2014.

⁷¹ Zucman (2013).

⁷² Opening remarks by the OECD Secretary-General, Fourth Plenary Meeting of the Global Forum, October 25, 2011.

⁷³ In OECD (2012).

⁷⁴ Johannesen and Zucman (2014).

B. Business to Consumer Transactions

58. The B2C segment presents acute compliance challenges. Consumers generally have no incentive to collect receipts/invoices, weakening enforcement strategies based on crosschecking of third-party information, and are too numerous to be required to withhold. And the growth of e-commerce⁷⁵ has made it more difficult for administrations to know when and where—even in which country—a sale has been made, especially for intangible services. The main fiscal risk all this creates is non- or under-reporting of final sales. And the amounts at stake are significant: in Australia, B2C taxpayers account for 29 percent of the large business segment and 25 percent of all tax collections; and in Chile, under-reporting of B2C sales represents 60 percent of the VAT gap.⁷⁶

59. RAs have undertaken a range of initiatives to improve compliance in the B2C segment... Chile, for instance, has developed a strategy to enforce B2C compliance in the field. The main controls include verifying that the taxpayer has issued invoices or receipts, is registered, and has a sound accounting system. The RA has the power to temporarily close the business premises of taxpayers who repeatedly fail to issue invoices—and uses it. Dedicated teams in every regional tax office are coordinated by an HQ unit, and workload planning is risk-based. From 2010 to 2012 this strategy was applied to an average of 47 percent of total taxpayers with business premises.

60. ...and have explored a range of measures specifically to improve reporting on B2C transactions (sometimes in combination):

- **Electronic Fiscal Devices (EFDs):**⁷⁷ A recent study concludes that these can be effective only when part of a comprehensive compliance improvement strategy.⁷⁸ Cardoza (2012) found that when EFDs were piloted in the Dominican Republic, the benefits were 2.5 times the costs, though these did not include the costs of compliance to taxpayers, likely considerable.
- **Lotteries:** These have been used in several countries to encourage consumers to request receipts. In Brazil, for instance, the government of Sao Paulo created in 2007 a reward scheme (the NFP), with sophisticated online support, providing a mix of tax rebates and lottery prizes.⁷⁹

⁷⁵ For instance: in 2013 European B2C ecommerce, including online retail goods and services (such as online travel bookings, events and other tickets) grew by 16.3 percent to reach €363.1 bn (Ecommerce report 2014).

⁷⁶ Engel, Galetovic, and Raddatz (1998).

⁷⁷ These—including among others, electronic cash registers—are devices that RAs can use to monitor taxable B2C and B2B transactions. A key element is a “fiscal memory,” usually certified by a government authority.

⁷⁸ Casey and Castro (2014).

⁷⁹ Consumers are credited 30 percent of the VAT shown on the receipt, and can opt to participate in monthly lotteries that distribute 1.5 million prizes on average, from US\$5 up, with 3 large prizes from US\$15,000–500,000.

Naritomi (2013) finds that this increased revenue from retailers at least 22 percent; increasing revenue (net of the cost of the rewards) by a fairly modest 0.3 percent of state VAT receipts.⁸⁰

- **Tax reductions for paper invoices:** Some countries (such as Bolivia and Turkey), have allowed consumers to credit part of the payments shown on paper invoices that they submit to the RA (often by the box-full)⁸¹ against other liabilities—creating significant administrative and compliance costs.
- **Tax reductions for credit/debit card payments:** Argentina, for instance, has since 2001 reimbursed customers five percent of their VAT payments, automatically credited to their bank accounts—amounting to around 1.1 percent of VAT collection. Korea has for some time enabled salary earners to credit against PIT some proportion of their purchases by credit/debit cards (or through EFDs linked to the tax agency), whilst also allowing sellers a reduction in VAT payments; the revenue thereby foregone is in the order of 5 percent of VAT revenue.⁸²

61. There is little evidence of substantial revenue gain from such schemes—and a real risk that they will detract from audit and other enforcement activities. There have been very few careful evaluations of these schemes, which should not be regarded—as some RAs appear to have done—as alternatives to effective auditing. Linking cash registers to the RA, for instance, is no guarantee that all sales will go through the register, and a lottery ticket may have much less value to the consumer than evading VAT on a big ticket purchase. Such schemes clearly cannot be the centerpiece of an effective compliance strategy.

62. The challenges posed by cross-border B2C sales, especially of intangible services, are attracting increasing attention. The destination principle underlying the VAT (and other taxes on final sales) means that tax should be levied at the rate of the jurisdiction in which the consumer is located; but it can be hard to know what that jurisdiction is for goods when there are no borders at which they can be intercepted, and for intangible services, especially Internet-based, even if there are.⁸³ In the U.S., the main challenge is applying state sales taxes to inter-state sales, notably but not only including Internet sales.⁸⁴ Some states have applied so-called “Amazon tax laws”—aimed at collecting taxes on inter-state sales by large Internet retailers. These have been challenged on constitutional grounds, with mixed results; some states (such as New York, from 2008) have

⁸⁰ The contributions in Fookien and others (2014) take stock of experiences with VAT-related lotteries in a range of countries. This reaches no conclusion on their effectiveness, but stress the need for evaluation.

⁸¹ Though this could be avoided using IT along the lines of the Brazilian NFP.

⁸² The ratio, for 2008, of the revenue loss of 2.4 billion won (Jeon, 2013) to VAT revenue of 47 billion won (OECD, 2014a). Korea has also provided lotteries for both sellers and buyers, but these have been terminated.

⁸³ Waerzeggers (2015) reviews challenges for the VAT posed by digitalization.

⁸⁴ Supreme Court decisions require sellers to remit sales tax only where they have a physical presence, liability otherwise being on the purchaser—effectively impossible to implement. The Marketplace Fairness Act would enable states that have adopted sufficient simplification to require out-of-state retailers to remit tax, but this has not passed the House.

successfully applied “click through nexus” statutes that subject out-of-state Internet retailers to state sales tax if they have a physical presence in the state in the form of affiliates, distribution centers, stores or other places of business; but the application of such laws differs across states and is evolving.⁸⁵ One recent study estimates revenue losses from B2B and B2C e-commerce in Alabama (in 2012) in the range of U.S.\$170–190 million, the same order as total sales tax revenues.⁸⁶ Similar issues arise internationally: recent EU rule changes and OECD guidelines⁸⁷ have endorsed the long-standing principle that e-commerce be treated the same way as traditional commerce. The key difficulty, however, is the practical one of imposing an obligation to remit tax on traders with no physical presence in the jurisdiction of the purchaser. One approach has been to require the non-resident supplier to register and account for VAT in the jurisdiction of the consumer, and both the EU and Norway have simplified schemes in place to facilitate this. But how effective such schemes will prove remains unclear.

INSTITUTIONS AND MANAGEMENT

Key Messages

- The institutional structures and managerial practices of RAs—large, complex organizations with extraordinary powers—matter greatly for assuring compliance and for wider state-building.
- High turnover of senior staff, weak HQs, inadequate and unstable financing, and unwieldy office networks have hampered RA performance in many countries.
- Establishing effective auditing, developing taxpayer services and constructing an appropriate legal framework remain major challenges, especially in developing countries....
- ...as does establishing strong relationships with major stakeholders, including other government agencies with relevant powers and expertise (notably, in anti-money laundering).
- RAs face increasing pressures to take on roles beyond tax collection, for which they may not be best-suited.
- Effective information management offers considerable opportunities to RAs at all stages of development—but IT developments also pose new compliance problems.

⁸⁵ Lunder and Petit (2014).

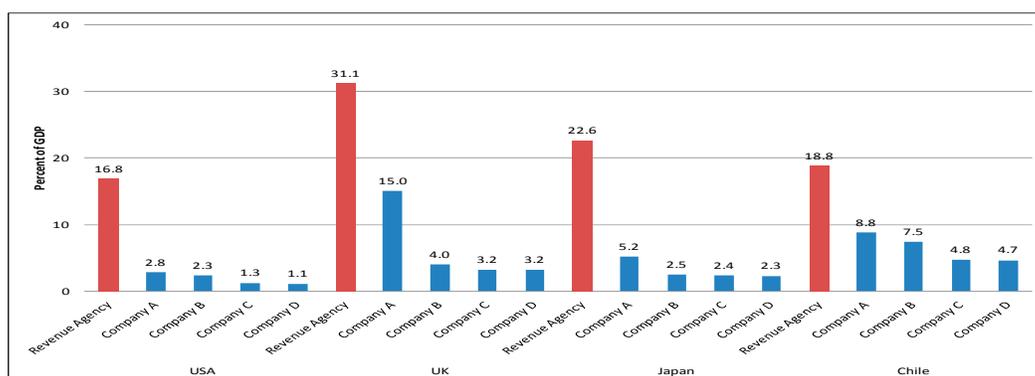
⁸⁶ Robicheaux (2014).

⁸⁷ OECD (2014e).

63. Effective institutions and management are essential for assuring compliance, with continuing need and scope for reform in many countries. This section considers core challenges that arise.⁸⁸

64. RAs are in many countries large, complex, powerful organizations, with critical macroeconomic and developmental roles... The tax receipts they manage, which commonly dwarf the sales of the largest national companies (Figure 9), are critical to stability and growth; they have large workforces and often extensive office networks; they have extraordinary legal powers; and their good governance is pivotal to wider state-building.

Figure 9. RA Receipts Compared to Revenues of Largest National Businesses



Source: Staff compilation.

Note: Revenue agency revenues are central government tax revenues, excluding social insurance contributions. Company revenues include extra-territorial sales.

65. ...which operate in a rapidly changing environment. Over-arching the challenges posed by the crisis are those from globalization (with tax base and taxpayers becoming more mobile), developments in IT (creating new arenas for contest between evaders/avoiders and RAs),⁸⁹ and increasing demands for RAs to take a central role in delivering welfare benefits.

A. Organizational Management

66. Notwithstanding progress, the organizational management of many RAs needs further attention, to better enable both rapid responses to shocks and sustained medium-term institution building (or rebuilding). IMF TA (particularly in developing countries) points to several widespread needs.

⁸⁸ Though not addressed here, managing change is in itself a major challenge, and a significant focus of IMF TA. It is addressed in a forthcoming FAD technical note.

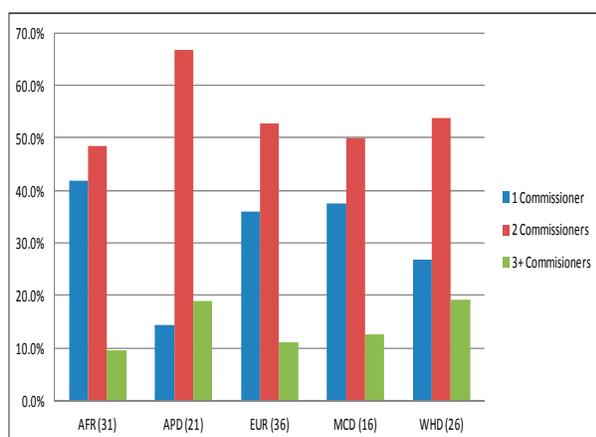
⁸⁹ See for instance, European Commission (2014) and OECD (2014b).

Strengthened and empowered RA headquarters

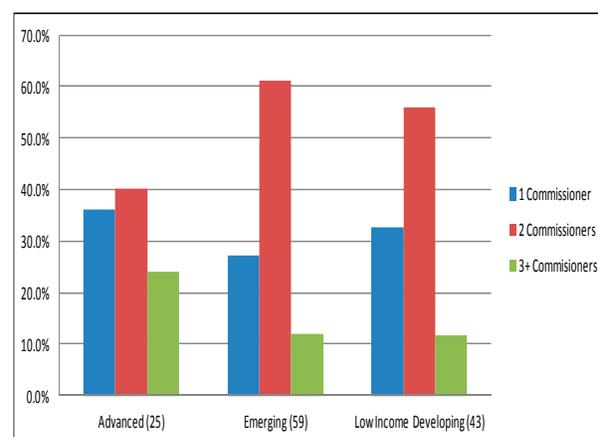
67. Secure and stable teams, enjoying reasonable tenure, are needed for medium-term institution building—but turnover of tax commissioners in many countries is high. Of a sample of 130 countries for the five years from 2009, over 60 percent had two or more commissioners (Figure 10);⁹⁰ and it is not uncommon for the commissioner position to be vacant for a long period. Such rapid turnover of senior managers puts at risk business continuity, coherence of strategic direction and effective reform management; and can be a major obstacle to reform and TA effectiveness.

Figure 10. Turnover of Commissioners

By region



By income group



Source: Staff compilation.

Note: Samples of 130 and 127 countries (by region and income group), 2009–13.

68. In many countries, RA HQ is understaffed and not sufficiently empowered to exercise its role; and responsibilities are sometimes fragmented. HQ staff in many cases falls short of the benchmark of at least 5 percent of total RA staff needed to effectively perform HQ functions (set out in Appendix IX). And the authority needed to exercise these functions nationally is in many cases lacking, leading to excessive autonomy at operational level, hampering a uniform and consistent delivery of administration functions. In some countries, the HQ's role is further weakened by a fragmented center: several independent units at central level dealing with tax administration matters. Potentially even more damaging, including in terms of tax policy, is that agencies other than the RA—provincial authorities, security services, transport authorities...—sometimes exercise their own taxing powers.

⁹⁰ In South America, CIAT data suggest, one third of RAs have had an average tenure of their Director Generals of less than two years.

Adequate, Stable Financing

69. Effective RAs require funding on a reasonable, sustainable basis. The appropriate level of spending on RAs was discussed in very broad terms above, but specific concerns include:

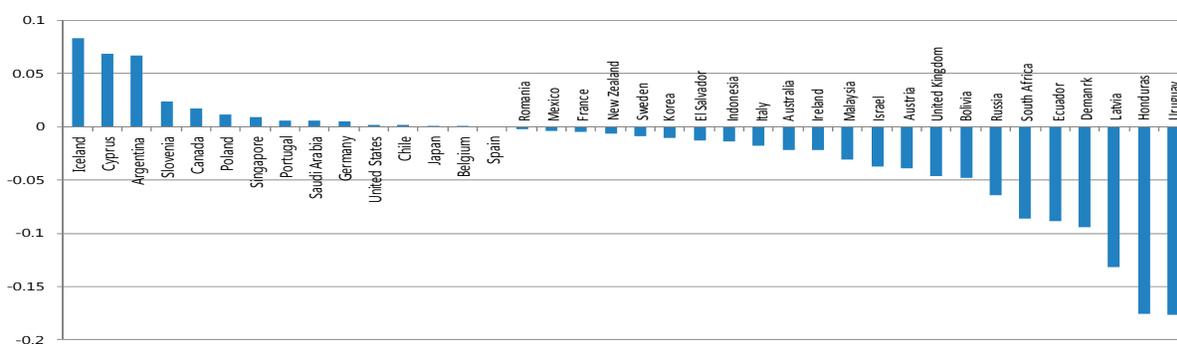
- **Competitive salaries are needed** to attract and retain suitably qualified staff, including skilled professional managers—and to reduce incentives for corruption. Payment schemes that reward individuals for collections, not uncommon, risk increasing not only revenue but bribes paid to avoid over-assessment.⁹¹
- **Investment in IT and knowledge management is critical** for modernizing and automating processes. These should include risk and verification processes, preferably bringing in third party information. Such data can also provide the RA with better indicators to evaluate and improve its performance. IT expenditure by administrations is high (commonly 11–13 percent of total spending in advanced economies, and 5–7 percent in emerging markets)⁹²—but the benefits of better IT and knowledge management can be correspondingly large.
- **Sufficient, sustained funding of tax operations is critical.** A surprising number of RAs do not enjoy enough funding to maintain a reasonable level of core operations: some, for example, have suspended field audits because they could not afford transportation for the auditors. Even temporary reductions in enforcement can have long term effects on compliance—along lines discussed earlier—and the long-term harm is even clearer (the empirics reported above providing a reminder of this). And sustained increases in enforcement may be especially needed to shift compliance from a low level equilibrium to a high one. A number of countries allocate some fixed proportion of collections to the RA, which can help assure revenue and provide a modest incentive for institution-wide performance—though rewards should also reflect other dimensions of performance.

70. Many countries reduced spending on RAs during the crisis—with short and long-term risks to compliance. About 60 percent of the countries for which data are available reduced spending even relative to GDP (Figure 11), in some cases very substantially. The evidence above suggests that the short run links between compliance and spending on tax administration may be modest. But that evidence is far from definitive, and a full assessment of the impact of these spending reductions is not yet possible. The risks are clear. Survey evidence from the U.K.,⁹³ for instance, suggests that while there was little change to tax morale during the crisis, there was an increased perception that persistent evaders are unlikely to be caught.

⁹¹ As the field experiment of Khan and others (2014) tends to confirm. See also Hindriks and others (1999) and Besley and Persson (2013) on incentive schemes for tax collection.

⁹² OECD (2013a).

⁹³ HMRC (2013a).

Figure 11. Changes in Spending on Tax Administration, 2008–11*In percent of GDP*

Source: CIAT, RA-FIT data, OECD (2013a).

Sufficient Autonomy

71. Though no guarantee of success, the creation of semi-autonomous revenue agencies (SARAs) does appear, broadly, to have been associated with improved RA performance.

Common objectives in establishing a SARA are—to varying degrees—greater insulation of the RA from political interference, more flexibility in human resource policies (including compensation) and operational practices, and more secure financing. In practice, SARAs (which continue to become more common, and whose introduction, once decided by the authorities, has been supported by FAD) vary quite widely, as does the extent to which these objectives are achieved.⁹⁴ It is effectively impossible, for instance, to entirely preclude political intervention. Simply establishing a SARA, without taking advantage of the opportunities for stronger institutional governance and management that it presents, does little in itself, particularly if other reform opportunities are neglected. And essential cooperation with the ministry of finance must be maintained: autonomy can become excessive. Nonetheless, anecdotal evidence does point to instances of improvement, albeit not always sustained; and Ebeke and others (forthcoming 2015) find, using synthetic control and other methods, that the creation of SARAs in sub-Saharan Africa has been associated with increased revenue.

Assuring integrity

72. Corruption in RAs not only reduces short-term revenues but also creates a long-lasting erosion of compliance.

Methods to address corruption in RAs (including simplified, transparent, and ideally automated procedures, and the potentially beneficial signaling effect of high-profile

⁹⁴ IMF (2011a) describes the spread of SARAs and the pros and cons of their introduction; Crandall and Kidd (2006) discuss their nature and objectives, and provide a qualitative assessment; Crandall and Kidd (2010) provide a toolkit for their implementation; and Kloeden (2011) reviews experience in Anglophone sub-Saharan Africa, where SARAs are now nearly ubiquitous.

prosecutions), and some experiences, are discussed in IMF (2011a) and elsewhere.⁹⁵ But escaping from the bad equilibrium of high corruption and low revenue is hard. As in most RA matters, strong political will to drive anti-corruption policies is crucial, ideally as part of a whole-of-government approach, as for instance in Georgia.⁹⁶

Maintaining focus

73. Many RAs, especially in advanced and emerging economies, face pressures to take on tasks beyond administering core taxes—including delivering welfare benefits. Several now collect debts for other government agencies, such as on student loans and child support, and civil penalties; the Norwegian RA even registers births. Increasingly too, some are tasked with a welfare role, in administering refundable personal tax credits and other social transfers. The Earned Income Tax Credit (EITC) of the U.S. is an early and leading example, with similar schemes, also administered by the RA, now in place elsewhere.⁹⁷ As pressures to develop more finely-targeted forms of social support intensify, pressures for RAs to undertake such a role will increase.

74. But the difficulties posed by such an expanded role can be substantial. In policy terms, it can seem natural for the RA to administer non-revenue raising policies that rely on information closely related to that needed for tax purposes, such as income and family status. While there is a core element of truth in that, the practicalities are far more complex. This is not because RAs are unused to paying money rather than receiving it: refunding VAT or excess pre-payments of income tax are standard tasks. Partly it reflects basic differences in instrument design to meet welfare and revenue objectives: support to the needy is best delivered far more rapidly, often in response to rapidly changing circumstances, than the annual cycle of the PIT, for instance, and is naturally assessed on a family basis, whereas the PIT is increasingly individual-based. Partly too it reflects a different client base—less skilled in dealing with official processes, and under intense stress—than RAs are used to dealing with.⁹⁸ All this involves a different (often very sizable) set of compliance risks, and requires significant resourcing: around half the staff of the RA in New Zealand, for instance, are involved in benefit delivery. This is not to say that RAs should not be given such wider roles—though tax administrators sometimes see this as punishment for success—but to stress the difficulties it poses, and the importance of assessing the comparative advantages of different agencies in non-revenue-raising functions, and the best forms of cooperation between them.

Streamlined and clear structures

75. Several tax administrations still maintain too large a network of regional and local offices. Extensive office networks—made less necessary by use of the internet, and the general

⁹⁵ See for instance Toro (1995), Walsh (2003) and Transparency Internaional (2014).

⁹⁶ OECD (2013c).

⁹⁷ In New Zealand, Korea and the U.K., for instance.

⁹⁸ Zelenak (2005).

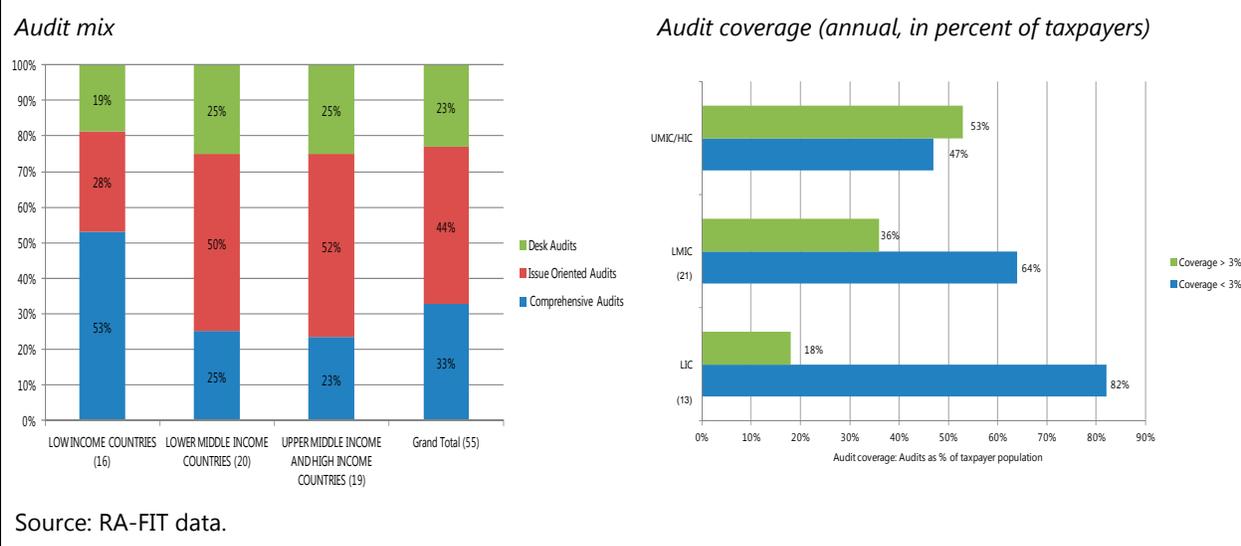
focus on a ‘one stop shop’ approach—pose significant obstacles to delivering low-cost, standardized processes for the main national taxes, compromise equality of treatment, and can increase compliance burdens (because taxpayers may have to request rulings from more than one local office, and adapt reporting to multiple standards). Experiences described in Appendix X suggest the potential benefits from streamlined office networks.

B. Operational Management

76. Many RAs, especially in developing countries, could better focus their core operations on the major compliance risks. There is still much to do to balance the provision of taxpayer services (promoting voluntary compliance) with enforcement activities (tackling noncompliance). In many countries, including in crisis circumstances, FAD has recommended establishing specialized units and projects focused on the various taxpayer segments (large, medium, small, high wealth), along lines discussed above. This approach is now followed by most advanced RAs as a cornerstone of an effective compliance strategy more generally. It helped, for instance, to prevent a precipitous decline of collections during the crisis in Portugal, by allowing the RA to identify more quickly emerging compliance risks for the largest taxpayers (for example by identifying major changes in revenue trends by sector). A tailored focus on the large and medium taxpayer segments in several Sub-Saharan African countries (Burundi, Democratic Republic of Congo, Kenya, Senegal, Uganda), helped them weather the effects of the crisis and has generally improved compliance levels for taxpayers that account for the bulk of tax revenues.

77. Establishing more effective taxpayer auditing is in very many cases a leading priority. The possibility of audit remains a central deterrence tool, whose importance is amplified, not reduced, by the apparent tendency of taxpayers to over-estimate its true likelihood. Many RAs indeed devote considerable resources to audit, but without a coherent plan that uses third party and other information to target the highest risk segments and activities, or that takes into account ex-post evaluations of the effects of audit actions. In one EU country, for instance, only about 7 percent of audits in 2013 targeted medium and large taxpayers, which remitted about 64 percent of VAT revenue. Such misdirection is common in middle- and low income countries, doubtless in part because more expensive skills are required to audit larger, more complex enterprises. Many developing countries also still focus excessive audit resources on comprehensive audits; compared to single-issue audits, they require more time, are more complex (often covering several taxes and periods) and limit the number of taxpayers that can be audited (Figure 12).

Figure 12. Audit Activities, 2010



78. Other common areas of operational weakness include failures in the prompt payment of refunds, especially but not only of the VAT—still a major concern in many countries, which struggle with managing the associated risks.⁹⁹ Further common failings include: devoting insufficient resources to enforcing delinquent payments; failing to focus enforcement efforts on the largest and most recent tax arrears; and either lacking effective enforcement powers (such as seizure of bank assets and garnishment of third-party payments) or not applying them systematically.

79. The cumulation of massive noncompliance can make it tempting to offer amnesty—but this is almost always counter-productive. Amnesties are rarely followed by the more effective enforcement commonly promised when they are introduced. They thus create horizontal inequity between compliant and delinquent taxpayers while simultaneously undermining the credibility of the tax system and its administration.¹⁰⁰

80. Taxpayer services—increasingly recognized as a key element in promoting compliance—are weak in many developing countries. Much more focus is often needed to modernize and design services to promote voluntary compliance. The ATO, for instance, has a multi-faceted taxpayer services, education and communication program—differentiated by taxpayer segment (large, medium, and small businesses)—designed to encourage compliance.¹⁰¹ Some advanced tax administrations have been experimenting with leveraging behavioral responses by tailoring their communications: for example, sending letters to taxpayers providing information on the proportion of delinquent taxpayers in their own zip code.

⁹⁹ On the extent of the problem, and ways to address it, see Harrison and Krelove (2005) and Harrison (2005).

¹⁰⁰ Baer and Le Borgne (2008) review experiences with tax amnesties.

¹⁰¹ Australian Tax Office (2013).

81. Legal changes are needed in many countries to enable administrations to better deter noncompliance. Stronger sanctions and other disincentives may be needed, such as stiffer fines and criminal prosecution, and measures to discourage transactions with jurisdictions that do not readily provide tax-related information (such as introducing withholding taxes and denying certain expense deductions on outgoing payments). It may also be necessary to modify cooperation agreements with other agencies or seek legal changes to rid the RA of any inappropriate ‘nontax’ tasks—such as collection of non-tax fees.¹⁰² And an enabling legal framework may be needed to adopt streamlined and technologically supported operations (such as reducing the number of local offices, or providing for e-filing or e-payment).

C. Information Management

82. Successful revenue administration depends on managing information effectively. This is not the same as managing IT support, important though that is. The key issue is leveraging big data, a crucial enabler for RAs. High expectations from (often very costly) IT investments have often been disappointed, reflecting excessive focus on the tool instead of the aim.¹⁰³ Commissioners frequently complain of the lack of good managerial information for timely decisions, or late and inconsistent data for appraising the performance of core RA operations. Avoiding this requires greater attention to realizing the transformational capabilities of good information systems, key considerations being:

- **Back to basics.** Despite significant investment in IT, many developing countries still struggle with automating basic compliance operations—often still supported by old IT legacy systems; Some countries (such as the Philippines) still do not enter all tax returns into their IT systems. One key lesson from the RA-FIT initiative has been the difficulty that many developing countries have in providing basic operational information: only about half, for instance, provided information on tax debts, a critical indicator of collection performance. Such a dearth/inaccuracy of information creates significant difficulties in managing operations and analyzing their performance; and weak information systems also provide opportunities for corruption. The good news, however, is that IT developments mean that many developing country RAs have an opportunity for a technological leapfrog, while RAs in several advanced economies battle with outdated systems.
- **Enhance compliance control capabilities—back-end as well as front.** Good progress has been made in developing front-end electronic interfaces for taxpayers, but back-end developments have lagged significantly, for example in automated risk profiling, joined-up filing and accounting across taxes, and matching with third party data. This leads to duplicated filing

¹⁰² For example, during the crisis Mexican tax enforcement officials still had to collect delinquent payments of fees charged by other government agencies.

¹⁰³ See for instance Bird (2008), Inter-American Development Bank and others (2012), IMF (2011a), Jenkins (1996), USAID (2013), and World Bank (2010),

requirements, the use of tax officials' time in verification checks that could be automated and augmented by data mining,¹⁰⁴ and less well targeted and tailored compliance interventions. This lack of data efficiency can be caused not only by poorly designed IT systems, but also by enforcement units in RAs lacking the capability to develop back-end use of electronic data, such as cross-matching.

83. The opportunities for RAs from changing technologies are substantial, and continue to unfold. There are many ways in which IT is being used to improve tax administration, and not only in advanced economies (Box 5). Further technological opportunities will doubtless emerge, Biometrics, for instance,¹⁰⁵ are a possible replacement for social security or other taxpayer identification numbers (TINs), with potential for improving taxpayer services (by for instance reducing the time needed for checking taxpayers' identity in communicating with RAs) and limiting the opportunities for identity theft to be used to create fictitious tax refund claims.

Box 5. IT and the Transformation of Tax Administration

- **Electronic invoicing:** replacing paper invoices with electronic versions using mandated or otherwise certified electronic devices that are generated by—and update—suppliers' and purchasers' accounting systems, and sometimes the RA's transaction logs. This significantly reduces costs for both firms and (by enabling automated compliance control) RAs. Latin American countries were pioneers in this area;¹⁰⁶ China and some European countries are using these methods to reduce missing trader VAT frauds.
- **Pre-population of tax** returns, using registration and third party data, is now routine in several countries.
- **'One-stop sites'** for all interactions between citizens and businesses and government are being increasingly adopted—potentially allowing shared access to government databases across departments.
- **'100% digital' administration** characterized by almost entirely digital communication with taxpayers and the use of social media and apps, is the aim in The Netherlands and elsewhere
- **EOI**, especially automatic, discussed above, rests entirely on appropriate IT systems and conventions.
- **Electronically submitted accounting data** can be interrogated with audit software to quickly and cheaply validate returns and identify compliance risks.
- **Technology-based compliance control** is becoming more sophisticated, moving from a largely reactive selection of cases for intervention to supporting customer segmentation by channeling taxpayer contacts to the most appropriate services in real time. This is especially suitable for e-filing, call centers, and other automated processes.

84. But there are also new problems from emerging technologies. EFD's, for example, can be undercut by 'zappers': software that falsifies recorded sales. And just as tax administrations are automating their high-volume processes, so the more sophisticated fraudsters are using technology

¹⁰⁴ The use of statistical techniques to identify anomalies, associations between taxpayer characteristics and noncompliance, and other risk indicators and thereby create risk profiles or target lists for compliance interventions.

¹⁰⁵ Voice-based authentication is particularly well suited for telephone contacts.

¹⁰⁶ For examples of developments in this region, see the presentations at the 48th CIAT General Assembly: <http://www.ciat.org/index.php/en/international-cooperation/international-activities/technical-conferences/3240.html>

to generate very large numbers of fictitious entities and/or claims for credits¹⁰⁷ that are individually too small to prompt compliance interventions. ‘Phishing’ attacks and hacking are being used to capture taxpayers’ personal data to use in fictitious refund claims.¹⁰⁸ In Europe, those behind VAT refund frauds are using similar techniques to identify and test RAs’ risk profiling and compliance checks. And new technology makes it easier to do business without leaving traces that the tax law and RAs can latch on to, as with the avoidance activities of MNEs and Internet transactions in intangible services.

85. More speculatively, tax policy may also come to respond to the possibilities created by technological advances much more than it has yet done: moving away from the arbitrariness of an annual cycle for the income tax to approaches embodying both longer- and shorter-term perspectives, for instance, or combining information on income and asset holdings. Implementation challenges will then fall to RAs.

D. Relationship Management

86. Managing relationships with taxpayers and other stakeholders is important for effective compliance management—with much to do in many developing countries. RAs need strong relationships with many groups: taxpayers (and intermediaries), trade associations, and other agencies responsible for different aspects of tax compliance (such as customs, when tax and customs are separate, social contribution agencies, withholding agents, and anti-money laundering (AML) agencies). More advanced administrations have a range of channels through which tax officials communicate with the public, ranging from regular briefings with trade and other organizations to working with an official taxpayer representative or ombudsman—all of which provide channels for taxpayer grievances and allow the taxpaying community to give the RA feedback on its operations and initiatives. But—with some exceptions, such as with commercial banks acting as withholders—the stakeholder relationships of most developing country RAs are largely ad hoc. This means that opportunities for exchanging information, sharing intelligence, or carrying out joint/coordinated actions with other agencies, are not exploited effectively.

87. Some advanced RAs have gone further, introducing an ‘enhanced relationship’ (or ‘cooperative compliance’) with key taxpayers. This entails close communication between the RA and (generally) large taxpayers with a view to addressing potentially questionable transactions before they occur, and agreeing how they will be treated. There is potential for mutual gain to RA and taxpayer in this. Both enjoy reduced uncertainty, and theory suggests further benefits: since positions disclosed are likely to be ones for which the taxpayer has a strong case, the RA gains, for instance, from its greater ability to focus on undisclosed tax positions.¹⁰⁹ These initiatives, which

¹⁰⁷ In Estonia, for instance, a case was identified in which a taxpayer made several dozen small adjustments each day to turn a VAT liability into a refund without triggering intervention from the automated risk process (IMF, 2014).

¹⁰⁸ Related, RAs must also protect taxpayer data from hackers and phishing attacks.

¹⁰⁹ De Simone and others (2012).

have attracted much attention, may help reduce the frequency of contentious issues for some types of taxpayers. But they require that the RA's enforcement capacities be credible and effective. An early study of the HRMC program (in 2007–8) concluded that while the risk rating approach had enabled the tax service to allocate resources better internally, it seemed less effective in changing the attitude of some corporate taxpayers toward tax avoidance.¹¹⁰ OECD (2013d) emphasizes the importance of a clear framework for such cooperation, and of good governance, both corporate and of the RA.

88. Closer cooperation with banks and government agencies to combat money laundering and associated tax evasion has great potential in many countries, including developing. The Financial Action Task Force (FATF), which sets standards for anti-money laundering and combating the financing of terrorism (AML/CFT), has recently expanded the scope of predicate offenses to money laundering to include tax crimes. Thus, the AML framework can provide RAs with valuable information regarding unreported income. To be effective, however, this requires RAs to have well-established channels of cooperation with Financial Intelligence Units, banks, and the relevant branches of the judicial system, including the prosecutor general's office.¹¹¹

AN APPROACH AND TOOLS FOR STRONGER COMPLIANCE

Key messages

- The challenges that RAs face can be addressed in a broadly common framework...
- ...and by using new tools for measuring and analyzing compliance gaps, collecting comparable data, and assessing performance.

89. Though RAs' circumstances and priorities vary widely, the challenges they face can be addressed in a common approach and with similar analytical tools, including ones currently spearheaded by FAD.

A. The Compliance Risk Management (CRM) approach

90. The standardized CRM approach provides a coherent structure that encompasses the diverse actions needed to influence taxpayer compliance...¹¹² (Box 6). First formulated by the

¹¹⁰ Vella, and others (2009). See also Freedman and others (2014).

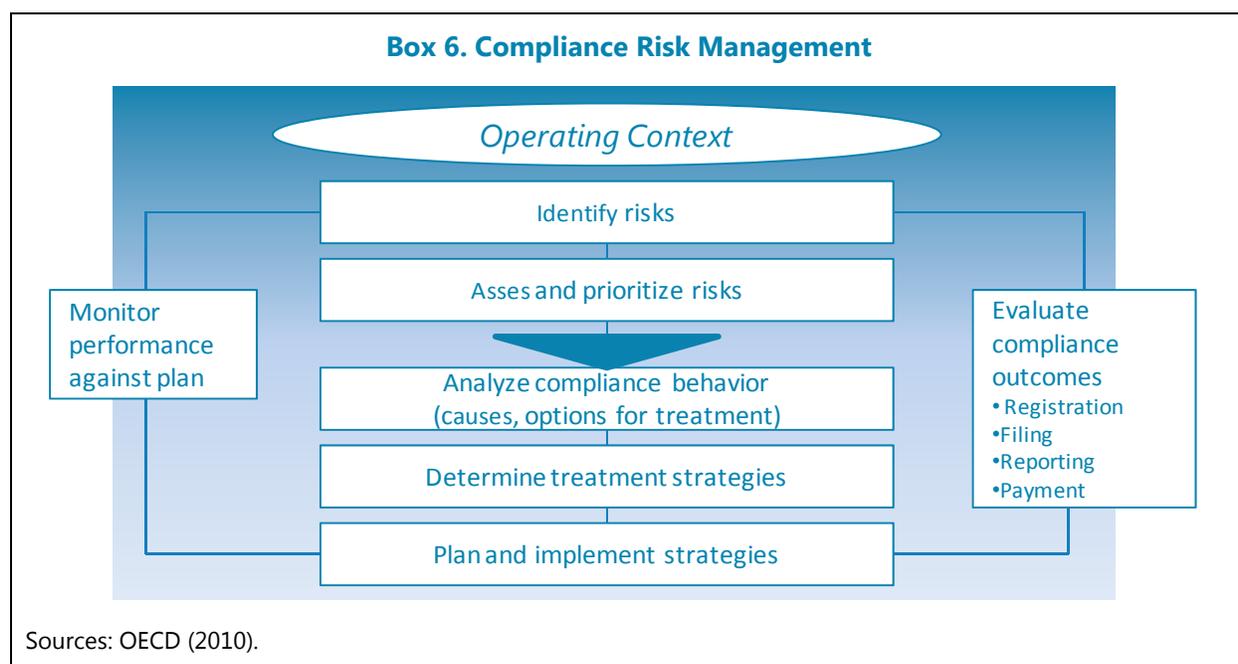
¹¹¹ For a more detailed discussion, see Mathias and Esposito (2014).

¹¹² See for instance Toro (2005) on the varieties of noncompliance under a self-assessment system and the various means by which RAs can address them.

ATO, it has since been adopted by the OECD and European Commission.¹¹³ It captures the logic set out in this paper: measure, and understand the causes of, compliance gaps; deliver mitigating and tailored responses, sometimes stressing facilitation of compliance, sometimes stressing deterrence; allocate resources appropriately to different taxpayer segments, and measure the impact of the mitigating actions taken.

91. ...but does not mean ‘one size fits all’ prescriptions for action and reform. The assessment of compliance risks it implies, for instance, could lead to quite different tailored interventions: expanding the registration base in some countries, for instance, and addressing sophisticated frauds in others.

92. The basics must be in place first. Experience in supporting the adoption of the CRM in several countries, such as in South East Europe, has made clear that for most countries weak core operations and limited capacity to identify, analyze, and, ideally, measure compliance risks and gaps remain significant constraints to fully applying the CRM approach.



B. New Tools

93. Three new tools can help all RAs improve their basic operations and implement, as appropriate, the CRM approach (detail on their substance and process are in Appendix XII):

¹¹³ OECD (2009b), European Commission (2010) and IMF (2010).

- **'RA-GAP' is an FAD program to help countries estimate and understand their compliance gaps.** Already implemented in a range of developed, emerging and low-income countries, the program has initially focused on VAT gaps; it is now moving into other major taxes.
- **'RA-FIT' is an FAD initiative to generate a standardized set of data from and for all RAs on a regular basis,** allowing them to monitor basic aspects of their performance more effectively and compare themselves against peers. It will unify and extend the efforts of several organizations, and cooperation is being established with the Inter-American Center for Tax Administrations (CIAT), the Intra-European Organization for Tax Administration (IOTA), the World Customs Organization (WCO) and the OECD. RA-FIT data have been used at several points in this paper.
- **'TADAT' (Tax Administration Diagnostic Assessment Tool) is a standardized framework for evaluating the performance of tax administration system.** It provides a detailed, evidence-based and scored assessment of performance in all key areas: a tax-side analogue to the expenditure-side PEFA. Implementation will be by a full range of agencies with expertise in the area. Financed with donor support, TADAT is led by a secretariat located in the IMF. Now being piloted, it will be available for general use from November 2015.

CONCLUDING REMARKS

94. Improving tax compliance requires sustained effort and a coherent strategy.

Compliance is vulnerable to shocks, as the crisis has shown, and can be fragile. Strengthening and solidifying it requires lasting work that balances enforcement and the encouragement of voluntary compliance; the paper has highlighted key tools that can be used to this end (and some likely to be less effective). But a key lesson has been the importance of having a coherent and actionable strategy within which to embed the actions of an RA—and of having the capacity to implement it.

95. Core elements of a systematic approach are relevant for all countries. These are: identifying the major compliance risks as accurately as possible, so as to allocate limited resources most effectively in pursuit of revenue and fairness objectives; and spearheading actions—legislative, administrative, educational or enforcement, depending on the risk—to address them. Achieving this requires: (1) strong commitment to and capacity for data analysis (not least, collecting the data); (2) effective prioritization in addressing multiple compliance risks; (3) proper attention to basic tax administration functions. It also requires strong management of RAs, which have increasingly complex mandates, and providing an institutional and legal approach enabling these capabilities to be developed. And, in all countries, strong political support is needed to provide RAs with the enabling environment (stable management and resources) needed for effective enforcement.

96. Priorities for developing these capabilities differ across countries. The point is not that all RAs can or should aspire to the highest levels in all these areas, but rather that realistic approaches encompassing all three are indispensable for achieving effective improvements. Broadly, the priorities differ across income groups. *Advanced economies* are naturally the strongest in all areas—but the crisis has shown that, in surprisingly many, more needs to be done in area (1), to

enhance analytics, particularly in measuring and understanding noncompliance, and analyzing how it is affected by various forms of intervention. *Emerging market* countries are enhancing their capabilities, but also lag in understanding noncompliance as well as in addressing governance issues and improving operations and risk management. In *developing countries*, there have been notable improvements, but, unsurprisingly, capacity in all areas remains work in progress; work under (3), to improve fundamental RA operations (taxpayer education, information management, auditing and debt collection), remains critical, as well as ensuring stable and empowered RA management.

ISSUES FOR DISCUSSION

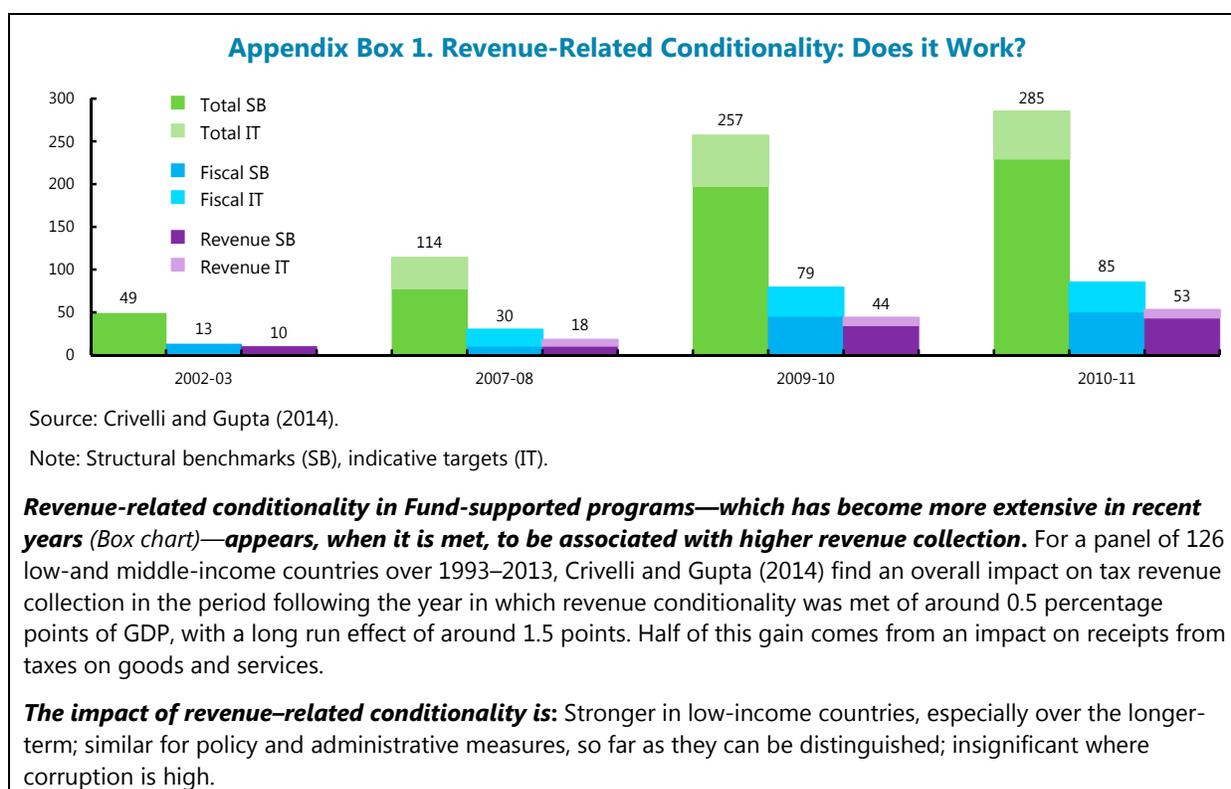
1. Do Directors believe that the strategic framework set out in the paper can help countries improve compliance and, thereby, revenue? Do they agree that it should become an integral part of Fund advice to member countries?
2. How much importance do Directors believe should be attached to fairness considerations in addressing noncompliance?
3. Do Directors agree that Fund staff, and national authorities, need to pay particular attention to compliance issues in times of economic crisis?
4. Do Directors agree that effective revenue administration can be compromised by instability in management and financing, and that caution is needed in extending their operations beyond collecting core taxes?
5. What challenges and opportunities do Directors expect revenue administrations to face from digitization and other recent and emerging trends?
6. Do Directors agree that systematic gathering and analysis of information enabling revenue administrations to assess their performance is critical, and that the new tools set out in the paper can help?

Appendix I. An Update on the Extent and Effectiveness of Fund Advice

There is some evidence that Fund advice and conditionality have helped strengthen revenue performance in developing countries—though much remains to be learned.

The Fund continues to provide extensive technical assistance (TA) on tax matters, both policy and administration: currently in over 90 countries each year, with around 120 missions from headquarters, along with 500 short and 30 long term expert assignments—a substantial increase in recent years, made possible by increased external finance.¹¹⁴ The Fund also provides tax law drafting assistance to about 20 countries each year, through a mix of HQ and short term expert assignments.

While there is an increasing focus on evaluating these interventions more effectively, there are signs that some elements of common advice¹¹⁵ have proved successful. On the VAT, for instance, which the Fund has been active in promoting, several analyses have now found a positive revenue impact.¹¹⁶ Ebeke, Mansour and Rota Graziosi (2014) find that adoption of the VAT, SARAs and (for direct taxes) LTOs have all tended to increase revenue in sub-Saharan Africa. TA advice has also informed the design of structural revenue measures in IMF-supported programs, and recent work suggests this has indeed contributed to stronger revenue mobilization (Appendix Box 1).



¹¹⁴ IMF (2011a; Appendix I) reviews tax-related TA more closely. Since then, the numbers of missions from HQ and short term expert assignments have increased by around 30 and 50 percent respectively.

¹¹⁵ As set out for instance in Box 1 of IMF (2011a).

¹¹⁶ Keen and Lockwood (2010), Ufieri (2014), Adhikari (2014).

Appendix II. MIMIC—and its Critics

A series of papers¹¹⁷ have produced much-cited estimates of the ‘shadow economy,’ over time and for many countries, using the MIMIC (Multiple Indicator Multiple Cause) method. This treats the shadow economy as an unobserved variable, driven by a series of causal variables and reflected in a set of indicators. Difficulties (beyond commonplace problems of endogeneity, omitted variables and the like), include:

- Since this structure is invariant to the scale of the shadow economy, some normalization of the coefficients is needed to produce more than relative values over time in a given country or (when estimated with panel data) across countries. This is often done by invoking some auxiliary model (usually models of currency or electricity demand) combined with an arbitrary benchmarking assumption. This makes the final published estimates difficult to interpret, and prompts the question of why the MIMIC part is needed at all.
- It is unclear what criteria should guide variable selection. For example, the unemployment rate is often considered a causal variable while the labor force participation rate is included as an indicator variable—when the opposite is no less inherently plausible.
- The approach requires that the indicator variables be uncorrelated *conditional* on the shadow economy. So, for example, GDP growth and labor force participation—common indicators—can be correlated only through changes in the shadow economy. Similarly, causal variables can affect indicators only through their impact on the shadow economy.

Using the estimates produced by this approach in further regressions is also problematic, whether as dependent or independent variable. In the former case, because the independent variables in that further regression should already have been included at MIMIC stage among the casual variables; in the latter because the dependent variable should have been included among the indicators.

The strong demand for estimates of ‘shadow’ activity risks blinding analysts to their limitations. Breusch (2005b) concludes that “...the MIMIC method is unfit for purpose” and stresses a lack of transparency in several of the papers that use it. RAs commonly treat such estimates with considerable disdain.

¹¹⁷ A recent example is Schneider and others (2011); the approach originates with Frey and Weck-Hannemann (1984).

Appendix III. Colombia and Peru—Addressing Challenges of the Crisis

Both countries experienced a reduced tax ratio during the crisis:

	2006–2008	2009–2010	2011–2013
Colombia	13.4%	12.6%	14.0%
Peru	15.8%	14.7%	16.1%

Source: IMF (2013, 2014f).

The authorities' response, with FAD help, was to assess their performance gaps in core areas and take corresponding measures for improvement.

FAD designed a three year (externally-financed) project, covering both countries, to strengthen compliance. The main elements were: (i) an improved strategy for taxpayer assistance and services, increasing the coverage of electronic invoicing and extending electronic services to taxpayer registration, return filing, and payment; and (ii) implementing a risk management system, including enhancing the effectiveness of audit by restructuring this function, ensuring that the audit area is responsible for the entire audit process, redesigning the selective and high-coverage audit process, and restructuring the VAT refund process; and (iii) strengthening IT systems by re-engineering registration and revenue collection systems, implementing an integrated taxpayer current account, and centralizing systems for enforced collection and auditing for tax and customs operations.

At end of the three years, both countries had increased collections (Appendix Table 1) and reduced the VAT compliance gap (Appendix Table 2).

	2006–2008	2009–2010	2011–2013
Colombia	25.4%	25.5%	22.4%
Peru	36.8%	37.3%	29.6%

Source: For 2000–12, CIAT (2014); for 2013, national revenue administrations.

The keys to success were: strong leadership of the RAs; a management team committed to change; strengthening a culture of strategic planning; strengthening analytical capacity, measuring compliance gaps and using management and operational indicators; establishing a coordinated work plan with donors and TA providers; and medium term planning, adequately resourced.

Appendix IV. Compliance Chains under the VAT

The structure of the VAT—tax charged on output, with a credit for tax charged on inputs—makes the compliance decision far more complex than in AS. It creates the possibility of ‘good’ chains of compliance forming: a compliant trader has an incentive, for instance, to ensure their suppliers are compliant, in order to claim a credit themselves rather than face increased unrecoverable cost of inputs. But ‘bad’ chains can also form; if that trader were noncompliant, they would prefer that their suppliers be noncompliant too, so as to avoid a tax-induced increase in the prices of their inputs that they cannot recover. De Paula and Scheinkman (2010) find that in Brazil, noncompliant traders do indeed tend to trade with others also noncompliant.

The policy challenge is how to encourage the formation of good VAT chains. A major purpose of levying VAT on imports—which account for a large proportion of all gross VAT receipts—is to spread compliance forward, by ensuring tax is paid at an early stage in production.¹¹⁸ Some firms may choose to remain noncompliant, but if so the tax-induced increase in their input costs worsens their competitive position—and both revenue and equity considerations are to some degree served by the taxation of at least part of total value added in the production chain.

An imaginative field experiment in Chile points to the scope for VAT compliance to spread backwards. In response to letters indicating an increase likelihood of audit, both targeted firms and their suppliers responded by increasing their levels of reported output VAT, while there was no impact on those purchasing from them (Pomeranz, 2013).

Ensuring compliance by the largest firms is key to strengthening wider compliance through their role as both purchasers from and sellers to other firms, and a number of countries have adopted special withholding regimes to exploit this, as noted in the text. As suppliers of goods and services, their compliance behavior is also critical in ensuring that their share in total value added is taxed.

¹¹⁸The critique of the VAT in Emran and Stiglitz (2005) neglects this point, which Keen (2008) elaborates on.

Appendix V. Some Empirics of VAT Compliance

A. Data

The only consistent panel data on compliance gaps, CG , of which we are aware are those produced by CASE (2013) for the VAT in all EU members except Croatia and Cyprus. Combining these with estimates for Japan, from Ueda and Tsutsui (2013), gives a balanced panel of 27 countries over 2000–11. Estimated output gaps YG (actual less potential GDP) are from Eurostat, and total expenditure on tax administration (in percent of GDP), A , is from various issues of OECD's periodic *Tax Administration in OECD [and Selected non-OECD] Countries: Comparative Information Series*.

B. Estimation and Results

The estimating equation is

$$\Delta CG_{i,t} = \alpha_i + \beta_1 CG_{i,t-1} + \beta_2 YG_{i,t} + \beta_3 \Delta YG_i + \beta_3 A_{i,t} + \beta_4 \Delta A_{i,t} + \varepsilon_{it} \quad (1)$$

for country i and year t ; country effects are included (but time effects are not). Estimation is by OLS except as indicated. (The standard rate of VAT, higher levels of which might be expected to be associated with larger compliance gaps, proved insignificant and is omitted in the results below). This specification allows fairly complex dynamics. The short run impact on the compliance gap of an increase in administrative spending, for instance, is given by β_3 , expected to be negative; and in the steady state, the gap is given by related to the level of spending on tax administration as

$$CG_i = -\left(\frac{\alpha_i + \beta_3 A_i}{\beta_1}\right). \quad (2)$$

Results are reported in Appendix Table 3. These, it should be stressed, are very tentative: sample sizes are modest, for instance, and explanatory variables explored quite limited.

Column (1) includes only the lagged compliance and output gap terms. The results imply that a change in the output gap has a marked effect on compliance in the short run, but this fades away reasonably quickly. Take, for instance, a one-off output gap of -1 percent. This immediately increases the compliance gap by around 0.4 percentage points; that means, in revenue terms, a loss of 0.4 percent of potential VAT, which in turn means (given a compliance gap of say 15 percent, the sample mean) a revenue loss of around 0.5 percent of total VAT revenue. The negative coefficient on the lagged dependent variable, however, means that this effect will be reduced in the following year, the compliance gap then being above its initial level by only 0.16 percentage points; the year after, the effect is merely 0.09 percentage points.

The negativity of the coefficient on the lag is important in itself, as it ensures stability of the process generating the compliance gap: that is, adverse shocks to compliance tend to vanish—they do not lead to the explosion of increased noncompliance that theory suggests is a real possibility.

Column (2) adds the level of and change in spending on tax administration. The former is strongly significant, with expected sign; the latter is not, and has counterintuitive sign. Spending might, however, plausibly respond to the compliance gap. To address this possible endogeneity, column (3) instruments the change in spending by the lagged change in the output gap. The coefficient on spending becomes slightly larger, though its significance falls (to 6 percent) as does that of the change in the output gap. Column (4) re-estimates the specification of column (3), removing insignificant variables. The implication, for instance, using equation (2), is that increasing spending on tax administration by 0.1 percent of GDP is associated with a long run improvement in the compliance gap of about 0.06 percentage points;¹¹⁹ which, at an initial compliance gap of 15 percent and ratio of VAT revenues to GDP of 8 percent, means a revenue gain of around 0.6 percent of GDP.

Appendix Table 3. Modeling the VAT Compliance Gap

	(1)	(2)	(3)	(4)
CG ₋₁	-0.415*** (0.044)	-0.820*** (0.120)	-0.853*** (0.144)	-0.581*** (0.072)
YG	-0.001 (0.077)	-0.128 (0.078)	-0.169 (0.114)	
ΔYG	-0.391*** (0.113)	-0.254*** (0.081)	-0.201 ⁺ (0.121)	-0.381*** (0.103)
A		-0.442*** (0.140)	-0.569** (0.217)	-0.342*** (0.091)
ΔA		0.152* (0.081)	0.483 (0.421)	
No. observations	297	135	135	162
R ² (within)	0.27	0.60	0.57	0.45

Source: Staff Calculation.

Notes: Country fixed effects in all cases. Fixed effects estimation and robust standard errors in columns (1), (2) and (4); ΔA instrumented by ΔYG_{t-1} in column (3). With jackknifed standard errors.

These estimates also enable an illustrative calculation of the enforcement elasticity discussed in the text. Evaluated at the sample mean administrative spending of 0.25 percent of GDPs, the estimates in column (4) imply, for instance, imply an elasticity of 0.17.¹²⁰

¹¹⁹ Calculated as 0.342/0.581.

¹²⁰ Calculated as $(1/(1 - 0.15)) \times (0.342/0.581) \times 0.025$.

Appendix VI. Dealing with Small Businesses¹²¹

Administrative challenges

No single definition of a ‘small business’ is appropriate, from the fiscal perspective, for all countries: a ‘small’ business in an advanced economy, for example, might well be ‘medium-sized’ in a developing one. In all countries, however, the smallest 85–95 percent of firms typically present substantial challenges for designing and implementing tax (and social contribution) systems:

- Their sheer number, smallness, and high rates of creation and destruction make them hard to identify and monitor;
- They often deal in cash and B2C transactions, and have limited book-keeping capacity;
- They commonly mix business and personal affairs, and capital and labor incomes, in ways that can be complex and manipulated;
- Compliance costs loom especially large for this group (Appendix Figure 1), an effect often amplified by complex design but—since compliance likely involves some fixed costs—largely unavoidable;¹²² and
- They are often politically influential, capable of mobilizing significant resistance.

The revenue raised directly from small businesses is generally modest. Countries define the small business segment very differently, but the examples in Appendix Table 4¹²³ suggest that it commonly accounts for less than 15 percent of domestic tax collections—often much less in lower income countries and, of course, for the very smallest microenterprises.

Non-compliance among small businesses is generally high. Error rates of over 40 percent are found in small businesses, even in advanced countries.¹²⁴ And in the United States, for example, the reporting rate¹²⁵ for small corporations (assets less than US\$ 10 million) was only 46.5 percent in 2006 compared to 87.5 percent for large corporations (assets more than US\$ 10 million).¹²⁶ Studies for developing countries also report high rates of noncompliance by small businesses.¹²⁷

¹²¹ International Tax Dialogue (2013) provides more detail on several of the issues raised here.

¹²² See Ariff and others (1995), Chan and others (1999), Slemrod and Blumenthal (1996), Slemrod and Vekatesh (2002).

¹²³ See also Table 12.6 of Corbacho and others (2013).

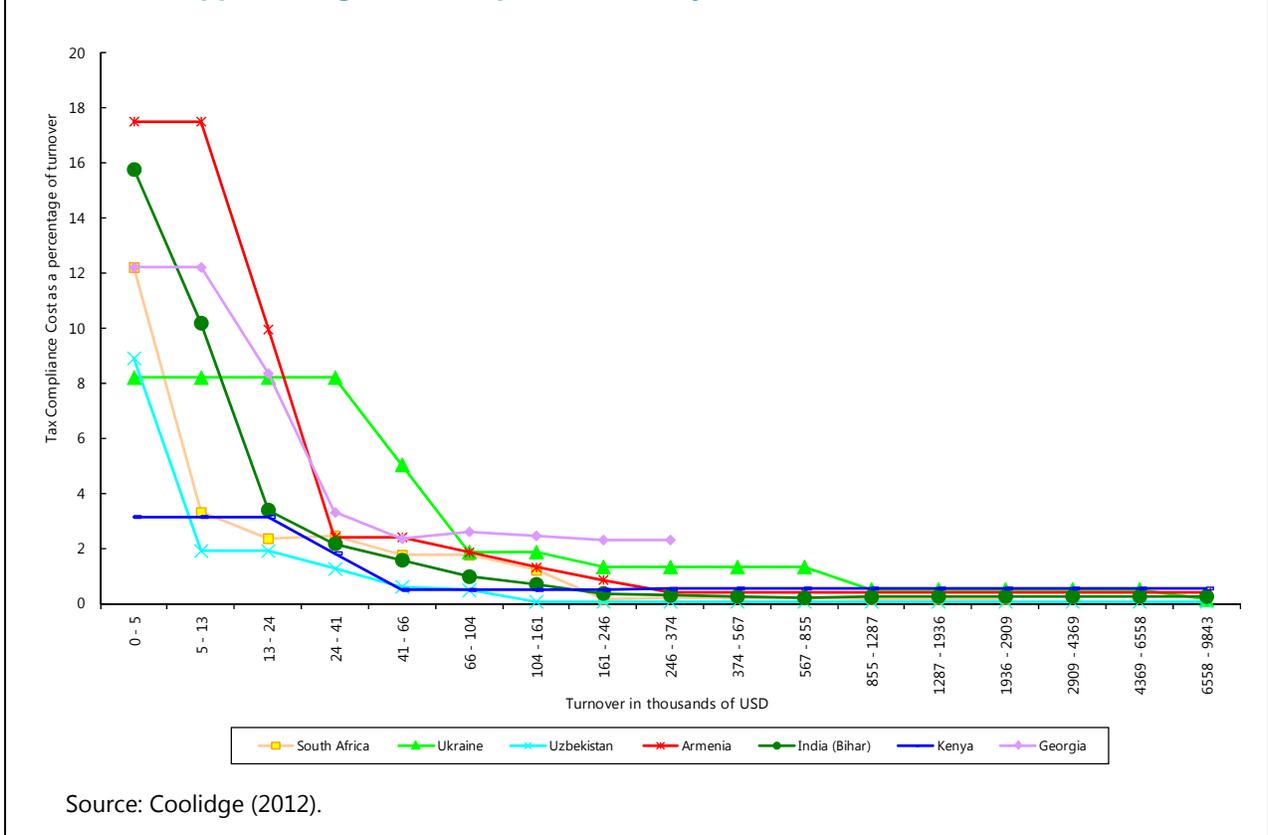
¹²⁴ The proportion of tax returns that contain at least one error (SKAT, 2009).

¹²⁵ Taxes paid voluntarily relative to the sum of under-reported taxes and voluntary payments.

¹²⁶ Calculations based on data from IRS (2012) and the IRS’ Sources of Income database, available at <http://www.irs.gov/uac/SOI-Tax-Stats-Table-2>Returns-of-Active-Corporations>.

¹²⁷ Gauthier and Gersovitz (1997) and Gauthier and Reinikka (2001).

Appendix Figure 1. Compliance Costs by Turnover, Selected Countries



The potential revenue gains from improving small business' compliance should not be overstated. In high compliance countries, small businesses may account for a large part of the compliance gap: in the U.K., as noted in the text, SMEs accounted for nearly 50 percent of the VAT gap in 2011–12.¹²⁸ But because the gap is relatively small, the revenue at stake is limited: even if the U.K. were to completely eliminate the SME tax gap, the additional revenue would be only around 0.9 percent of GDP. In low compliance countries, where the tax gap is higher, potentially larger amounts of revenue might in principle be mobilized from noncompliant small businesses. But unfocused efforts at collecting this revenue often come up short. In Indonesia, the tax department increased the number of registered (small) taxpayers from 8 million in 2008 to 25 million in 2013—but achieved no increase in the tax yield.

¹²⁸ HMRC (2013b).

Appendix Table 4. Small Business, in Percent of all Firms and of Revenue, Selected Countries

Country	Definition of Small Business	Percentage of Businesses	Percentage of Tax Collection
Australia	Includes micro businesses (turnover less than Aus\$ 2 million, equivalent to US\$ 1.6 million) and small businesses (turnover between Aus\$ 2 million and Aus\$ 10 million, equivalent to US\$ 1.6 million- US\$ 8.1 million)	99.2	8.8
Bolivia	Small businesses with sales less than \$b 400,000 (US\$ 56,000) in sales as well as those micro businesses subject to the simplified regime.	90.6	9.8
Brazil	Small businesses (turnover less than US\$ 1.8 million), micro-businesses (turnover less than US\$ 180,000), and self-employed persons (turnover less than US\$ 30,000).	83.2	5.0
Cameroon	Businesses and self employed persons with turnover below CFAF 50 million (about US\$ 100,000)	60.6	2.9
Chile	Ongoing businesses with sales less than US\$ 1.1 million and newly established businesses with equity less than US\$ 5.3 million	97.8	12.6
Denmark	Micro businesses (no employees and turnover less than DKK 500,000, about US\$ 80,000) and small businesses (turnover between DKK 500,000 and DKK 14 million (US\$80,000 to US\$ 2.2 million) or with labor costs less than DKK 4 million (US\$ 640,000)).	73.0	13.0
Ivory Coast	Turnover less than CFAF 25 million (US\$ 45,000) for companies providing services and less than CFAF 50 million (US\$ 90,000) for businesses with other activities.	82.6	5.1
Netherlands	Micro businesses with less than 10 employees, small businesses with 10–150 employees, and self-employed persons.	92.0	30.0
Peru	Micro businesses with turnover less than 555,000 soles (US\$ 203,553) and small businesses with sales between 555,000 and 6.3 million soles (US\$203,553 and US\$ 2.3 million).	97.6	16.3
Uganda	Small and micro businesses with gross annual turnover below UGX 2 billion (US\$ 720,000) or total tax payable in a year less than UGX 700 million (US\$ 252,000)	95.7	16.7
United States	Total revenue is not typically reported by taxpayer segment. Collection from small businesses and self-employed (SB/SE) persons is estimated to include: (1) all business income taxes paid by SB/SE; (2) all individual income taxes associated with a 1040 tax return containing a schedule C, E, or F; (3) all estate, trust, and gift revenue; and (4) both the employer and employee portion of employment taxes collected from SB/SE.	N.A.	44.2

Source: Staff compilation.

Nonetheless, the design and implementation of effective tax regimes for small businesses is important to the coherence of and support for the wider tax system. Some argue that—irrespective of revenue considerations—requiring some tax payment from small businesses can support state building, since they will then hold their governments more strongly to account. In both efficiency and equity terms too, some tax on smaller businesses may be warranted—even if the revenue is less than the cost of collection—to ease the competitive advantage they would otherwise enjoy over larger, taxed firms and to ensure the fairness of the tax system.¹²⁹ At the same time, while the importance of the small business sector for job creation has often been overstated, it is evidently critical to avoid disincentives to their growth or production efficiency. All this, and the close interaction with administrative practicalities, makes the proper design of small business regimes extraordinarily difficult. This is discussed further below.

Noncompliance by small businesses commonly spans all tax obligations: Non- or abusive registration—some small businesses become ‘ghosts,’ completely outside the tax system; some register only to illicitly claim a refund; weak record keeping; poor filing and payment—through evasion, ignorance of deadlines, and difficulty in completing returns; misreporting—including under-reporting of income and/or sales; failing to withhold or accurately declare employment taxes or social contributions; misclassifying employees as contractors; claiming undue deductions; and misreporting unusual one-off transactions.

Given their very large number, cost effective strategies are needed to facilitate compliance by small businesses and deal with the revenue risks they pose. Approaches that have proved successful in many countries include:

- Risk-profiling (including relative to industry norms) to identify potential problem cases...
- ...and tailoring enforcement actions (registration checks, record keeping reviews, audits, and prosecutions) to the degree of revenue risk they pose.
- Reducing compliance costs by providing small businesses with advisory visits, simplified accounting requirements and free record-keeping software, reduced frequency for filing, and online services.
- Promoting the use of electronic services, including electronic filing of tax returns and electronic payment of taxes.

The VAT, withholding taxes and information reporting can all help secure revenue from small businesses. The VAT charged on their imports or purchases from registered firms, for instance, limits the competitive advantage from being unregistered and ensures that some revenue is raised from firms’ purchases if they choose to remain so. There can be scope for building on such devices, for

¹²⁹ Keen (2013a).

instance through charging additional taxes (say on imports) that are creditable or refunded to registered firms—but excessive withholding risks unduly increasing costs of compliance and administration. Some countries have enacted special withholding regimes for non-compliant sectors.¹³⁰ Ensuring that smaller firms comply with their own obligations to withhold personal tax and social contributions on salaries paid is also critical, and—given low receipts from these sources—an evident area for improvement (indeed for medium-sized businesses too) in many developing countries. Where withholding is deemed too burdensome, third party information reporting can be a useful alternative: Australia, for example, requires businesses in the building and construction sector to report their payments to individual contractors.

An example of administrative success

The ATO's Small Business Assistance Program was established in July 2007 with the goal of providing small businesses with information and assistance at various stages of their life cycle. It provides: (1) advisory visits to taxpayers' business premises; (2) seminars and workshops; and, (3) outbound telephone calls. The ATO devotes a segment of its website to basic record keeping. The advisory visits—the centerpiece of the program—are demand-driven and focus on educating taxpayers rather than looking for evidence for audits. Officers provide guidance on registering for a TIN, VAT obligations, managing records and paper work, and complying with employer obligations; they can also help businesses to set up a Business Portal, electronic accounting systems, and other electronic services. Over the past four years, the ATO has delivered over 32,000 such visits.

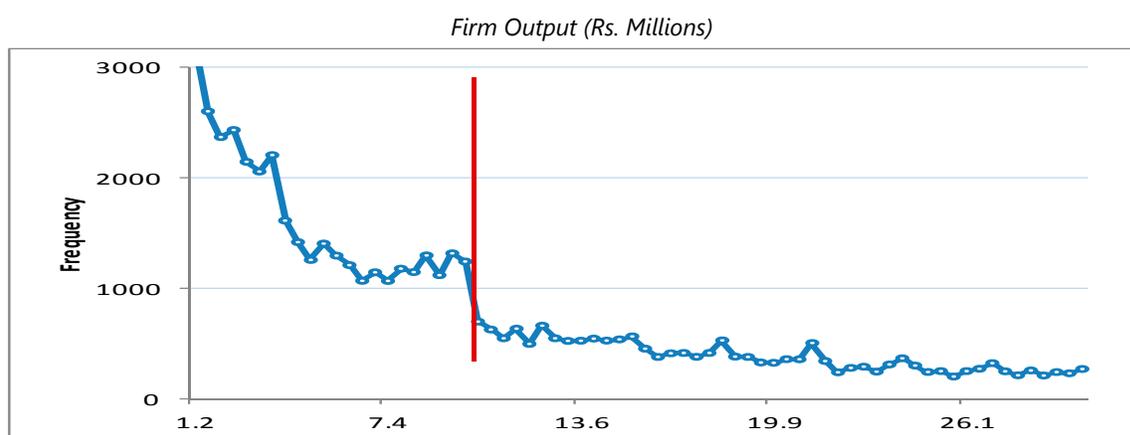
Design issues

Designing small business tax regimes is hard. The problem is to set size-based thresholds so as to partition taxpayers into distinct groups for differing treatments—reflecting their differing capacities and those of the RA—and determine the appropriate treatment (base, rate,¹³¹ obligations and administrative approaches) within each group; and to do this bearing in mind the potential to distort behavior. This is a complex problem, and 'simplicity' is easier to state as an objective than to achieve.¹³² Empirically, recent work has highlighted the importance of the choice by documenting the potential for thresholds to distort behavior by leading to reports just below or at such points (Appendix Figure 2 shows just one example; see also, for instance, Kleven and Waseem (2013)). Analytically, there has been some work on how the appropriate VAT threshold—a key anchor of many small business regimes—is shaped by revenue needs, costs of administration and compliance

¹³⁰ For example, Chile requires certain large purchasers to withhold payment of VAT from suppliers of certain agricultural products; the withholding rate is kept low to avoid generating refund claims from the producers.

¹³¹ Many countries, for instance, apply reduced rates of corporation tax at lower levels of profitability. The most plausible rationale for this is a very second best response to difficulties in raising external finance, but against this are many disadvantages (set out in International Tax Dialogue (2013)): it can lead, for instance, to very high effective marginal tax rates if the benefit of this reduced rate is clawed back at higher levels of profitability.

¹³² For instance, managing a 'smooth' transition from a turnover-based regime to an explicit income tax at a single turnover-base threshold is impossible when firms' profit margins differ.

Appendix Figure 2. Bunching and the Central Excise in India

Source: Chatterjee and Wingender (2011).

considerations.¹³³ These costs point not to low thresholds so as to maximize the number of taxpayers, but to higher thresholds than would otherwise be the case—enabling tax administrations to focus on improving compliance of the more important taxpayers before extending the net to smaller ones. And this consideration may be reinforced where compliance problems are more severe.

Small business tax regimes vary widely, and though there is no consensus on the ‘best’ (less because of disagreements than for want of analysis) there are sensible guidelines. Variation is naturally marked between countries at different income levels—few countries have such sophisticated schemes for distinguishing between labor and capital income of small companies as have several Nordic countries, for example—but also within income groups. Initial conditions matter: many countries have been reluctant to raise a VAT threshold that is evidently too low, for instance, through a fear (usually misplaced) of substantial revenue loss and/or concern for what to do with the staff resources freed up (often justified).

While theory thus as yet provides no firm guidance on optimal systems for small business tax regimes, experience points to a structure with:

- A VAT threshold as an anchor for the wider small business regime, set at a level that is lower the lesser is the need for revenue and the greater are administration and compliance costs. Businesses with this level of turnover should also be able to cope with the regular income tax.

¹³³ Dharmapala and others (2011), Kanbur and Keen (2014) and Keen and Mintz (2004).

- For firms below the VAT threshold, a simple turnover tax—levied at one or two rates differentiated across sectors—can serve as a simple form of income tax and replacement for the VAT. Presumptive taxes based on physical assessment are generally to be avoided, as complex and corruption-prone.
- For the very smallest (micro enterprises) some modest fixed charge may be useful less as a source of revenue than to provide some attachment to the tax system and government.

This approach and related issues are discussed further in *International Tax Dialogue* (2013).

Appendix VII. Dealing with Professionals

Professionals—lawyers, accountants and the like—pose substantial compliance risks in many countries, undermining both revenue and trust in the wider tax system. In Greece, for instance—perhaps an extreme case—Artavanis and others (2012) find self-employed professionals to be reporting income below even their interest payments on consumer loans, with a revenue loss estimated at around 4.6 percent of GDP.

The compliance risks posed by professionals tend to take different forms in developing and advanced economies. In many developing economies, professional service providers frequently fail to comply with their basic tax obligations of registering, filing, and paying on time and in full.¹³⁴ In advanced economies, the key difficulty is underreporting—whether by misreporting receipts or more subtle methods, such as excessive payments by a professional firm for services received from a related entity.

A comprehensive compliance strategy can mitigate these risks. Possible measures, in addition to close monitoring of timely filing and payment, include:

- Information reporting or withholding on payments to professionals (such as those to physicians by health insurance companies, hospitals, and other bodies).
- A specialized audit program that includes identifying unexplained wealth.
- Cross-checking registers of professional associations with the RA's database.
- Requiring professionals to present a valid TIN and/or obtain a tax clearance certificate for renewal of professional licenses.
- Awareness campaigns with professional associations, focused largely on new entrants.

By such methods the ATO greatly improved compliance by legal practitioners. The proportions of barristers and solicitors not filing was reduced from 18 and 23 percent in 2004 to 0.5 percent and 6 percent in 2006, respectively. Taxes owed by professionals rose by about 30 percent.

¹³⁴ Examples include Antigua and Barbuda, Jordan, Malawi, and Philippines.

Appendix VIII. Initiatives in International EOI

Provisions enabling EOI¹³⁵ have long featured in many double tax agreements (DTAs), though for many years to little effect—both because advanced countries generally did not have DTAs with low tax jurisdictions, and because of limitations in the standard provisions (arising from bank secrecy, for instance, and the requirement of the domestic tax interest). The situation has been transformed by a series of initiatives over the last decade:

- The **EU Savings Directive** of 2003 requires member states to exchange information automatically, so as to enable interest payments made in one to residents of others to be taxed according to the laws of the latter. Exceptionally, Austria¹³⁶ instead deducts tax at (currently) 35 percent, passing 75 percent of the receipts to the country of residence. Similar agreements have been reached with 5 non-EU European countries¹³⁷ and the dependent and associated territories of several member states. The Directive was amended in 2014 to close such avoidance techniques as use of an interposed legal person and to include financial instruments equivalent to debt as well as income from all kinds of investments funds; negotiations to similar ends are underway with the non-EU participants.
- The **G-20/OECD process** acquired considerable momentum at the summits in 2009, at the peak of the crisis. These called on all jurisdictions to adopt EOI to the international standard—then being primarily reflected in Article 26 of the OECD model treaty, as revised in 2005—with the prospect of actions (such as deployment of withholding taxes) against those not doing so. Tax Information Exchange Agreements (TIEAs) usually bilateral, emerged as the primary means of achieving this, being simpler to negotiate than DTAs. This work is carried out in the framework of the Global Forum on Transparency and Exchange of Information for Tax Purposes (GF), which now has 124 members. It operates by peer review: a Phase 1 review of the legal and regulatory framework and a Phase 2 review of its implementation. As of October 2014, GF rated 71 jurisdictions that have completed both reviews: 58 as compliant/largely compliant, 9 as partially compliant and 4 as non-compliant. Twelve jurisdictions are not ready to move to Phase 2.¹³⁸

The G20 Summit at St. Petersburg in 2013 adopted automatic EOI (AEOI) as the global standard and the Brisbane Summit in 2014 endorsed the global Common Reporting Standard for its implementation. Fifty five jurisdictions have committed to be able to begin AEOI by September

¹³⁵ Information exchange may be *automatic* (periodic exchange of bulk information) or *specific* (upon request), and typically involve information on various categories of income (such as dividends, interest, royalties, salaries, pensions), changes of residence, purchase of or disposition of immovable property, and VAT refunds).

¹³⁶ Belgium and Luxembourg also availed of this exception, until 2010 and 2014 respectively.

¹³⁷ Andorra, Liechtenstein, Monaco, San Marino and Switzerland.

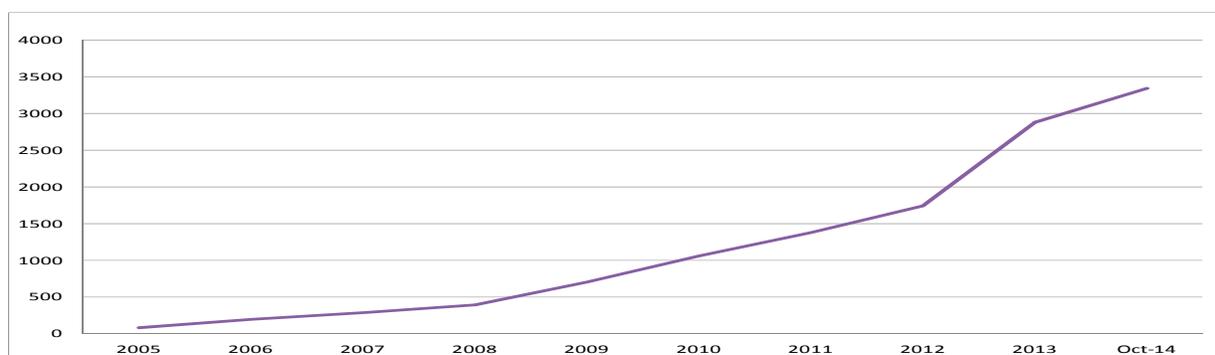
¹³⁸ OECD (2014c).

2017. For developing countries without financial centers, the need for capacity building before entering AEOI is recognized.¹³⁹

- The **Convention on Mutual Administrative Assistance in Tax Matters**, developed by the OECD and the Council of Europe in 1988, aims to facilitate international cooperation ranging from EOI, including AEOI, to the recovery of foreign tax claims. This was opened to all jurisdictions in April 2011; 69 have now signed.¹⁴⁰
- The **U.S. Foreign Account Tax Compliance Act (FATCA)** intends to detect and deter evasion of U.S. tax by U.S. persons hiding money outside the U.S. It requires foreign financial institutions (FFIs) to enter into an agreement (FFI Agreement) with the IRS to: a) identify accounts held by U.S. taxpayers and entities with substantial U.S. ownership, and b) report income and principal information to the IRS regarding those accounts. A 30 percent withholding tax is to be imposed on payments of U.S. source income to non-participating FFIs and account holders who refuse to provide the required information. An FFI agreement is not required, however, if the national tax authority of a jurisdiction in which the FFIs are located concludes an intergovernmental agreement (IGA) with the IRS¹⁴¹ (which seems likely to be the more common approach in practice). To date, 110 jurisdictions have reached IGAs.¹⁴²

Indicative of this increased commitment to EOI is in the very substantial increase since the crisis in the number of EOI agreements (mainly TIEAs) involving GF members shown in Appendix Figure 3.

Appendix Figure 3. EOI Relationships Established since 2005 by Global Forum Members



Source: OECD (2014c).

Note: Including through the Convention on Mutual Administrative Assistance in Tax Matters.

¹³⁹ OECD (2014d) sets out a roadmap for their movement to AEOI.

¹⁴⁰ www.oecd.org/tax/exchange-of-tax-information/conventiononmutualadministrativeassistanceintaxmatters.htm, accessed December 10, 2014.

¹⁴¹ This may provide either for FFIs to report information on U.S. account holders directly to their national tax authorities (FATCA Partners), who in turn will report to the IRS (Model 1); or for FFIs to report directly to the IRS, with the IRS able to request FATCA Partners to provide additional information on U.S. account holders who decline to consent that an FFI provide information (Model 2).

¹⁴² www.treasury.gov/resource-center/tax-policy/treaties/pages/fatca-archive.aspx, accessed December 10, 2014.

Appendix IX. Headquarters Functions

The core tasks for RA HQs are to:

- Develop strategic direction for increasing effectiveness in achieving the institutional mission.
- Develop and manage national policies (on core and support functions), and design and maintain standardized processes and procedures.
- Prepare national work plans reflecting corporate priorities (for both reform and operational objectives) and specify required activities, reform-related tasks, expected work volumes, staffing levels, and budget requirements.
- Ensure that resources are allocated across activities and locations in line with corporate priorities.
- Identify training needs and oversee the development and delivery of staff training programs
- Refine operational delivery structures, develop appropriate tools and techniques, and advise and guide field operational units.
- Monitor performance against the national work plan and budget through a structured performance measurement system. Identify reasons for divergences from plan and develop corrective actions.
- Report on the institution's performance to stakeholders, within and outside the organization.

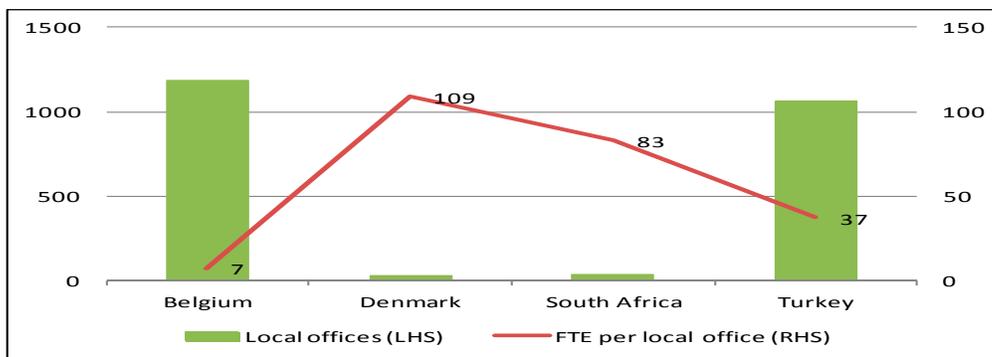
Appendix X. Experiences in Local Office Organization

Two country pairings provide contrasting experiences. They are:

- Denmark and Belgium—both small, high-income countries with tax ratios around 50 percent.
- South Africa and Turkey—both large emerging economies with tax ratios around 25 percent.

Belgium and Turkey have over 1,000 local offices; Denmark and South Africa have less than 50 (Appendix Figure 4). Over 90 percent of RA staff in Belgium and Turkey are in field offices; Denmark and South Africa have proportionately more HQ and other staff (in call and data centers, for instance). Belgium and Turkey also spend a higher proportion of their budgets on staff salaries.

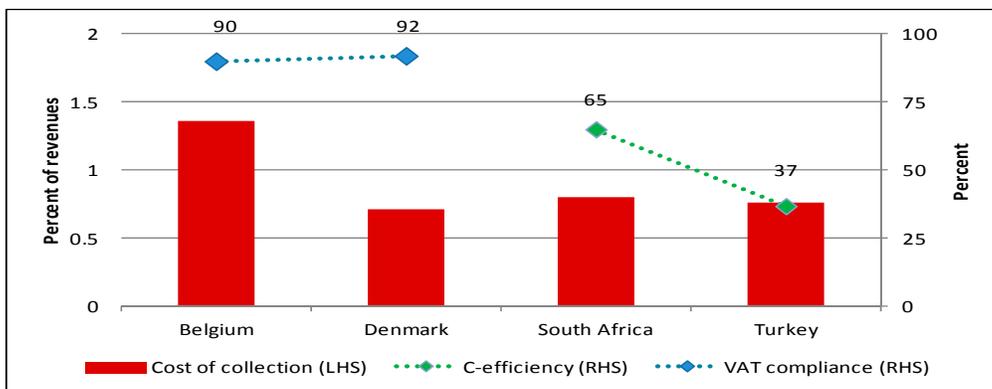
Appendix Figure 4. Local Offices and Local Office Staffing



Source: OECD (2013a).

Many elements beyond office network structures will affect outcomes, but the differences across these country pairs are suggestive. The VAT compliance gap is much the same in Denmark and Belgium, but collection costs in Denmark are half those in Belgium. In South Africa and Turkey, collection costs are similar, but (in the absence of compliance gap estimates for Turkey) C-efficiency is much higher in South Africa—where the compliance gap indeed seems low. (Appendix Figure 5).

Appendix Figure 5. Cost of Collection and Compliance



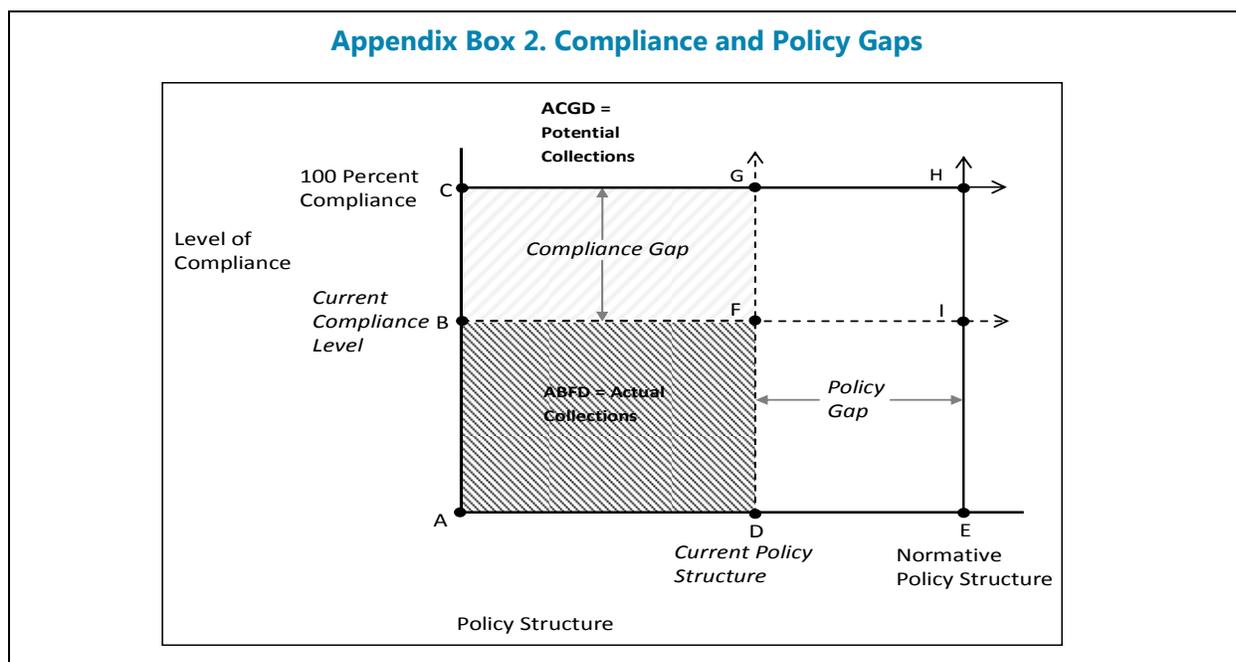
Sources: OECD (2013a), CASE (2014).

Appendix XI. New Tools for Improving Revenue Administration

A. RA-GAP—Quantifying and understanding compliance gaps

Analytical Framework

The overarching framework is one in which a gap arises between actual receipts from some tax and receipts under some perfectly enforced benchmark tax system. In the case of the VAT, for instance, the natural benchmark is a tax levied at a single rate on all consumption. This overall gap can then be decomposed into elements relating to (a) imperfect compliance with the current tax system—the compliance gap; (b) deviations of current tax rules from the benchmark—the ‘policy gap.’¹⁴³ This approach makes possible a unified assessment of enforcement issues and those related to tax expenditures. It is applied in IMF (2010), for instance, to conclude that in many advanced economies it is the policy gap that is the key source of forgone revenue, whereas in many emerging economies it is the compliance gap that is the primary concern.



Designing a Gap Estimation Framework

There are many potential ways of estimating tax gaps, as outlined in Box 1. That used in any specific case should make the best use of the best available data. In some cases, it may be necessary to use a variety of methodologies for different components of the tax gap for a single tax. There are five key criteria RA-GAP checks to ensure that the various models and methodologies used to estimate the compliance gap are effective. They should:

¹⁴³ This framework is elaborated in Keen (2013b).

- *Cover all potentially taxable activity and all potential taxpayers* for the tax concerned.
- *Account for all potential forms of non-compliance.*
- *Not overlap* in coverage of the base, taxpayers, or types of non-compliance—or it must be possible to control for the overlap.
- *Be consistent* in the way potential revenues and actual revenues are compiled: for instance, the accounting method for reporting actual revenues may not be consistent with the way the estimate of potential revenues has been constructed.¹⁴⁴

RA-GAP aims to go beyond providing a single number for the compliance gap. It provides an estimate for the overall tax gap, which is decomposed into the policy gap and the compliance gap; this provides context for evaluating the relative importance of the two. The compliance gap is then further decomposed into an assessment gap (the difference between the total amount of tax assessed and the potential tax) and a collections gap (the difference between the amount of tax assessed and that actually collected); this provides some context for how the administration needs to address the gap. In addition, for the VAT, the methodology that RA-GAP employs in estimating the compliance gap allows for a decomposition of the gap by sector, providing the RA with insight into where best to direct its efforts to close the gap.

Current Status

The program is currently focused on helping countries estimate and understand their VAT compliance gap. Reports on Estonia (2014) and Uganda (2014) are publicly available (IMF 2014c,d). The program also works with countries in assessing and evaluating their own current methodologies, as for instance in the U.K. (IMF 2014b). Extensions to other taxes are currently being developed, the aim being to assist countries in estimating compliance gaps for all major taxes.

B. RA-FIT

Objectives

The central purpose of RA-FIT is to enable revenue administrations to monitor the performance of their core operations more effectively. These data—which are input into a web-based platform—are both quantitative and qualitative, and include a mix of baseline and profile data, volumetrics, inputs, and performance-related data. Once gathered, the information will be analyzed and made available to participating countries and TA partners/donors with a legitimate interest, through an online dissemination platform.

¹⁴⁴ Typically a pure accruals based compilation of actual revenues is the most appropriate measure for actual revenues to employ in gap estimation. Using an accruals based measurement of revenue ensures that revenues are all attributed to the tax periods on a consistent basis, and that period is the same as that used in the construction of the estimate of potential revenue.

RA-FIT began as a response to the need for standard data to help RAs in low income countries better assess and track their performance. It also responds to a request from the G-20 for international organizations to establish objective measures to track progress in the capacity improvement of RAs in low income countries,¹⁴⁵ and aims to systematize the large quantities of tax and customs administration data collected by international organizations.

Lessons from the first round

The first round of data collection under RA-FIT, in 2012, gathered revenue administration data, for the first time, for more than 80 low and middle income countries. These data, when combined with the collection efforts of CIAT, IOTA, the OECD and the WCO, will enrich understanding of revenue administration globally and support, and provide a much firmer empirical basis for recommendations to improve RAs' efficiency and effectiveness.

The quality of data gathered in Round 1 of RA-FIT was variable and has its limitations (with a quite small sample size, for instance, in some income groups and for some questions). Indeed the difficulty many RAs experienced in providing basic operational data, though not unexpected, is a clear indication of the progress needed—which the RA-FIT process itself will help catalyze.

Despite these limitations, the first round has already helped identify a number of areas requiring attention in many countries, some of them—as in Figures 6 and 12—highlighted in the main text.

Current Status

The RA-FIT initiative has been deployed as an online, web-based platform for Round 2, which is implemented in partnership with CIAT and the WCO. The tax part was launched in May 2014; the customs part will be launched in early 2015.

Other international organizations gathering revenue administration data have expressed an interest in joining the RA-FIT platform. On October 24, 2014, the IMF, CIAT, IOTA and the OECD signed a letter of intent to establish a common platform to collect data concerning tax administration.

C. TADAT

Purpose

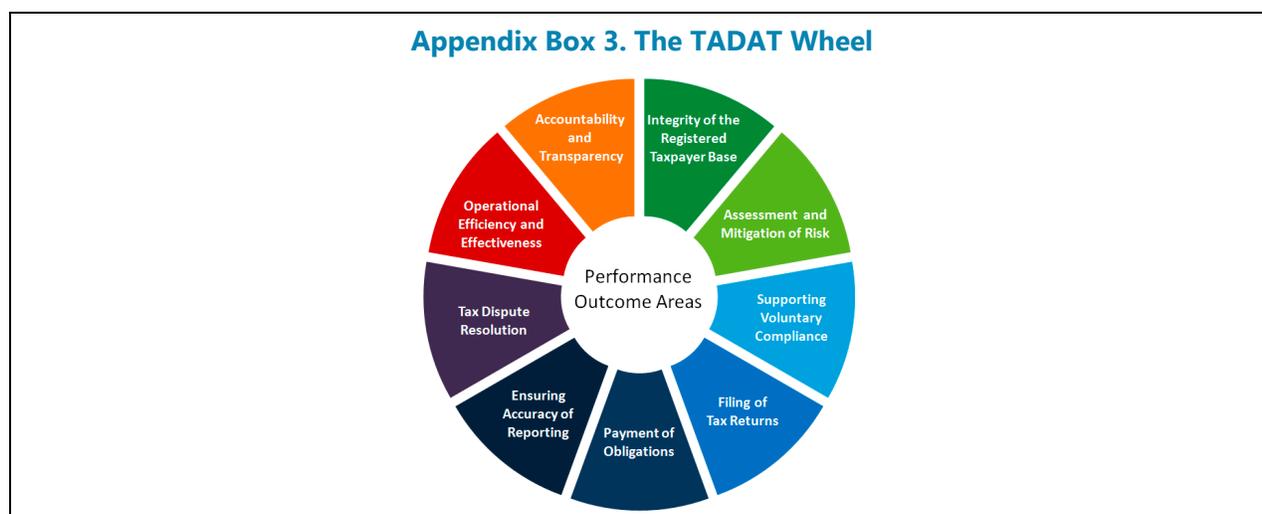
TADAT is designed to deliver an objective and standardized assessment of the most critical outcomes of any country's system of tax administration, pinpointing relative strengths and weaknesses. This will help stakeholders form a shared vision of overall reform priorities, key objectives, and sequencing of reform steps. It should result in better reform outcomes, with better coordination among stakeholders resulting in faster and more efficient implementation of reforms. Periodic re-assessments, say every 3–5 years, will provide a basis for ascertaining reform results.

¹⁴⁵ See IMF and others (2011).

TADAT was developed to parallel a similar tool that assesses the quality of public expenditure management: the Public Expenditure Financial Accountability (PEFA) tool, housed at the World Bank.

Structure

While the assessment tool is still being finalized—and will be released for public comment early in 2015—the intention is to focus on the nine key performance outcome areas shown in the “TADAT wheel” (Appendix Box 3). The assessment of these is based on 26 high-level indicators, built on around 52 dimensions. Aggregating the scores given for each dimension gives scores for each indicator.



Current Status

TADAT has been developed jointly with several stakeholders: representatives of donor countries and organizations; staff within the Fund, the World Bank, and other international organizations; representatives from organizations involved in improving tax administration or representing national tax administrations (CIAT, IOTA, the African Tax Administrators Forum, (ATAF)); and tax administration experts from several RAs.

With support from donors,¹⁴⁶ the tool is implemented by the TADAT Secretariat, located in FAD. Delivery will be by suitably trained experts, with the secretariat ensuring quality control. The framework has been tested in four pilot assessments, and more are planned through summer 2015.

¹⁴⁶ TADAT partners include the: European Commission, German Federal Ministry for Economic Cooperation and Development (BMZ), IMF, Japanese Government, Ministry of Foreign Affairs of the Netherlands, Royal Norwegian Ministry of Foreign Affairs, Swiss State Secretariat for Economic Affairs, U.K. Department for International Development and World Bank.

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