INTERNATIONAL MONETARY FUND

Revenue Mobilization in Developing Countries

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ABBREVIATIONS AND ACRONYMS

CEMAC	Communauté Économique des États d'Afrique Centrale
CIT	Corporate Income Tax
EAC	East African Community
ECOWAS	Economic Community of West African States
FAD	Fiscal Affairs Department
IT	Information Technology
HR	Human Resources
LIC	Low-Income Country
LMIC	Lower Middle-Income Country
LTO	Large Taxpayer Office
PIT	Personal Income Tax
RA	Revenue Authority
SACU	Southern African Customs Union
SIC	Social Insurance Contributions
SOE	State-Owned Enterprise
TPC	Tax Procedures Code
VAT	Value-Added Tax
UMIC	Upper Middle-Income Country
WAEMU	West African Economic and Monetary Union
WCO	World Customs Organization
WTO	World Trade Organization

EXECUTIVE SUMMARY

The Fund has long played a lead role in supporting developing countries' efforts to improve their revenue mobilization. This paper draws on that experience to review issues and good practice, and to assess prospects in this key area.[1]

The need for additional revenue is substantial in many developing countries, but improving revenue mobilization has importance beyond that. Requirements for relieving poverty and improving infrastructure are substantial: achieving the Millennium Development Goals, for instance, may require low-income countries to raise their tax-GDP ratios by around 4 percentage points (United Nations, 2005). But the quality of measures also matters: increasing revenue by further taxing readily compliant taxpayers can worsen distortions and perceived inequities; conversely, reducing reliance on trade taxes can bring real structural gains that outweigh short-term revenue difficulties. More fundamentally still, the centrality of taxation in the exercise of state power means that more efficient, fairer, and less corrupt tax systems can spearhead improvement in wider governance relations.

Experience shows that progress can be made—given strong political will. There have been disappointments: in some areas of advice (such as early espousal of the global income tax) and in country practice (the use made of improved IT systems, for instance). But several countries have significantly improved their tax performance over relatively short periods, and econometric analysis (comparing performance in differing countries) suggests that many lower-income countries could increase their tax ratios by 2–4 percent of GDP. A common element of success stories is sustained political commitment at the highest levels: even administrative reforms can prompt strong opposition. Reforms must be entrenched, however, to avoid subsequent slippage.

Significant additional revenue can be raised in many developing countries by established methods, adapted in emphasis and sequencing to countries' circumstances. There are important commonalities in reform strategies recommended by the Fund and others—and in the challenges and opportunities that remain:

- Building administrations that effectively limit incentives and opportunities for rent-seeking and inappropriate behavior, and are capable of implementing the voluntary compliance needed to extend the tax base, including by risk management (allocating resources where the risks to revenue are greatest) and taxpayer segmentation (tailoring intervention and services to the distinct challenges posed by different groups, starting with a large taxpayer office)—here much remains to be done, but positive results have been seen;
- Adopting and making readily available clear laws and regulations embodying strong taxpayer protection—the main problem is often implementation;

[1] The paper does not address the taxation of natural resources: Appendix VII provides an overview of issues and advice, which are treated at length in a recent Fund book (Daniel, Keen, and McPherson, 2010).

- Eliminating exemptions that forego revenue to little useful end—these are often still substantial and can amount to several points of GDP;
- Implementing a broad-based VAT with a fairly high threshold (the turnover level at which registration for the tax becomes compulsory)—in lower-income countries where VAT performance is weakest, base-broadening and improved compliance might raise something in the order of an additional 2 percent of GDP;
- Establishing a broad-based corporate income tax, at rates competitive by international standards—more has been done on the latter than on the former, leaving signs of significant scope for base-broadening in many lower-income countries;
- Extending the PIT base, and ensuring a coherent treatment of alternative forms of capital income—still a major challenge;
- Levying excises on a few key items that are adequate to revenue needs and wider social concerns—these too have further potential in some countries;
- Implementing simple but coherent regimes for taxing smaller businesses—now receiving increased attention;
- Strengthening real estate taxes—minimal in many countries, but with potential to transform local government finance in the longer-term; and
- Developing capacity for tax expenditure and wider policy analysis—impressive advances in some countries, but much still to do in others.

Protection of the poorest, including through basic public spending, is an overarching concern. The fairness of a tax system cannot meaningfully be assessed in isolation of the spending it finances: a regressive tax may be the only way to finance strongly progressive spending. This makes it important not only to examine the distributional impact of tax reforms themselves but also to identify specific spending measures to address any concerns they raise. Better persuading taxpayers of the value of the public spending financed by the taxes they pay, including by improving the management and quality of that spending, can further bolster trust in and compliance with the tax system.

There are emerging concerns and issues requiring greater attention. Challenges in international taxation and from regional integration are intensifying, and call for closer cooperation on tax matters—including with advanced economies—in both policy and administration, as well as further support for capacity building. Continued trade liberalization will put pressure on revenue in many lower-income countries. Scope to meet these and other revenue needs by simply raising standard VAT rates is becoming limited, so the potential lies largely in better improving compliance and scaling back preferential treatments. Not least, and important too for the wider legitimacy of tax systems, greater efforts can be made—requiring political will as much as technical capacity—in taxing elites and high-income/wealth individuals.

I. INTRODUCTION

1. **Strengthening revenue mobilization in developing countries has long been a central concern of the Fund, and its advice has been highly influential.** In its program, surveillance and—the main perspective here—technical assistance (TA) work, the Fund has for many years supported developing countries' efforts to build more effective and fairer tax systems. Though far from the only provider, the Fund has come to occupy a leading role in advising on tax matters in these countries (Appendix I). Its advice has been keenly felt by Fund members, closely watched by academics and CSOs, and sometimes controversial.

2. **Interest in enhancing revenue mobilization in developing countries is increasing**. Most developing countries are emerging from the crisis with their fiscal prospects broadly intact (IMF, 2010a), but with many still facing a fundamental need to raise more revenue from their own tax bases. Achieving the Millennium Development Goals, for instance, has been suggested to require increasing domestic revenues in low-income countries (LICs) by around 4 percent of GDP (United Nations, 2005). Infrastructure needs are also extensive (IMF, 2010a), and there are climate challenges to address. Advanced economies are increasingly focused on improving their support of these revenue mobilization efforts. In this context the G-20 leaders called in November 2010 for the Fund, with others, to report on key issues in strengthening revenue mobilization.[2]

3. **This paper reviews experience in strengthening tax systems in developing countries—focusing particularly on lower-income countries**.[3] It draws lessons, for both policy and administration, from analytical and TA work,[4] discusses core elements of Fund advice, and assesses prospects for strengthening revenue mobilization in the face of emerging challenges.[5]

II. AIMS, TRENDS, AND POSSIBILITIES

4. **This section addresses overarching issues**: the objectives of revenue mobilization, similarities and differences in the challenges faced by developing countries (and the implications

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[2] Other signs of strong donor interest include the creation of two trust funds to support the Fund's tax TA, the emphasis on the issue by the European Commission (2010), the creation by the Development Assistance Committee of a Task Force on Tax and Development, and of the DfID/NORAD-sponsored International Centre for Tax and Development.

[3] Meaning, broadly speaking, low- and lower middle-income countries (in the World Bank classification, per capita income below $995 and between $996–3,945); for perspective, indicators for upper middle-income ($3,946–12,195) and advanced countries are also sometimes reported below.

[4] Several recent surveys bear on these issues: African Development Bank and OECD (2010), Bird (2008), ECORYS (2010; prepared for the Dutch Ministry of Finance), Gordon (2010), Keen and Simone (2004), and Chambas (2005), and Keen and Mansour (2010a, b) on sub-Saharan Africa.

[5] This paper will inform the Fund's contribution to the work requested by the G-20.

for reform strategies), recent trends, and the scope to raise more.

A. Objectives and Context

5. **Raising revenue is the core objective of any tax system, but revenue is not the sole concern.** The spending needs of developing countries are substantial, and both greater and, ultimately, more sustained than can be met from foreign assistance.[6] In low-income countries (LICs) the revenue imperative is stark: over 20 still have tax ratios (tax revenue relative to GDP) under 15 percent.[7] But there are other considerations:

- The effects which theory suggests the level and composition of taxes can have on ***efficiency and long-run growth***—via investment, human capital acquisition, and innovation—have proved hard to identify robustly. For OECD countries, Arnold (2008) concludes that property taxes are least damaging for growth, followed by consumption taxes, the personal income tax (PIT), and the corporate income tax (CIT): this is as theory suggests, with taxation of capital income having a potentially strong impact on investment. But there has been much less work for developing countries, and what there is tends to find no significant effect from either the overall level of taxation or the direct-indirect tax mix (Adams and Bevan, 2005; and Martinez-Vasquez, Vulovic, and Liu, 2009). Lee and Gordon (2005) find lower CIT rates are associated with faster growth, including in non-OECD countries, though other tax variables are insignificant. Evidence that trade liberalization fosters growth (Wacziarg and Welch, 2008) suggests a potential impact from reduced reliance on trade tax revenue. Other effects likely operate through the considerable volatility of tax revenue in many developing countries (there being some evidence that this depresses public investment: Ebeke and Ehrhart, 2010), stressing the value of diversifying revenue sources;

- ***Distributional effects*** are important in themselves (poverty relief is a major motivation for raising revenue in the first place) and for their impact on compliance (likely damaged if taxpayers perceive others, including all-too-often some elite, as paying too little). Two points are critical in assessing these effects. First, what ultimately matters is not the impact of any tax instrument in isolation, but the combined impact of all such measures—and of the spending they finance. A regressive tax may be the only way to finance strongly progressive public expenditure; conversely, where the ability to target spending is relatively weak, progressivity on the tax side is a greater concern. Second, those who bear the real burden of any tax may not be those responsible for remitting it to the government. To the extent that capital is internationally mobile, for instance, a small country cannot affect the after-tax return required by foreign investors: trying to do so will simply reduce the income of immobile factors (local labor, most likely). Judging

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[6] Support to adapt to and help the mitigation of climate change may be an exception, to the extent that it is seen as compensation for past emissions in advanced economies.

[7] This common but arbitrary benchmark appears to date back to Kaldor (1963).

where the real incidence of taxation falls is difficult in advanced economies, and no easier in the different context of lower-income economies; and

- Taxation is a defining feature of state power, making its improvement a key aspect of ***state-building***. This consideration, which stresses the view of tax reform as an investment central to wider institutional development, has been prominent in recent policy initiatives.[8] What remains unclear is what its increased recognition means for tax advice and policy.

B. Similarities, Differences, and Strategies for Reform

6. **Developing countries face many common tax challenges.** Most are qualitatively the same as in advanced economies—but much larger.[9] They include:

- Dealing with sectors that are '***hard-to-tax***' everywhere (small businesses, including small farmers, professionals, and—in some cases—state-owned enterprises), but especially where administrative capacity and compliance habits are weak. 'Informality' is extensive in developing countries—perhaps 40 percent of GDP on average, up to 60 percent in many.[10] But this is arguably not in itself the problem:[11] micro traders may be 'informal,' for instance, but are also likely to have income and sales well below any reasonable tax threshold; and much of the most egregious evasion is by qualified professionals. The issue is best framed as one of ***non-compliance.*** Estimates of non-compliance are scarce, but Value-Added Tax (VAT) 'gaps'[12] have been put at 50–60 percent in Indonesia and Mozambique, for instance, compared to 13 percent in the United Kingdom;

- ***Weak revenue administrations***, ***low taxpayer morale, and poor governance***—closely linked—though not unique to lower-income countries, are especially entrenched there. Corruption indicators are strongly associated with low revenue (Attila, Chambas, and Combes, 2008)—indeed corruption functions like a tax itself, and likely a particularly regressive one—as are other governance indicators (weak rule of law, political instability). Causation can run both ways, and governance problems are not unique to revenue administrations and nor can they be fully addressed in isolation from, for

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[8] See for instance OECD (2008) and Everest-Philips (2008).

[9] Gordon and Li (2009), Heady (2002), and Keen and Simone (2004) discuss the distinct tax-relevant features of developing countries.

[10] See Schneider, Buehn, and Montenegro (2010).

[11] The term is used loosely here, and indeed—one reason to prefer the focus on non-compliance suggested here—is rarely well-defined (Kanbur, 2009); Keen (2011) elaborates.

[12] VAT revenue with full compliance less actual VAT revenue, relative to the former; the figures are from Silvani et al. (2008) and Castro et al. (2009).

example, judicial reform. Nevertheless, the centrality of tax collection as an exercise of state power gives governance issues in tax collection a particular importance;

- Heavy reliance on receipts from ***multinational enterprises***, whose adroitness in tax planning poses increasing challenges, and, in many cases, difficulties in dealing with ***state-owned enterprises*** that have been known to abuse or simply ignore the tax system;

- ***Shallow use of financial institutions***, a valuable source of tax-relevant information;

- Pressures on revenue from ***trade liberalization***, including ***regional integration,*** and from intensifying international ***tax competition***; and

- Dealing with ***international services***, increasingly important but—since they cannot be intercepted at the border—hard to tax, especially where administrations fail to progress beyond heavy reliance on physical controls.

7. **But there are also significant differences among developing countries**. Probably the most important is in natural resource wealth. Geography also matters. Small islands are better able to impose taxes at the border than are landlocked countries; this may explain both why they have been less inclined to adopt a VAT[13] and why, when adopted, it tends to perform well.[14] Post-conflict countries, with shattered administrations and tax bases, face particular difficulties, as do successor states eager to establish investor-friendly reputations (Appendix II provides case studies). History also has a role: constitutional restrictions dating to the 1935 Government of India Act still powerfully constrain VAT design in both India and Pakistan, for instance, and there is evidence that differing legal traditions, reflecting colonial pasts, are associated with different revenue performance.

8. **Fund advice reflects both these similarities and the differences**. A common criticism is that Fund tax advice is 'one size fits all.'[15] Some tax practices are indeed close to universally appropriate: establishing firm control of the largest taxpayers, for instance. Beyond that there are certainly commonalities in broad strategies for reform (Box 1), reflecting the generality of underlying economic and organizational principles. But the timing, relative importance, and precise design of appropriate tax reform measures varies substantially. Advice has repeatedly stressed, for instance, the need for substantial administrative reform in advance of VAT adoption. Sometimes addressing severe non-compliance is an overwhelming priority, leading to a focus on strengthening enforcement actions before moving to medium-term reforms. And countries' idiosyncrasies affect the substance of advice. Substantial re-exporting in The Gambia, for instance, gave pause before recommending a VAT (given the difficulties of exporter

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[13] Keen and Lockwood (2010).

[14] Chapter 4 of Ebrill et al. (2001), and Aizenman and Jinjarak (2008).

[15] As for instance in Stewart and Jogarajan (2004) and Marshall (2009).

refunding, discussed below); and constitutional constraints have affected the design and implementation of effective VATs. Political and social views on the proper degree of progressivity vary widely, the traditional role of the external advisor then being to describe and assess alternatives.

Box 1. Common Elements of Strategies for Reform

Fund advice to developing countries has commonly stressed:

- Establishing effective revenue administrations[16] making proper use of withholding and third-party information, and capable of building on these to implement voluntary compliance and self-assessment—taxpayers calculating and remitting tax themselves, subject to audit and penalties—both as a prerequisite for expanding the tax base and to help address corruption.
- Assuring strong control of the largest taxpayers, in a dedicated office (and with specialized units for the most critical sectors), as a key step towards introducing risk assessment and fuller taxpayer segmentation.
- Implementing policies and procedures that limit opportunities for rent seeking and help identify and punish inappropriate behavior in the revenue administration.
- Designing and applying forceful and efficient strategies to deal with non-compliance.
- Ensuring that laws and regulations are reasonably simple, readily available, coherent across taxes, and provide good taxpayer protection (including effective appeals procedures).
- Replacing inefficient production or sales taxes, after adequate preparation of both the administration and taxpayers, by a simple VAT—including to catalyze administrative reforms.
- Levying a VAT on a broad base, with a high threshold (the level of turnover at which registering for the tax becomes compulsory) and avoiding multiple rates, to realize its potential as a reasonably efficient source of government finance.
- Coordinating any prospective loss of trade tax revenue with measures to replace it from domestic sources.
- Avoiding exemptions—under all taxes—that jeopardize revenue and good governance, are hard to reverse, and generate no clearly offsetting social benefit.
- Removing minor taxes and fees that are inordinately costly to comply with and administer.
- Building CITs that are simple (in their depreciation and carry forward provisions, for instance) and sufficiently broad-based to allow statutory rates competitive by international standards, with effective tax rates that are reasonably low and uniform across investments.

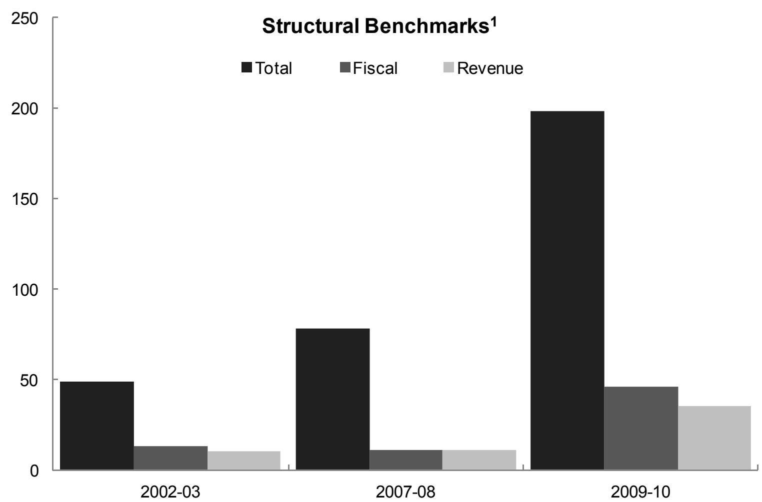
[16] The term encompasses both domestic tax and customs administration.

Box 1. Common Elements of Strategies for Reform (continued)

- Strengthening capacity to deal with profit-shifting by multinationals, while recognizing the extreme difficulty of doing so.
- Extending the coverage of the PIT (particularly through inclusion of smaller businesses and professionals) and establishing coherent taxation of capital income, with an effective rate structure consistent with the authorities' distributional preferences.
- Exploiting the potential for regional cooperation, in both policy and administration—particularly on business taxation and excises—to limit mutually damaging competition.
- Balancing royalties, auctioning and profit-related charges in taxing natural resources.

9. **Fund-supported programs are making increasing use of structural revenue measures as part of government-owned strategies to increase economic growth and reduce poverty** (Figure 1). These are often informed by TA advice, and might involve, for instance, the introduction of an LTO or removal of exemptions. There is evidence that IMF-supported programs can improve tax performance by inducing reforms requiring strong political commitment (Brun et al., 2010).

Figure 1. Revenue-Related and Other Structural Benchmarks, 2002–10



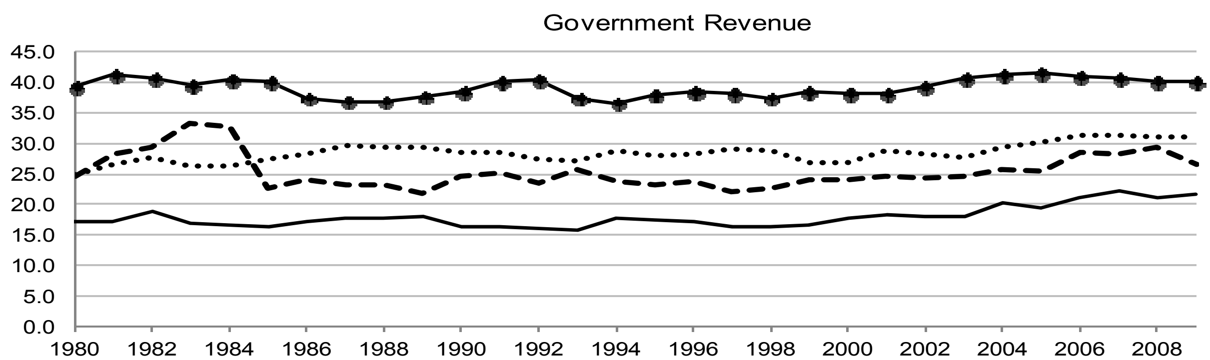
Source: MONA database.

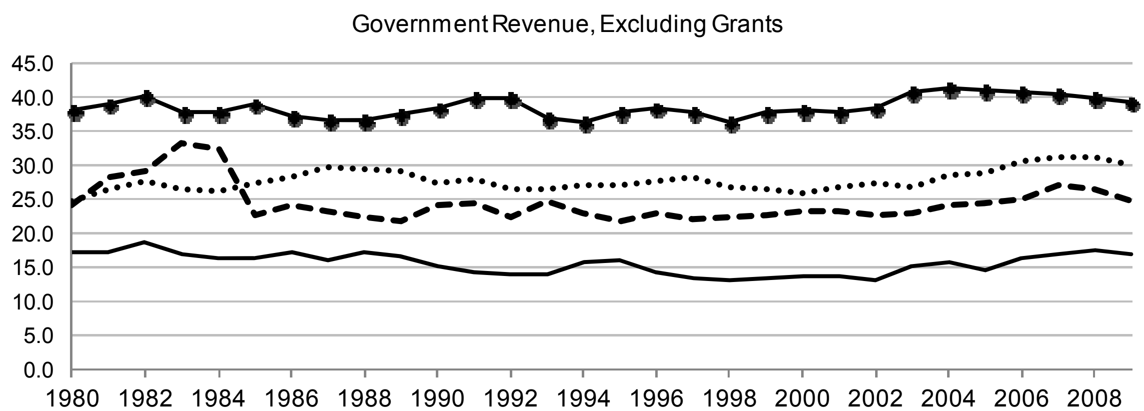
[1]Structural benchmarks can be legal, institutional or policy measures that are relevant for a program's macroeconomic objectives. e.g., Introduction of Tax Identification Number, Increase of VAT Threshold, Establishment of a Large Taxpayer Unit, Reduction/elimination of tax exemption.

C. Trends and Recent Experience[17]

10. **Revenues in lower-income countries (especially LICs) showed resilience through the crisis.** Figure 2[18] shows developments since 1980 in three measures of government revenue: total, excluding grants from abroad, and—the focus in the bulk of this paper—tax revenue (including social security contributions). The narratives naturally differ, but the buoyancy of revenues in LICs in particular is apparent.

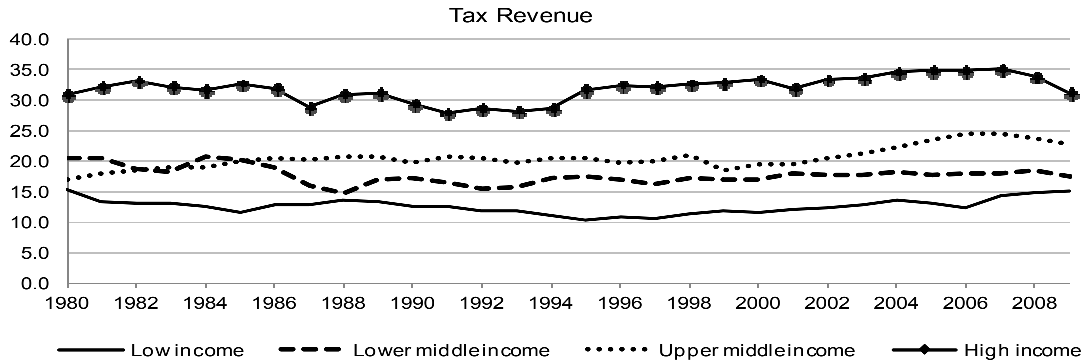
Figure 2. Trends in Total and Tax Revenue, 1980–2009
(In percent of GDP)





[17] The analysis in this paper draws on a mix of GFS, WEO and other data, from 1980 on—an eclecticism that reflects limitations of available revenue data for developing countries. Appendix III provides detail.

[18] Figures show medians (rather than means) to limit the impact of outliers and data gaps. 'Dynamic' income groups are constructed by ranking countries by income per capita at each date, and dividing them into four equal-sized groups: this avoids biases from classifying countries by income at any single date (using final income per capita, for instance, could exclude strong revenue performers that migrate to the LMIC group, giving an unduly pessimistic view of LICs as a group). Averages and/or categorizing groups by their final incomes, however, gives broadly the same conclusions as follow.



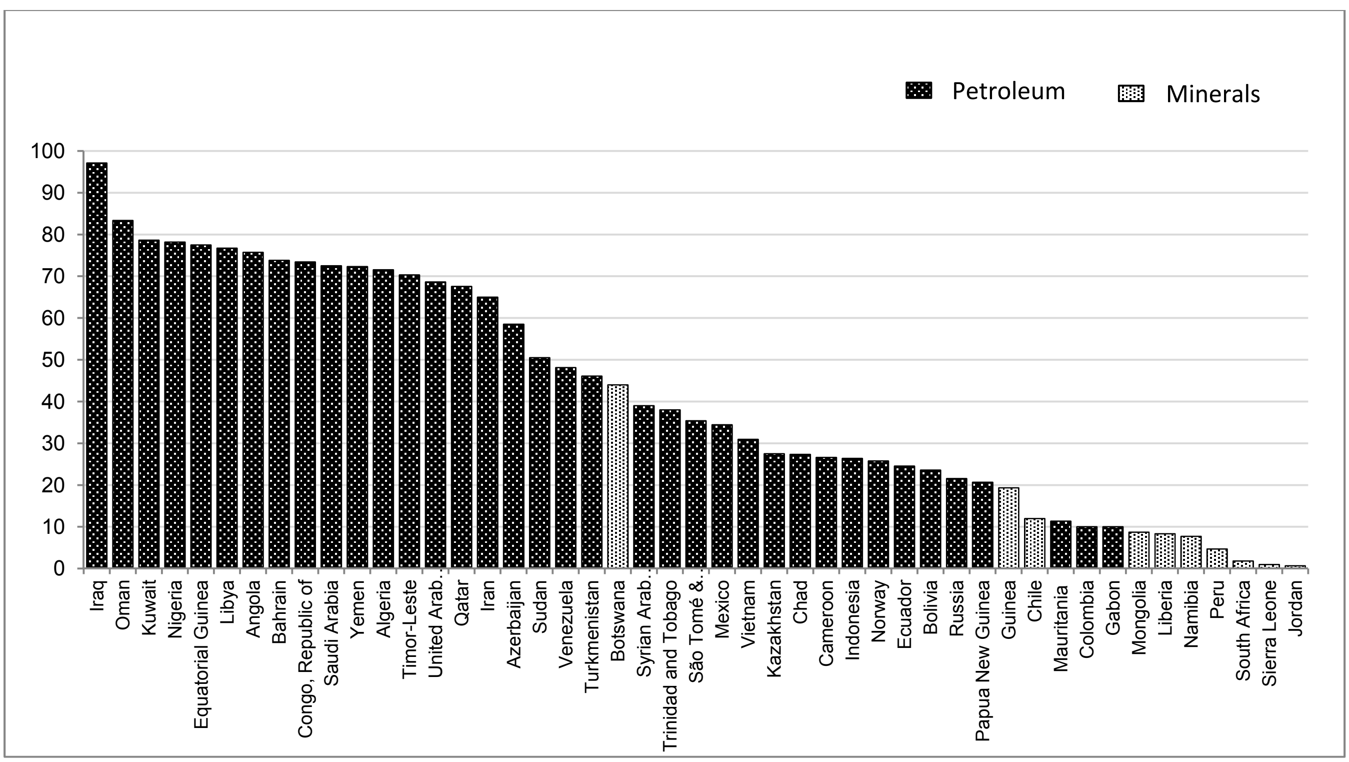
Source: IMF staff estimates.

Note: Group medians and dynamic income groups.

11. **Revenues from natural resources played an important role in the relatively strong performance of recent years, but were not the only factor.** Data on resource-related receipts are poor, but they loom very large in the fiscal situations of many countries (Figure 3). Keen and Mansour (2010) find that, within sub-Saharan Africa, revenue has performed more strongly in resource-rich countries. Figure 4, however—comparing experiences in resource-rich and other countries more widely—shows not only the massively greater volatility of receipts in the former but also that tax ratios have increased over recent years in non-resource countries too.

Figure 3. Receipts from Natural Resources, averages 2000–07

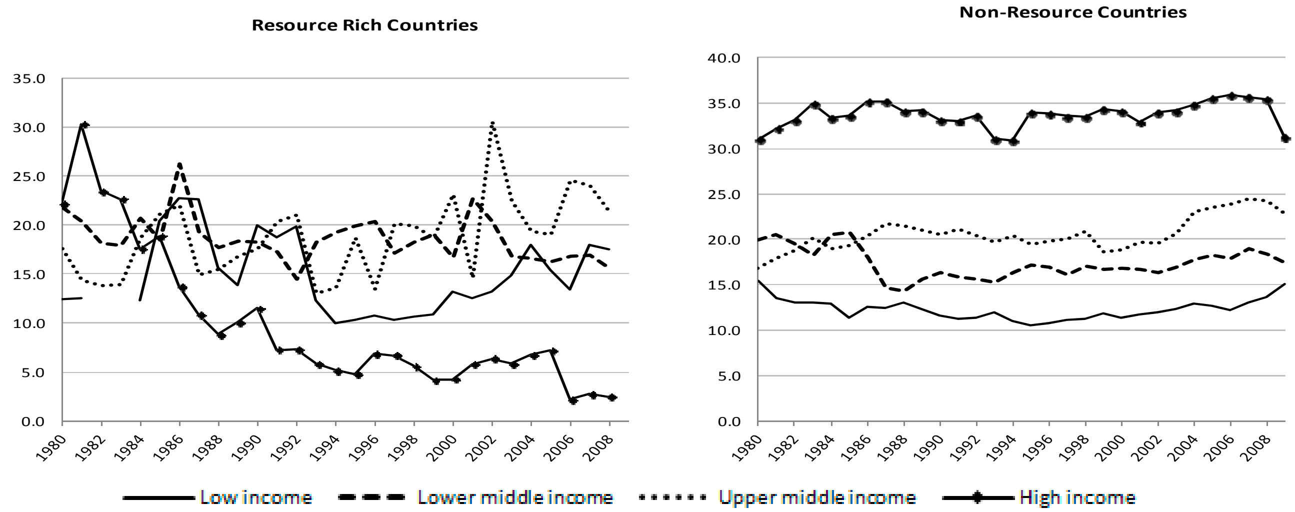
(selected countries, percent of government revenues)



Source: IMF staff calculations.

Figure 4. Tax Revenue Developments in Resource-Rich and Other Countries,1980–2009

(In percent of GDP)



Source: IMF staff estimates.

Note: Group medians and dynamic income groups; 'resource-rich' countries at each date are those with resource rents over 10 percent of GDP.

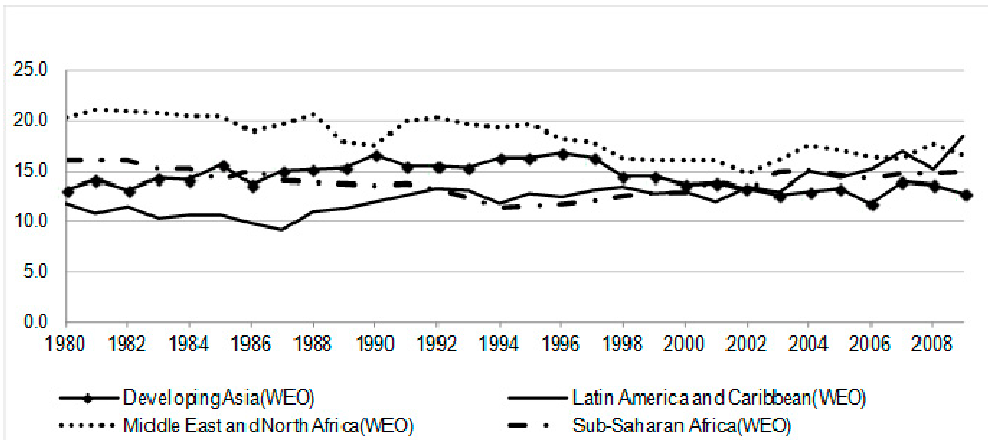
12. **There has been some increase in lower-income countries' tax revenues since the mid-1990s.** Regional experiences differ (Box 2) but, following stagnation or even decline, Figure 2 shows an increase in median performance. Comparing (LICs and LMICs) in 1990–95 and 2003–08, Figure 6 shows, more broadly, a marked increase in tax ratios. Over this period, five or so countries raised their tax ratios to above 15 percent.

13. **These developments in tax performance reflect increased revenue from the VAT, strong performance of the CIT and declining trade tax revenues** (Figure 7)—trends apparent since the early 1980s.

Box 2. The Regional Perspective

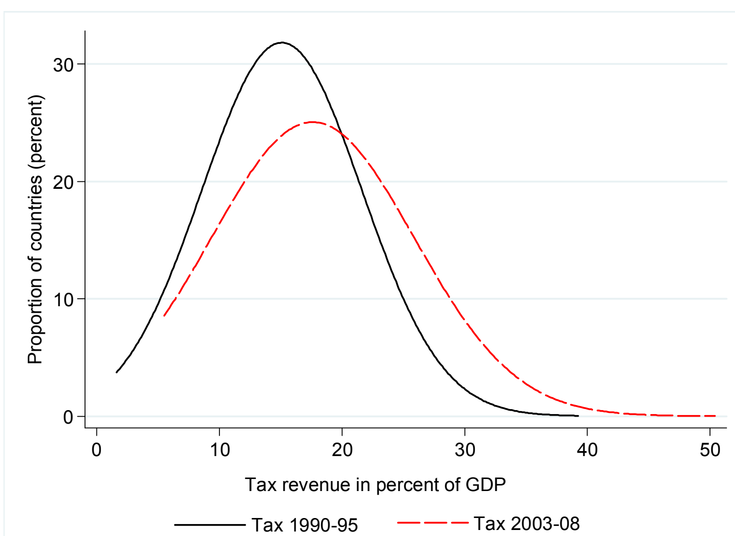
While the focus in this paper is on lower-income countries as a group, experiences have differed across regions. While sample size becomes more of a concern at finer disaggregation, Figure 5 suggests, for instance, that tax revenue performance has strengthened in sub-Saharan Africa since the mid-1990's but weakened in developing Asia.

Figure 5. Tax Revenue Developments by Region, 1980–2009



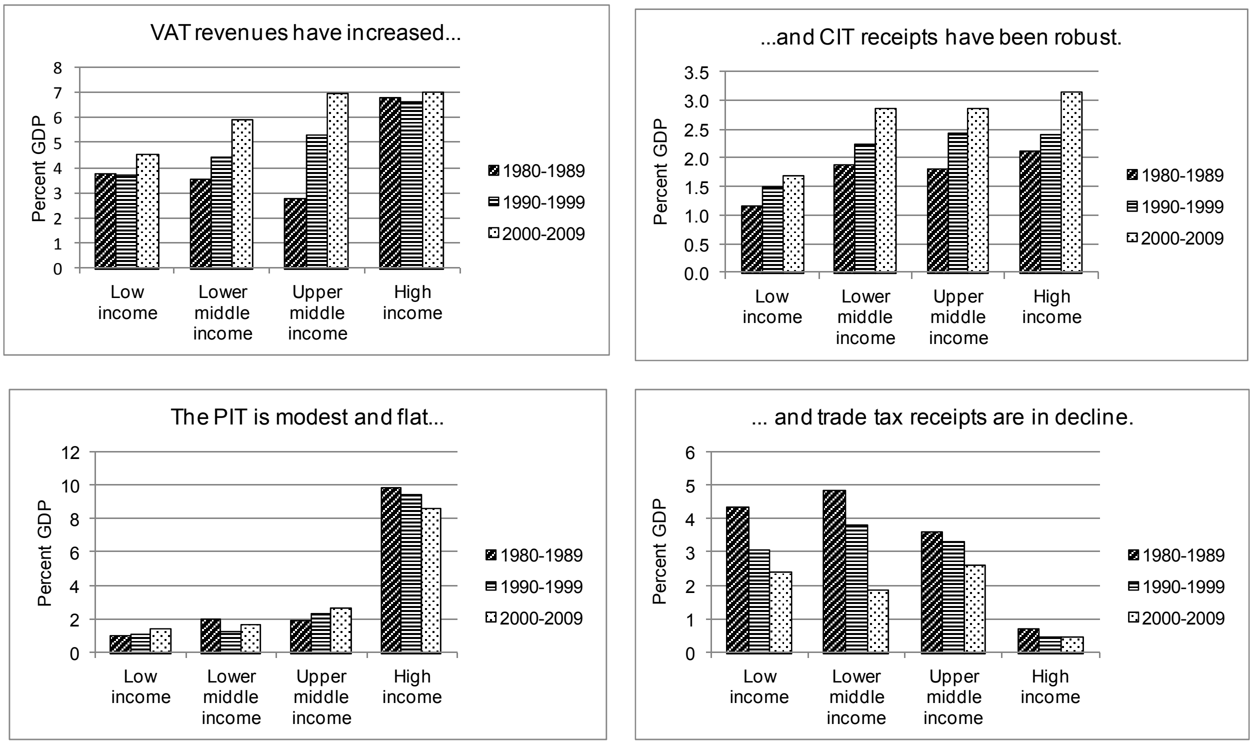
Source: IMF staff calculations.
Note: Group medians and (to ensure that the sample for one region is not affected by changes in the income classification of countries in other regions) fixed income groups.

Figure 6. Distribution of the Tax Ratio in Developing Countries, 1990–95 and 2003–08



Source: IMF staff calculations.
Note: Sample composed of low - and lower middle-income countries, using dynamic income groups.

Figure 7. Trends in the Composition of Revenues, 1980–2009
(In percent of GDP)



Source: IMF staff calculations.
Note: Group medians and dynamic income groups.

D. Assessing the Scope to Raise More Revenue

14. **Econometric work has linked revenue performance—the ratio of actual revenues to GDP—with a range of structural, developmental and institutional features** (Appendix IV). Many (such as the agricultural share, past political instability) are largely exogenous to tax decisions, especially in the very short-term. The impact of resource wealth and aid on revenue performance in this context has attracted particular attention (Box 3).

Box 3. Aid, Resource Wealth, and Revenue Mobilization

The empirical evidence on whether some kinds of aid might displace own revenues is mixed. Over 2001–06, aid in recipient countries averaged around 4.4 percent of GDP; in 25 countries it exceeded half of all tax revenue. Such receipts could displace domestic revenue-raising by reducing immediate needs and creating a disincentive to strengthen performance for fear of offsetting reductions in future assistance. In practice, empirical findings vary. Gupta et al. (2004), for instance, find that grants displace domestic revenue (almost fully where corruption is high) while loans are associated with stronger domestic revenues. Reviewing the evidence more widely, however, Moss, Petterson, and van de Walle (2006) stress the diversity of country experiences and empirical results. Better understanding of these links between foreign assistance and domestic revenues would help ensure that aid is provided in forms most supportive of developing countries' own tax reform efforts.

Box 3. Aid, Resource Wealth, and Revenue Mobilization (continued)

There are strong signs that oil revenues displace own taxation, and some that non-oil resource revenues do too. Bornhorst et al. (2009) find that an increase in hydrocarbon revenues of $1 displaces about 20 cents of non-hydrocarbon tax revenue. Results for sub-Saharan Africa[19] suggest a similar effect for all forms of resource wealth.

15. **Empirical estimates suggest that 'effort'—the ratio of actual revenues to potential[20]—is not low in all developing countries, but that significant additional revenue could be raised where performance is weakest**. Appendix V describes the methodology and reports—as illustrative of broad implications, not prescriptions—country-specific estimates of 'effort' (based on Pessino and Fenochietto, 2010). On average, effort is no lower in LICs.[21] Those with the lowest tax ratios, however, also tend to be those with the lowest effort. Of the 15 LICs and middle-income countries (LMICs) in the sample with tax ratios below 15 percent, for instance, 13 have estimated effort below their group median; raising it to that level would increase their revenue by an average of about 3 percent of GDP. This leaves open, of course, precisely how this can be done. Though details must be highly country-specific, the analysis in the next section gives a sense of where the possibilities may lie.

16. **Several countries have shown the feasibility of substantially increasing domestic revenue mobilization**. While some (such as Egypt, Pakistan) show little movement in tax ratios over extended periods, others have made impressive progress. Peru, for instance, increased its tax ratio from 6 to 13 percent over the 1990s and to around 17 percent now. Some have achieved sustained revenue increases of 4–5 percent of GDP over just a few years. Appendix VI details three cases of substantial progress: El Salvador, Tanzania, and Vietnam.

III. Issues and Lessons

17. **This section considers central issues of principle and lessons of experience in non-resource taxation**. Taxing natural resources raises more distinct and complex challenges than can adequately be addressed here: Appendix VII provides an overview.[22]

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[19] Not reported here; using the dataset of Keen and Mansour (2010).

[20] The terms 'performance' and 'effort' are often used synonymously, but the distinction made here, due to Lotz and Morss (1967), proves useful.

[21] Gupta (2007) reaches a similar conclusion.

[22] A fuller treatment is in Daniel, Keen and McPherson (2010).

18. **It is expositionally convenient to focus in turn on distinct aspects of tax design—Box 4 distills key lessons—but a holistic perspective is also needed**. Fundamental issues of administrative reform overarch all (and so are dealt with first); more specific administrative challenges are discussed in relation to the particular instruments then considered. And there are important design links between those policy instruments. Perhaps most fundamentally, one theme underlying much of the following discussion is that pressures on revenue from trade liberalization, regional integration and tax competition mean that, absent greater international coordination, the search for additional revenue will likely focus on relatively immobile bases—most obviously labor, consumption, and real estate.

Box 4. Key Challenges for Tax Reform

Priorities vary with country circumstances, but several lessons emerge. Relative to key elements of the reform strategies set out in Box 1, in many cases:

- Progress has been made in administrative reforms, but more on basic organizational structures than in developing and applying risk-management, and governance problems remain extensive;
- The VAT still has more obvious revenue potential than most other instruments, but realizing this requires expanding the base—by both policy change and improving compliance—rather than increasing standard rates;
- More systematic attention needs to be given to replacing revenue lost from trade liberalization;
- Incentives, including in free trade zones, continue to undermine revenue from CIT, which is any event likely to come under continued pressure from globalization in coming years;
- Profit-shifting by multinationals is an increasing concern; strengthening capacity and legislative frameworks is important, but, absent fundamental changes in international tax policies, there are no easy solutions;
- The PIT will likely remain poorly developed for some time, but movement to explicitly, and coherent, schedular structures can improve effectiveness and fairness;
- High-income individuals can be taxed more effectively by removing opportunities for avoidance and strengthening detection and enforcement;
- Establishing streamlined tax regimes for small businesses, and extending to them the methods of taxpayer segmentation, is unlikely to yield significant short-term revenue gains but is important for the longer-term development and perceived legitimacy of the tax system;
- Much remains to be done to make tax expenditure analysis routine;
- Capacity in tax policy analysis is often very weak, and a significant hindrance to better design and ownership;

Box 4. Key Challenges for Tax Reform (continued)

- Greater transparency and consultation on tax matters—not least, improving the effectiveness and visibility of public spending it finances—can promote the trust on which voluntary tax compliance rests; and
- Sustained political commitment from the highest level is essential for deep reform, which needs then to be entrenched to prevent backsliding.

A. Core Administration Reforms[23]

19. **Improving revenue administration is essential for enhanced and fairer revenue mobilization and for wider governance improvement; though success is hard to evaluate.** It may be too much to assert that "in developing countries, tax administration *is* tax policy" (Casanegra de Jantscher, 1990): tax policy sets the framework within which the revenue administration must operate. In practice, the distinction between administration and policy is often hard (and pointless) to make. But there is no doubt that weak and often corrupt revenue administration remains a fundamental barrier to effective and fair taxation, and to building wider trust between government and citizens. Key indicators—tax gaps, audit recovery rates and the level and pattern of arrears—can say much about the performance of tax administrations: developing the capacity to monitor and analyzing these, indeed, is a central reform aim. Evaluating the impact of administrative reforms on revenue itself, however, can be especially difficult, since they take time, are complex, and rarely lend themselves to experiment-type evaluation. In this respect, assessments are to some degree judgmental.

Accomplishments and trends

20. **Developing countries have implemented wide ranging administration reforms—more earnestly since the early 1990s—but with mixed success.** Some have made impressive advances (Mozambique, Peru, Rwanda, Tanzania, and Vietnam, for instance); others very little, reflecting conflict or governance issues (DRC, Haiti, Nicaragua, Sierra Leone). Sometimes progress has been followed by stagnation or decline (Guatemala, Honduras, Zambia), sometimes by a resurgence (Bolivia, Ghana, Uganda). There is no single formula for assuring major administrative improvement, but experience points to some key elements.

21. **Many major organizational changes have proved constructive, though there have also been mistakes.** Key improvements include moving away from duplicative and narrowly focused tax-by-tax approaches by implementing function-based organizational structures, establishing headquarters organizations to guide them, and integrating domestic direct and indirect tax management. Less successful—because less appropriate given their different tasks—

[23] Detailed regional assessments are in Crandall and Bodin (2005), Kloeden (forthcoming), and Zake (forthcoming).

have been attempts to merge operational (as opposed to managerial) tax and customs administration processes (Zimbabwe).

22. **Revenue authorities (RAs) have not always lived up to the high expectations held by some, but, with political will, can provide a framework for sustained progress.** The creation of RAs has been a widely-noted innovation over the last 10–15 years (they are now almost ubiquitous, for instance, in Anglophone Africa), and the Fund has supported countries that have chosen this path. RAs differ greatly, the essential being a semi-autonomous status intended to protect against political interference, give independence in operations and HR management, and enable flexibility in budgeting and operations. The high hopes sometimes expressed have not, however, been fully realized (Kidd and Crandall, 2006; Kloeden, forthcoming). The (mostly anecdotal) evidence is that managerial and staff capacity and practice often have improved (many examples in Latin America, Eastern and Southern Africa, Ghana, and The Gambia). But the disruption of instituting an RA often delayed reforming core tax administration functions: the integration of direct and indirect tax administration is only now getting underway in Anglophone Africa, for instance. And even substantial increases leave salaries dwarfed by the potential gain from corruption. As RAs now spread further, including with heightened interest in Francophone Africa, it is important to recognize that the aim of reform is to improve core administration functions, not just the vehicle for their delivery.

23. **Segmenting the taxpayer population has enabled a better allocation of administrative resources and facilitated risk-management approaches to compliance**. Large, medium, small, and micro taxpayers offer very different revenue possibilities and compliance concerns. As noted above, the need for focused attention on large taxpayers is now nearly universally accepted: given the highly skewed size distribution of firms, controlling the largest enterprises (usually a few hundred or thousand), can secure 60–80 percent of domestic taxes (more, in island economies). Securing prompt and appropriate tax payment from resource companies, financial institutions and telecom operators is a prerequisite for effective revenue-raising. While Africa trailed earlier adopters in Latin America (Argentina, Peru, and Uruguay), and the absence of integrated administration rendered some early efforts ineffective (Egypt, Kenya, and Uganda), an LTO is now the norm [though gaps remains, as in SACU (except South Africa)]. LTOs have accomplished much (Baer, 2002) and can likely do more: in resource taxation, for instance (as is beginning in Ghana, Uganda, and Mongolia), and by developing specialist units to deal with high wealth individuals. Their very effectiveness, however, can create difficulty: the ease of collecting from large firms may lead governments to disadvantage smaller companies (Auriol and Warlters, 2005), and the focus can distort competition and be perceived as unfair (factors contributing to the disbandment of Uganda's first LTO). The natural next step is to deliver similarly high-quality services and compliance enforcement to non-large taxpayers, with medium taxpayer offices emerging (in Indonesia and Francophone Africa) and some innovative small taxpayer approaches (Tanzania, and small taxpayer offices in Algeria and some Francophone African countries).

24. **Improved business processes, built on effective IT systems, are critical, but failures have been too common.** Better processes can reduce compliance costs and facilitate self-

assessment by simplifying taxpayer registration, filing and payment, audit, collection enforcement, and appeals. Automation of routine tasks, and, since the mid-2000s, the emergence of linkages between tax and customs IT applications, have also increased effectiveness. Less progress has been made in relation to ex post controls (audit, enforcement, appeals). IT systems in developing countries (whether home-grown or packages) are often inadequate, with many disappointing examples and far fewer moderately successful ones (as in Colombia, Peru, Rwanda, Tanzania). Poor results can arise from inadequate linkages with a broader reform strategy (perhaps being designed with only an isolated objective—administering the VAT, for instance—in mind, or with insufficient attention to restructuring basic processes), or conversely, from excessive ambition. High failure rates and costs in going alone on computerization could be mitigated through regional cooperation: the possibilities of this are emerging in East Africa, and through customs harmonization efforts in Central America.

25. **Simplifying tax laws and adopting tax procedure codes (TPCs) can ease both administration and compliance**. Harmonizing across taxes and simplifying key administrative provisions facilitates administration and compliance. TPCs are not always effective, whether because of an absence of accompanying measures (Paraguay) or hesitation to impose the strictest penalties. Where they are, however, they have strengthened administrative powers of investigation and arrears collection, while protecting taxpayer rights.

Challenges ahead

26. **Compliance costs remain high in many developing countries**. For the typical firm of the *Doing Business* exercise, time spent preparing and paying taxes exceeds 300 hours in developing countries, compared to under 210 for high-income countries. In the East African corridor Mombasa-Kigali, customs' handling costs per import container by road are \$0.13 per km, compared to \$0.05 per km along the Danang-Tak corridor in Asia (CPCS Transcom, 2010).

27. **Revenue administrations often suffer from under-resourcing, misallocation, and weak mid-level skills**. Revenue administrations need assurance of adequate resourcing, though rigid and legislatively-mandated financing by a fixed percentage of collections (such as the 3 percent in Ghana) has often failed in its intention to motivate stronger performance. Such resources as they have, moreover, need to be carefully deployed, avoiding fads (particularly technological) and distractions (excessive focus on minor non-tax revenues). Mid-level managerial and technical skills (though noticeably improved in Latin America) are often weak. Comprehensive skill studies to identify tax gaps, compliance trends, and needed improvements are rare, resulting in poor taxpayer services and inadequate or inappropriate interventions (including harassment).

28. **Coordination between domestic tax and customs administrations is generally poor.** Tax and customs administrations—and reforms to each—need to be closely coordinated. Economic activity straddles both domains, and customs has a critical role in managing VAT on

international trade: half or more of gross VAT revenue in developing countries is collected by customs.[24] Coordination, which can enable a more complete view of each taxpayer, is often weak: information on VAT collected on imports and zero-rated exports needs to flow from customs to tax administration for automatic cross-checking against VAT returns to identify anomalies and high-risk cases for audit consideration. Transactional customs and tax data provides opportunities for trend analysis by customs and tax managers to collaboratively and jointly (particularly within the framework of RA) develop compliance models and response strategies. All too often these opportunities remain underexploited.

29. **Addressing these concerns, and strengthening the legitimacy of the tax system, requires improving compliance management—dealing with the "hard-to-tax"—in parallel with consolidating good tax administration fundamentals.** Beyond the fundamentals—functionally structured organizations, taxpayer focus, self-assessment, simple IT-supported processes, ethical and competent managers and staff—is the need for clear strategies to address the most non-compliant businesses and individuals. Key elements include: understanding the nature of the taxpayer/trader population; identifying key compliance risks and how they arise (from weak laws and regulations, for instance, or administrative incapacity?); clarity on accountability for, and adequate resourcing of, compliance activities; and specifying performance indicators and potential corrective actions.

30. **Addressing non-compliance ultimately requires the hard work of routine administration**. Shortcuts often prove illusory. Amnesty schemes offering waiver of tax, interest and penalties, often with 'no questions asked,' can undermine compliance by creating expectations of more to come and doing a keenly-felt injustice to the compliant (Baer and Le Borgne, 2008). Limited voluntary disclosure programs, on the other hand, intended to achieve enduring tax compliance by partial waiver of penalties accompanied by strong enforcement action, can prove helpful. Other schemes that have proved problematic include requiring tax certificates for access to contract or bank accounts, which can simply invite forgery; and lottery schemes rewarding those holding VAT invoices, or allowing deduction against PIT of some items backed by invoice (intended to ensure that these are issued), which can result in tax administrations being presented with bags of invoices to sift through and verify. Some simple measures can help: requiring large payments to go through banking system, for instance, can provide useful information. But what is key is a program of routine but targeted and thoughtful intervention: Russell (2010), for instance, sets out a range of practical measures to address non-compliance by small businesses. Registration programs (increasing unannounced visits to market) and follow-up of stopfiling are critical to finding 'ghosts'—those (apparently) unknown to the tax administration—while education and welcoming taxpayer services, together with wider intelligence operations, are crucial for all aspects of compliance.

[24] Table 4.3 of Ebrill et al. (2001).

31. **Progress can be made in addressing corruption**. It requires strong leadership (political and managerial), institutional measures—strong and proactive internal audit and staff investigation functions, visible implementation of a code of ethics (including prosecutions)—and processes that limit rent-seeking opportunities (minimizing contact between taxpayers and tax officials). The Uganda Revenue Authority is an example of how (by, for instance, forceful measures to purge staff and re-hire, with zero tolerance for corruption) a once poorly-perceived institution is now cited as a model.

32. **Successful administrative reform requires sustained political will as much as technical capacity**. A sound reform strategy, technical understanding and adequate human resources are essential, of course, but so too is political commitment—from the highest levels and over substantial periods of time—to overcome resistance (not least from the revenue administration itself), ensure effective application of the laws, assure funding, and drive through complementary legal and tax policy changes. Where this has been present (in Peru, Ecuador, Guatemala, and Rwanda, for instance), progress can be substantial; where it is not, it will be minimal. A holistic approach is also needed: partial approaches often disappoint, as the potential revenue gain from investments in administrative improvement can be offset by base-narrowing exemptions (as perhaps in Uganda).

B. The Value-Added Tax (VAT)

33. **Most developing countries have now developed a VAT.** Since the early 1990s, the VAT has spread rapidly beyond advanced economies (Figure 8). Though not ubiquitous, it has become the norm and continues to spread (The Gambia and Syria, for instance, plan introduction, and it is also under consideration in the Gulf Cooperation Council). The Fund has been active in its promotion,[25] and VAT adoption and implementation continue to be a significant part of its TA.

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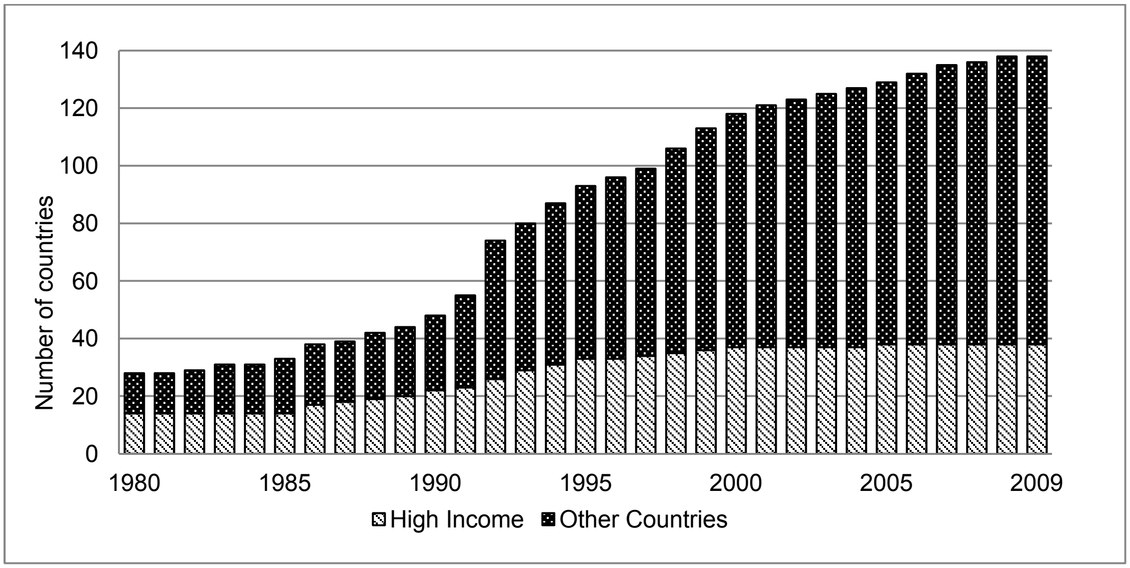
[25] The probability of adoption is significantly related to participation in a Fund-supported program (Keen and Lockwood, 2010).

Figure 8. The Spread of the VAT, 1980–2009



Source: IMF data.
Note: Figure shows the number of countries with a VAT at each date.

34. **Fund advice—largely followed—favors a broad base, single rate and fairly high threshold.**[26] These prescriptions (widely shared by others advising in this area)[27] aim to realize the core potential merits of the VAT: raising significant amounts of revenue in a way that does less damage to economic activity than alternatives, supports equity objectives, and is relatively simple to administer and comply with. They do not mean no exemptions:[28] some (for financial services charged for as a margin, government agencies, basic health and education) are common to most VATs, often on technical (though increasingly challenged) grounds. Others (for staple foodstuffs) are driven by political and distributional sensitivities. A relatively high threshold excludes traders with little revenue potential relative to the administration and compliance costs involved. IMF (2000) found these prescriptions have been widely followed, except perhaps in relation to the threshold: a single rate is much more common in LICs, for instance, than in higher income countries (Table 1),[29] though there are signs of pressure: the WAEMU VAT directive, for example, has been amended to allow a second rate.

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[26] Ebrill et al. (2001).

[27] Such as Bird and Gendron (2007). Theory [a recent review is by Crawford, Keen, and Smith (2010)], suggests that rate differentiation can play a useful role in easing distortions to market participation and (especially where better targeted instruments are weak) pursuing distributional objectives. In practice, however, it is hard to identify desirable forms of differentiation (beyond those handled by excises), while differentiation is costly to administer and comply with, and opens the door to special pleading.

[28] 'Exemption' means sales are not taxed, but (unlike 'zero-rating') tax on inputs is not refunded. Fund advice generally resists zero-rating other than for exports because of the difficulty of controlling refunds.

[29] This partly reflects the greater age of VATs in higher income countries: most new VATs have been single rate.

Table 1. VAT Features by Income Group

Income Class	Average VAT Rate	Number of strictly positive VAT rates	C-efficiency
Low-Income	16	1.28	38.0
Lower Middle-Income	13	1.94	46.6
Upper Middle-Income	15	1.90	51.6
High-Income	20	2.52	55.6

Source: IMF staff calculations.
Note: Rates as at end -2010; C-efficiency (the ratio of VAT revenue to the product of the standard VAT rate and consumption), discussed below, as at 2005 (for reasons of sample size).

35. **The VAT has established itself as a robust source of revenue, with signs that it has proved a relatively efficient instrument.** It typically accounts for around one-quarter of all tax revenue; and no country has ever removed a VAT without subsequently reintroducing it. Keen and Lockwood (2010) find that countries with a VAT generally raise more revenue than those without, all else equal, though the likely gain varies with countries' openness and income levels (being less, for instance, in smaller countries, presumably because tariffs are then an easy revenue source, and perhaps lower in sub-Saharan Africa than elsewhere).

36. **Close analyses commonly reach fairly benign conclusions on the distributional impact of the VAT, but more can be done to identify specific spending measures to allay concerns.** A proportional tax on all consumption is regressive relative to annual income, but this effect is mitigated by the common exemption of sensitive food and other items and (less noted) by the operation of the threshold: the latter either confers a competitive advantage on smaller and presumably less well-off retailers and service providers or enables their customers, likely amongst the poorer, a de facto exemption (Jenkins, Jenkins, and Kuo, 2006). The reach of the tax is also less in poorer rural regions than in urban centers. Reviewing the evidence, Bird and Gendron (2007) find the VAT to be generally mildly progressive or mildly regressive. Assessing the distributional impact of any tax requires, however, comparing it with some alternative. One possibility is that it replaces other revenue sources: Zolt and Bird (2005) conclude "the evidence is...that the VAT is likely on the whole to be less regressive than the trade and excise taxes it has replaced. Furthermore, in at least some developing countries, the VAT may be about as progressive as the income tax." Alternatively, if the VAT finances increased expenditure then the final distributional outcome can be progressive even with a broad-based, single rate VAT: the benefit of preferential rates/exemptions goes mainly to the better off (since they spend more on all items), so that the poor can benefit from their elimination and use of the additional tax revenue to finance targeted spending measures (Box 5). The effectiveness of the targeting instruments available is critical, but even the relatively blunt instruments available to developing countries can achieve much: Munoz and Cho (2004), for instance, using microdata to look at the combined tax-spending of a VAT in Ethiopia, find basic health spending to have a particularly strong effect. It remains the case, nonetheless, that precise measures to address any equity

concerns from proposed tax reforms—alleviating poverty is of course in itself a primary reason to impose these taxes—are often left unspecified.

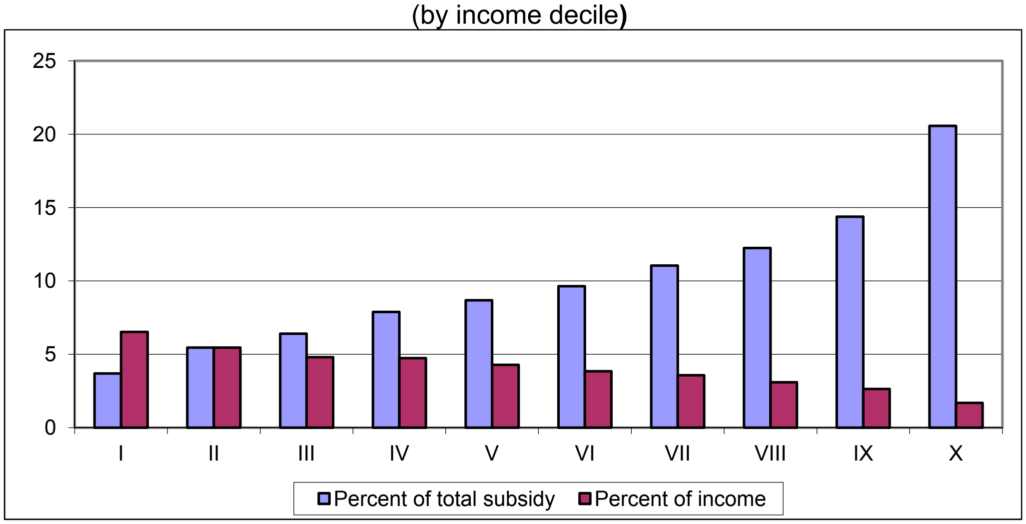
Box 5. The Distributional Impact of Exemptions and Reduced Rates

Reduced rates on (or exemption of) items particularly important to the poor are inherently limited as distributional devices: even if the poor spend a larger *proportion* of their income on some item, the better off may spend *absolutely* more (Sah, 1983; and Ebrill et al., 2001). The practical importance of this recurs in TA and other work: Figure 9 shows how the bulk of the subsidy implicit in domestic zero-rating in Mexico accrues to the better-off.

The question then is whether spending instruments can do a better job of protecting the poor. The Ethiopia case study suggests that even where spending instruments are quite weak, rate differentiation can be an inferior policy, and similar results have been found, for instance, for the Philippines (Newhouse and Zakharova, 2007). It remains the case, however, that the equity case for rate differentiation is generally stronger in developing countries than in advanced economies. Whether rate differentiation is desirable in any specific context depends on the government's equity objectives and the precise instruments available to it for protecting the poor.

Figure 9. Benefits from Zero-Rating Relative to Income Shares, Mexico

(by income decile)



Source: OECD 2007.

37. **Any tax encourages informality, but a VAT may be less harmful than alternatives.** A higher rate of VAT tends to increase informality, so the rate should be lower where informality is a greater concern. But other tax instruments, such as an income tax, also spur informality, and the VAT offers some advantages: if a trader's customers are registered for VAT,

it is advantageous for them to register too.[30] But 'bad' VAT chains can also form: if a trader's customer are not registered, better for them not to register either (de Paula and Scheinkman, 2006). It has also been argued that the VAT may deal with informality less effectively than tariffs, because unregistered traders will at least pay tariffs on their imports (Emran and Stiglitz, 2005). This though can be overstated: unregistered operators will incur unrecovered input VAT on imports just as they incur customs duty[31] and, unlike tariffs, the VAT also reaches informal operators on their purchases from compliant domestic firms.[32]

38. **VAT introduction can catalyze improvements in tax administration,** by using the VAT threshold for taxpayer segmentation (see Section G), introducing self-assessment and spurring implementation of functionally-organized tax administrations and IT reform.

39. **Flawed design and implementation undermines the effectiveness of the VAT in many developing countries—with refunds a particular problem.** Common difficulties include: low (sometimes, as in Nigeria, zero) thresholds (pressurizing tax administrations and diverting attention from higher value and riskier taxpayers); extensive exemptions and zero-rating (creating classification disputes and increasing compliance costs); inadequate preparations and public sensitization (making resistance more likely); and piecemeal implementation (as previously in Yemen, for instance). Refunding exporters requires balancing the risk of fraud against that of turning the VAT into a de facto export tax. This challenges all tax administrations, but significant and sometimes corrupt delays in refunding legitimate claims are commonplace in developing countries, and a major business complaint. Developing effective refunding procedures is time-consuming and difficult, but crucial: ITD (2005) and Harrison (2008) elaborate on how it can be done.

40. **These difficulties are reflected in relatively low revenue productivity of the VAT in developing countries—pointing to potentially significant revenue gains from base-broadening.** Standard rates of VAT rates are already quite high in many developing countries (Table 1),[33] and further increases may pose a particularly heavy risk of worsening compliance**.** But that is not the only option for increasing revenue, as emerges from considering one common measure of the effectiveness of a VAT: its 'C-efficiency,' the ratio of revenue to the product of the standard rate and consumption. This would take the value of 100 under a single rate VAT on a broad base, but will be lower to the extent that reduced rates apply and compliance is

[30] This is because by registering for VAT a trader can recover tax on their own inputs while their customer receives a credit for the tax they are then charged.

[31] Import VAT is not subject to any threshold.

[32] Keen (2009) reviews the tariffs vs. VAT controversy; Stiglitz (2010) sets out other criticisms of the VAT.

[33] In some cases, however, there is risk of introducing a VAT at so low a rate—under 5 percent, say—that it is questionable whether the effort is worthwhile.

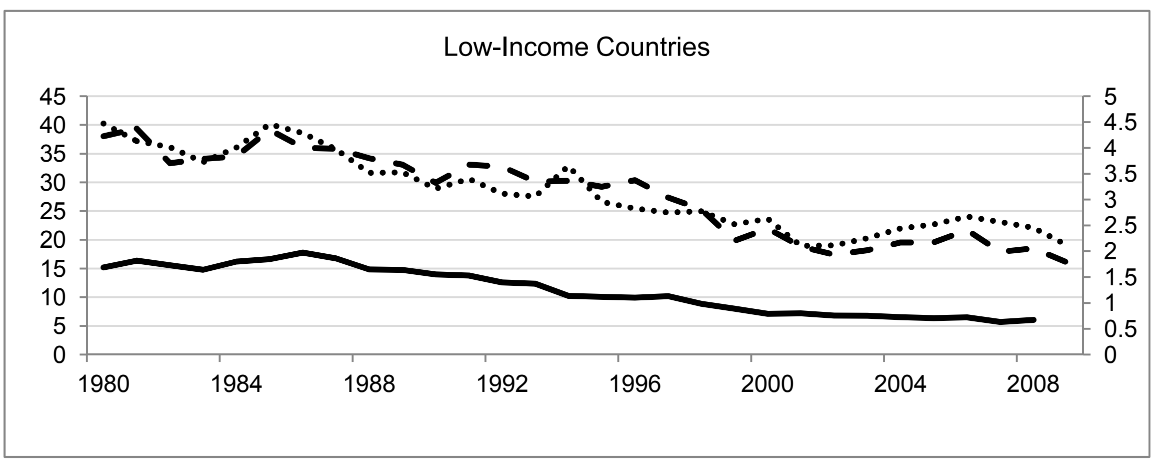
imperfect.[34] In LICs, for instance, median C-efficiency is only about 36 percent (Table 1 above). In countries where it is less, raising it to that level—without changing the standard rate, but by some combination of base-broadening and improving compliance—could raise, on average, nearly 2 percent of GDP (Appendix VIII). Indeed a long-term objective, given sufficient base-broadening and improved compliance, could even be lower standard VAT rates.

41. **The VAT is work in progress.** Adoption is a natural focus of attention, and revenue commonly performs well in its immediate aftermath. But much—more than often realized—remains to be done thereafter to develop the audit and other capacities an effective VAT requires: Appendix IX recounts the experience of Zambia, illustrating the need for continued nurturing of the VAT.

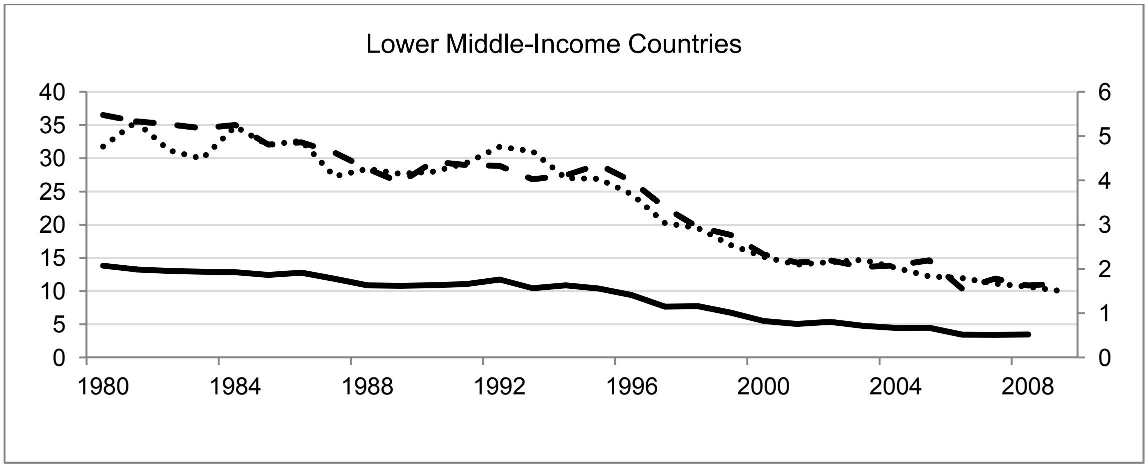
C. Trade Liberalization and Customs Administration

42. **Trade tax revenues, still important to many developing countries, are set to continue to decline.** Relative to both GDP and total revenue, trade taxes have been in trend decline for thirty years, tracking a decline in collected tariff rates (revenues relative to imports): Figure 10. Further liberalization (including through regional agreements and bilateral agreements with the EU and others), some already programmed into agreements in force, mean that the trend will continue. While the efficiency and growth implications of this are welcome, the fiscal challenges can be significant: in sub-Saharan Africa, for instance, trade taxes still account for one-quarter of all tax revenue.

Figure 10. Developments in Trade Tax Revenue and Collected Tariff Rates, 1980–2009



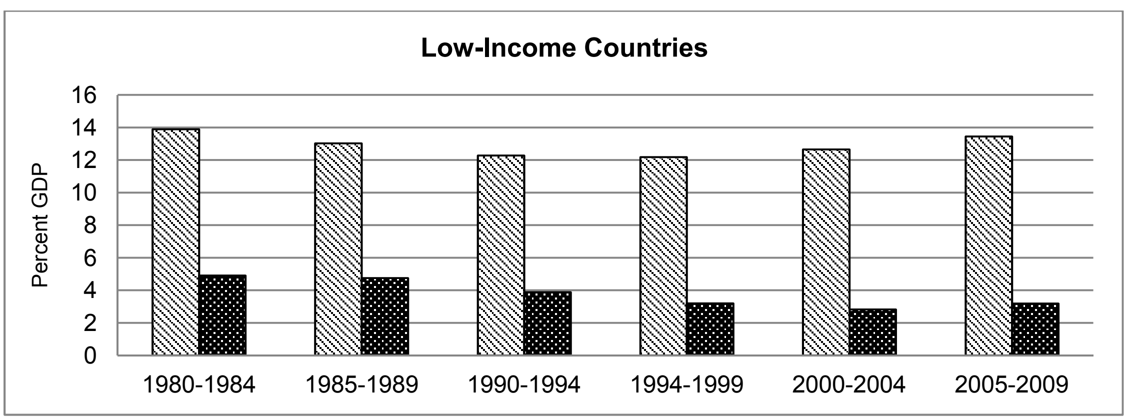
[34] Care is needed, however, since some poor VAT practices—such as a failure to refund exporters, or exemption of intermediate products—lead to high C-efficiency; Ebrill et al. (2001): discuss these and other limitations of the concept.

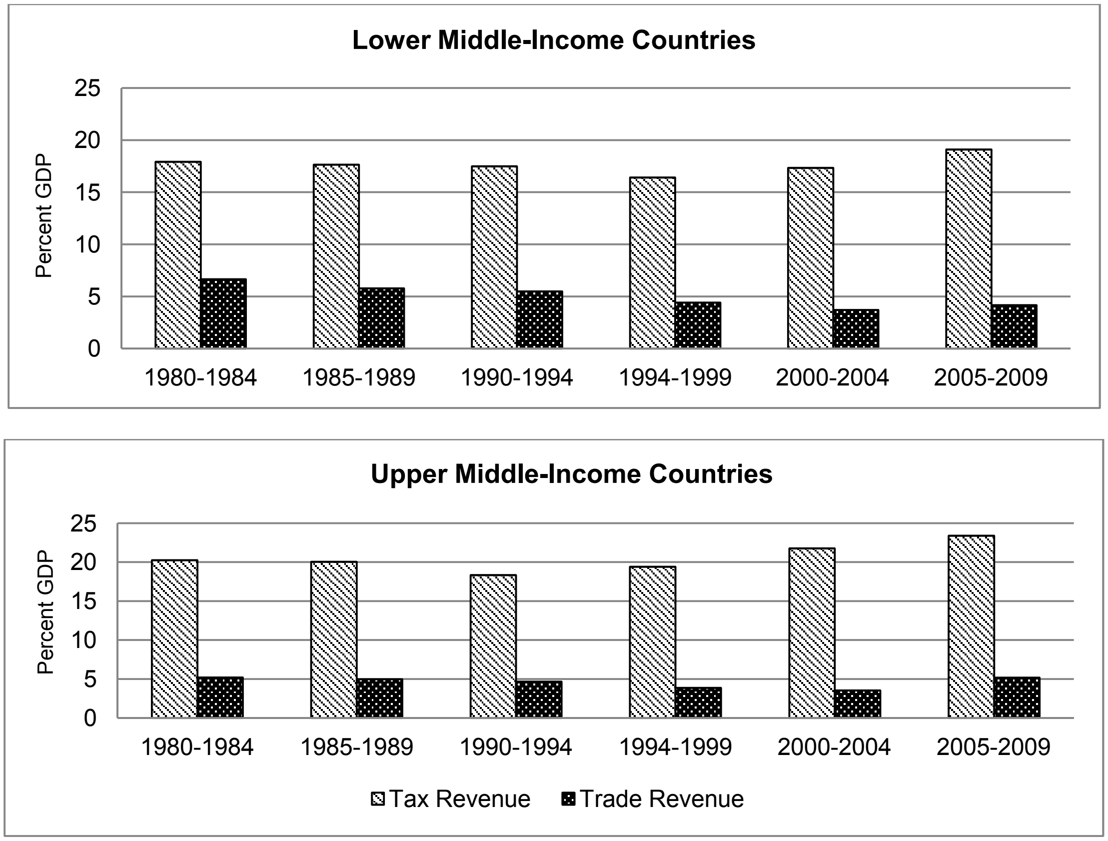


Source: IMF staff calculations.
Note: Group medians and dynamic income groups; left hand scale differs between panels.

43. **Replacing trade tax revenues from domestic sources has proved problematic in some LICs.** Most middle-income countries have readily recovered revenue from domestic sources (Figure 11; and Baunsgaard and Keen, 2010). The same has not been true of LICs throughout the sample period [though sub-Saharan Africa may in this respect have performed better than other regions (Keen and Mansour, 2010)]. The marked decline in trade tax revenues means that slow progress in overall tax ratios may mask a constructive rebalancing.

Figure 11. Developments in Tax Revenue and Trade Tax Revenue, 1980–2009





Source: IMF staff calculations.

Note: Group averages and fixed income groups.

44. **Revenue challenges from trade liberalization will continue**. There are signs in Figure 10 that revenue replacement has been more complete since the mid-1990s, but there are also intensified challenges ahead. The standard policy prescription for recovery is to combine tariff reduction with increased consumption taxes (exactly matching tariff reductions on excisable products, for instance, with higher excises),[35] and the analysis above suggests further room for this without an increase in standard VAT rates—already high in many developing countries (Table 1)—that may pose a particularly heavy risk of worsening compliance. Countries with a VAT, however, have not been systematically more successful in replacing lost trade tax revenue (Baunsgaard and Keen, 2010), and the case studies in IMF (2005) suggest that successful replacement has been associated with using a range of instruments, including the income tax. While there is thus no simple recipe for success, failure to quantify and prepare for the revenue impact of trade reforms has in some cases amplified the difficulties. In Lebanon and Mozambique, in contrast, introduction of an effective VAT was carefully coordinated with trade reform.

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[35] This preserves the efficiency gain from the reform, widens the tax base (by including domestic production along with imports) and can leave consumer prices lower (Keen and Ligthart, 2002). Emran and Stiglitz (2005) stress that informality can invalidate the argument (because not all domestic consumption can then be taxed), though the result continues to apply if an appropriate withholding tax is applied to imports (Keen, 2008).

45. **Institutional capacity in customs administration remains particularly weak in most lower-income countries.** Many middle-income countries have been pursuing comprehensive reform programs that advance the modernization agenda,[36] including by implementing modernized customs codes aligned with the Kyoto convention;[37] replacing universal pre-release inspection by risk-based, selective post-release audits; adopting HR reforms centered on the introduction of career systems and codes of ethics for staff; using non-intrusive verification techniques; implementing single-window systems for trade; and implementing WCO 'SAFE' guidelines[38] (to address security concerns while pursuing trade facilitation). Progress in many low-income countries, however, has proved much harder, with limited progress, for instance, in the Kyoto convention. There have been rewarding multiyear reform strategies supported by carefully-planned TA (Mozambique, Nepal), but for the most part customs administration reform results have been disappointing. Limited resources, lack of long-term commitment and overall limitations in the institutional capacity of the civil service in most LICs are the key challenges.

46. **Many customs administrations still struggle to control rent-seeking, and regional integration can raise further challenges.** Progress in implementing integrity-enhancing measures (such as adequate salaries and working conditions, management control systems, computer systems to streamline procedures and minimize face-to-face contacts, and accreditation of customs brokers and importers) remains patchy. Regional integration also poses distinct problems. Shifting fiscal control from national to regional borders requires new ways to collect import VAT and certify export-related refund claims, and potentially new policy frameworks to deal with intra-regional transactions—issues with which the EU is still struggling, and which can pose even greater challenges for developing countries.

D. Personal Income Taxation

47. **Receipts from the PIT are low and stagnant in developing countries, and come almost entirely from wage withholding on large enterprises and public sector employees.** Since the early 1980s, the PIT has raised 1–3 percent of GDP in developing countries, compared to 9–11 percent in developed (Peter, Buttrick and Duncan 2010). Up to 95 percent comes from wage withholding by the public sector and large firms, compared to about 80 percent in developed countries. Less than 5 percent of the population pay PIT (compared to nearly 50 percent in developed), and only about 15 percent of income is reached (compared to 57 percent): Modi et al. (1987).

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[36] Described in detail in Keen (2003).

[37] See http://www.wcoomd.org/home_pfoverviewboxes_tools_and_instruments_pfrevisedkyotoconv.htm

[38] http://www.wcoomd.org/home_cboverviewboxes_valelearningoncustomsvaluation_epsafeframework.htm

48. **Top statutory rates of PIT have been cut, and rate structures simplified, but with no discernible behavioral impact.** These cuts are likely to have been driven, to some degree, by reductions in CIT rates: absent matching cuts in top PIT rates, these can invite avoidance by incorporation. They affect even fewer taxpayers in developing countries than in advanced.[39] Thresholds vary widely; raising them could enable a better focus on high-income individuals, though the revenue loss can be non-trivial.

49. **An emerging concern is the mandating of universal filing for all PIT taxpayers** to inculcate greater appreciation of the tax system and in the expectation that additional income will be declared. In Kenya, for instance, processing the additional returns has significantly increased workloads but collection and compliance outcomes have disappointed. The impact on taxpayer awareness may have actually been harmful as taxpayers see that non-filing and under-declaration goes undetected.

50. **Evasion and avoidance by high-income individuals, ranging from legal use of tax preferences to illegal use of low tax jurisdictions, could be addressed more forcefully.** These activities take a variety of forms, some purely domestic (concealing income, exploiting preferential treatments), some international (not declaring income from abroad). They are inevitably hard to quantify: for the latter, one estimate is that about $50 billion of tax revenue is foregone annually in developing countries (Tax Justice Network, 2005). Whatever the precise amount, there is little doubt that the sums are large—and, moreover, that failure of elites to pay a fair share of taxes undermines support for the wider tax system. Raising substantially more from such groups, often influential and intimidating, is hard. At a minimum, appropriate legal provisions are needed: exemptions for agricultural income, for instance, can pander to the powerful, and in some countries personal income from abroad is simply exempt. Real estate taxes can be a powerful tool for reaching the better off. Dedicating units within the tax administration to high-income/wealth individuals can provide a focus for enforcement efforts, with high profile prison terms sending a salutary lesson. Strong audit power, including the possibility to use indirect methods to assess tax liabilities, is an effective tool for increasing the effectiveness of audit operations: these enable revenue agencies to use third party information, particularly related to assets and flow of investments, to estimate the taxpayer's income (Biber, 2010). Collective action on abuse through tax havens, as with the work of the Global Forum on Transparency and Exchange of Information for Tax Purposes, can benefit developing countries.

51. **'Global' PITs have proved especially hard to implement in lower income countries—explicitly schedular systems, with coherent treatment of capital income, can offer improvement.** On paper, most developing countries have a 'global' income tax—a

[39] The top PIT bracket starts at about 18 times per capita income in upper middle-income countries, and 83 times in LICs (Peter, Buttrick, and Duncan, 2010). Lee and Gordon (2005) find no growth impact from the top PIT rate.

progressive charge on the sum of income from all sources[40]—and building such income taxes was a focus of much advice through the 1970s.[41] The low yield, narrow base, and accumulated structural incoherencies of these taxes mean, however, that this approach has failed: "....in most developing countries, the global progressive personal income tax long advocated by experts is…neither global or progressive, nor personal, not often even on income" (Zolt and Bird, 2005). In practice, many lower income countries have schedular systems—taxing different types of income separately. The theoretical merit of the global approach has itself been more widely challenged in recent years (it may, for instance, simply be unrealistic, given their differing international mobility, to apply the same top marginal rate to capital as to labor income). Several advanced countries have moved towards a particular form of schedular taxation, the 'dual income tax' (DIT): applying a progressive tax to labor income but a lower (and, critically, uniform) rate to capital income. Whatever view is taken of this as a long-term objective in personal income taxation, movement towards explicit and more coherent schedular taxation—with limited discrimination between different types of capital income—can be a practical option towards greater effectiveness.[42] It can limit avoidance opportunities that arise through relabeling capital income,[43] and ease both administration and compliance, especially where capital income is taxed at a flat rate (tax then being implementable largely by final withholding). Importantly, the 'Achilles heel' of the DIT in advanced economies—the ability of smaller companies to reclassify labor as capital income (or vice versa)—is less troubling in developing countries given the difficulty of subjecting them to any reasonable tax at all.

E. Taxing Corporations

52. **CIT revenues—more important to developing than advanced economies—face pressures from globalization, but have as yet proved reasonably robust.** Figure 12 shows developments in CIT rates and revenue by income class. Statutory rates have tumbled worldwide, though remaining somewhat higher in lower income countries.[44] The revenue challenges that such downward pressures could pose are a greater concern for developing than advanced economies: the CIT raises about 17 percent of total tax in the former, compared to 10 percent (pre-crisis) in the OECD. In practice, CIT revenue in all income groups has performed strongly in the face of rate reductions (at least until the crisis, in high-income countries),[45]

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[40] Or, in some Francophone countries, a 'complementary' income tax: a progressive tax on the sum of net incomes from sources to which distinct schedular taxes apply.

[41] See for instance Goode (1993).

[42] Others have reached a similar conclusion: Alm and Wallace (2002), Zolt and Bird (2005).

[43] As tax-preferred capital gains, for instance.

[44] This may in some cases reflect the use of the CIT to extract resource rents, absent better targeted instruments.

[45] This does not imply any causality in the relationship.

Figure 12. Developments in Corporate Tax Rates and Revenues, 1980-2009

Source: IMF staff calculations.
Note: Group medians, dynamic income group; scales vary.

53. **Incentives—preferential treatment of particular types of investment—have become more pervasive in sub-Saharan Africa, though the wider picture is mixed.** In 1980 about 40 percent of LICs in sub-Saharan Africa offered tax holidays, while by 2005 about 80 percent did; and there was a very marked increase in the proportion providing special tax treatment in free trade zones: from nil to 50 percent (Keen and Mansour, 2010). That revenue nevertheless broadly held up, even aside from resource revenues, presumably reflects an increase in the profit share whose continuation cannot be assumed.[46] In Latin America and the Caribbean, on the other hand, the average length of holidays fell (Klemm and van Parys, 2009).

54. **Reduced tax rates and incentives can attract foreign investment, but only where other business conditions are good.** Business surveys repeatedly find that while taxation matters for foreign investors, other considerations—infrastructure, rule of law, labor—matter more (for instance, McKinsey, 2003), as emerging econometric evidence confirms (van Parys and James, 2009 and Dharmapala and Hines, 2009).

55. **Incentives pose concerns of effectiveness, leakage, governance and spillovers.** Some types of incentive are more likely to attract investment generating wider social benefits than are others: an investment tax credit, for instance, may for this reason be preferable to simply exempting profits. Incentives can be hard to control: free zones, for instance, are not always well-controlled sealed areas,[47] and profits can be transfer priced from non-holiday to holiday companies. Signaling a willingness to provide special tax treatment invites special pleading and corruption; and the demand for incentives, particularly tax holidays—generally agreed to be the worst form of incentive (Appendix X)—may in part be a response to, and so entrench, corruption in the tax administration. The scope to raise more revenue by limiting such incentives is hard to assess— and even harder where holiday companies are not even required to file tax returns—but seems likely in many cases to be substantial. Cubeddu et al. (2008) put the revenue cost of CIT incentives in 15 Caribbean countries at an average of around 5½ percent of GDP. Less dramatic but sizable, available estimates for Latin America put the cost of preferential treatments under the income tax at 0.5–6 percent of GDP (Villela, Lemgruber, and Jorratt, 2010).[48] And, as an indicator to be treated with very great caution, for those LICs with 'CIT-productivity'[49] below the median for their income group, raising it to that median, whether by base-broadening or improved compliance, would in 2002 have increased revenue by about 0.7 percent of GDP.

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[46] The convergence of statutory CIT rates over the sample period may also have reduced losses through transfer pricing.

[47] They also raise WTO-consistency issues.

[48] The figures need to be interpreted with care: methodologies differ, and, moreover, the need to honor existing commitments can mean that the revenue gains take some time to materialize.

[49] CIT revenue in percent of GDP divided by the CIT rate. One reason for caution is that (unlike VAT C-efficiency) this is not evaluating revenue performance relative to a coherent benchmark base.

56. **Regional cooperation can help combat excessive incentives—but unilateral actions have also succeeded.** In competing to attract investment, countries can make themselves collectively worse off. Regional agreements to limit incentives (a model is in Appendix XI) can block downward tax competition. This can be especially helpful where the formation of customs unions increases firms' mobility and can prompt pressure for alternative protective measures; indeed one lesson of the continuing difficulties many trading blocs have in reaching such agreements is that they are best put in place in tandem with other integration measures, before the intensified pressures come into play. While participants in such agreements remain vulnerable to competition from third countries, the net gains—including in scaling back governance problems associated with preferential treatments—could be substantial. The difficulties in reaching such agreements are more political than technical, as seen in Central America and the East African Community (EAC), for example. Unilateral actions, however, have also proved beneficial: Appendix XII.

57. **International tax considerations are increasingly important for developing countries, which can be powerfully affected by actions of advanced countries.** Multinational companies have opportunities for profit-shifting through intra-group transactions, financial arrangements and corporate structuring. Even the most advanced tax administrations struggle with this, and—although the extent of the revenue impact remains unclear[50]—the challenges are greater where capacity is weak. Some argue, moreover, that present norms are tilted against developing countries; the low withholding taxes common in double tax treaties (DTTs), for instance, can weaken a last line of protection for weak administrations. The sheer transactions costs of negotiating DTTs can be a severe drain, which could perhaps be eased by developing multilateral treaties. (Thuronyi, 2001). Convergence of statutory tax rates reduces avoidance incentives, but developing (and retaining) capacity to deal with them will remain a severe challenge. A realistic balance must be struck between the additional revenue to be gained in this area—by increased administrative efforts in relation to transfer pricing, for instance—and that from strengthening more prosaic aspects of administration. Advanced country decisions can ease the difficulties of developing countries (as with the reinvigorated G-20 action on tax havens, for instance)[51] but can also risk deepening them: rate cuts in advanced economies can trigger cuts elsewhere, for example, and exempting foreign profits, as sometimes proposed in the U.S. and underway in the United Kingdom, might intensify global tax competition.[52]

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[50] Baker (2005), widely-cited, puts such flows at $700–1,000 billion per year, with $320-520 from developing countries (with a total of a further $350-500 billion of criminal and corrupt flows); the underlying sources, however, are not available. While there is indeed substantial evidence that profit-shifting is extensive, Fuest and Reidl (2010) argue that the methodologies underlying available estimates of its extent and revenue cost are problematic.

[51] Torvik (2009) argues that their impact on governance can make tax havens especially damaging for developing countries.

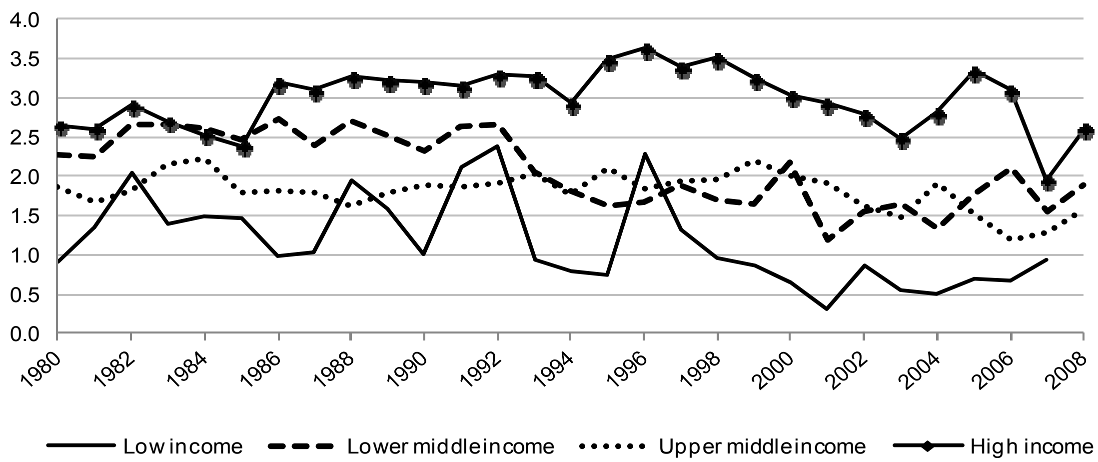
[52] Under the alternative 'residence-based' approach, tax paid abroad is creditable against that due at home, so that those foreign taxes impose no additional liability on the investor; Mullins (2006) elaborates.

58. **SOEs pose significant compliance problems in some countries.** The transition to taxing them by the same rules and methods as applied to private enterprises has not always been easy, and in some cases remains incomplete—most evidently so in relation to some natural resource companies,[53] but also sometimes too in such sectors as energy generation and transmission, telecommunications, and transportation. While the taxation of SOEs profits raises no net revenue for government broadly interpreted, revenue from the VAT and wage withholding can suffer, non-compliance undermines good commercial practice and wider taxpayer morale, and large accumulations of tax arrears can result in administrations diverting scarce resources away from more productive activities. Solutions rarely lie within the capacity of the tax administration alone, though efforts can be made to identify and quarantine arrears, following up by enforcement.

F. Excises

59. **Excises—taxes on a few key products—are a significant source of revenue, but in trend decline** (Figure 13)—mainly, it seems, as a result of declining real rates. Their importance also varies substantially across regions, being much less, for instance, in sub-Saharan Africa and Middle Eastern and Central Asian countries than in Asia[54] and South America; and Francophone Africa derives less from this source than Anglophone.

Figure 13. Developments in Excise Revenues, 1980–2008



Source: IMF staff calculations
Note: Dynamic income groups. Samples are sometimes small (as low as two LICs for 2005–07).

60. **Levied on a few key items, excises can serve both revenue and, in some cases, wider social ends.** Special taxes are sometimes levied on luxury goods such as jewelry or perfume, but

[53] The particular challenges in dealing with these are discussed by McPherson (2010).

[54] Tobacco alone raises around 8 percent of central government revenue in China P.R. and Indonesia: Barber et al. (2008) and Hu et al. (2008).

typically bring little revenue and so have only a token impact on equity. Almost all excise revenue comes from fuels, tobacco, alcohol and other drinks, cars and, increasingly, mobile phones,[55] the rationale for these charges being not only to tap the revenue potential of a relatively inelastic and readily identified base but, to varying degrees, to change behavior:

- ***Petroleum products.*** Fuel taxes are often part of wider frameworks to stabilize and moderate domestic retail prices. Direct subsidies in developing countries amounted to around $54 billion in mid-2009, and net revenue foregone relative to a tax of $0.3 per liter to around $110 billion (Arze del Granado et al., 2010). More effective fuel pricing would serve distributional ends—empirical work repeatedly finds better ways to help the poor (del Granado et al., 2010)—and help address environmental concerns (not only, or even mainly, climate change, but also local pollution and congestion);

- ***Cigarettes*****:** Externality and self-control considerations point to higher taxes than would otherwise be the case (there being substantial evidence that they can deter new smokers; Ross and Chaloupka, 2000), with several studies suggesting scope for gains in both revenue and health from increases in many developing countries: [56] in the order of 0.3–0.4 percent of GDP in India and Vietnam, for instance;[57]

- ***Alcoholic and other drinks****:* Local custom, social preferences and drinking patterns mean that revenue potential can differ widely. Increasing attention is being paid to the case for taxing non-alcoholic bottled drinks in low-income countries;

- ***Motor vehicles.*** In addition to raising worthwhile revenue—0.1 to 0.15 percent of GDP in Botswana and Lebanon—largely from the better-off, vehicle taxes can also address externalities; and

- ***Telecoms.*** Auctioning licenses is in principle the best way to tax the potentially substantial rents in this increasingly important sector. Failing that, excises can raise substantial revenue without unduly discouraging use (the positive externalities from which appear to be sizeable: Jensen, 2007). Liberia, for instance, raises about 6 percent of its revenue from this source. The amounts are much less elsewhere, but the scope for increase is clear.

61. **Excises can be among the simplest taxes to implement, but there are challenges—some of which can be eased by regional cooperation.** Concentrated production and high

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[55] In 2009, excises on tobacco and drink accounted for around 80 percent of non-fuel excise revenue in the Central African Republic and Senegal, and 90 percent in Egypt and the Philippines.

[56] See for example: WHO (2010), Sunley (2010), and Petit (forthcoming).

[57] International Union against tuberculosis and lung disease, country studies are available at: http://www.tobaccofreeunion.org (January 4, 2011).

import shares make administration (nowadays generally located in the LTO) relatively easy. One long-standing issue is the choice between specific and ad valorem forms of excise (specified as monetary amounts and as proportion of the price, respectively): the former are better-suited to addressing externalities (which generally depend on quantities, not prices), and have often been regarded as simpler to administer, though any advantages of specific taxation in this respect are becoming less marked as implementation moves away from physical control).[58] But other concerns are coming more to the fore. Telecoms, for instance, raise less familiar implementation issues, including the taxation of prepaid airtime and auditing operators without the necessary software and technical expertise. Still more of a concern in many countries are potential difficulties—or, for some, a source of revenue gain—from smuggling. Illicit and small scale production can also undercut excise revenue (and in some cases raise public health issues). Fear of inducing revenue losses from these sources is one reason many countries have hesitated to increase rates. Administrative measures, including close control of bonded warehouses and transit shipments are important, especially within customs unions; however, some degree of policy cooperation may be needed—perhaps including, in CEMAC and WAEMU, agreement to raise regionally-agreed maximum rates.

62. **There is scope in many countries to raise significant additional revenue from excises without adverse distributional effects.** The declining share of excises in tax revenue suggests considerable scope for increase (beyond offsetting any tariff reductions on excisables), perhaps supported by some degree of policy and administrative cooperation. Prescriptions clearly need to be country-specific (an exception being the universal importance of automatic indexation of specific taxes), but, for example, sub-Saharan Africa and the Middle East and Central Asia could increase excise revenue by an average of 0.5 percent of GDP and 1.3 percent of GDP respectively by increasing the share of excises in total revenue to the world average.

G. Taxing Small Businesses

63. **Small businesses are extremely difficult to manage, and have limited revenue potential.** This is a highly heterogeneous group, from 'micro' businesses—street traders, subsistence farmers—with limited ability to pay (in both fairness and practical terms), through professionals and businesses with many employees. The highly skewed size distribution of firms—in all countries, but perhaps especially so in developing—means that such businesses are numerous, but have little revenue potential. In Egypt, the largest 4,000 companies account for about 90 percent of total turnover; even a massive proportional increase in receipts from the 5 million small enterprises would have relatively little impact on total receipts. It is not uncommon for developing country tax administrations to devote large resources to this segment in the hope of flushing out medium or large taxpayers by blanket enforcement operations; but results have been poor and costs of implementation high.

[58] Other considerations in making the choice include the stability of revenues (tending to favor specific where the demand elasticity is low) and maintaining the availability of low-price product variants (favoring ad valorem).

64. **The tax treatment of small business has importance, however, beyond revenue.** They are often viewed as especially important in generating employment and productivity-enhancing innovations, although the evidence on this is mixed.[59] What is clear is that they are often politically influential. Such considerations, combined with their limited revenue potential and the risk of distracting the tax administration from more critical tasks, might suggest subjecting them to no more than some token tax—as has been common. But there are powerful reasons for careful attention to the treatment of small businesses, which can:

- ***Ease competitive distortions and inefficiencies***. Taxation—including attendant compliance costs and, potentially, exposure to bribery and harassment—can be a powerful disincentive for small firms to regularize their activities. In some instances, there is a high effective tax rate on new investments by small enterprises (FIAS, 2007), and firms may limit their growth to avoid detection by the revenue authorities. In extreme but not uncommon cases, firms become 'ghosts'. Although surveys repeatedly show that taxation is far from the only reason firms remain irregular—labor laws, social standards and corruption can be at least as important—the distortions are clear. Non-compliance by small taxpayers, coupled with the greater ability of large firms to benefit from tax exemptions, can create an inverse U-shaped relationship between firm size and effective tax rates that is unlikely to be optimal.[60] Even a tax on small businesses which raises less than it costs to collect is desirable to the extent it eases these distortions (Keen, 2010);

- ***Enhance taxpayer morale***. Compliance of larger businesses can be undermined if smaller ones are not seen to pay reasonable amounts. And small businesses themselves are more likely to comply if they believe others are—creating the possibility of shifting from 'bad' compliance equilibria to 'good' ones;

- ***Contribute to state-building***. Bringing small businesses into the tax net can help secure their participation in the political process and improve government accountability; and

- ***Bring non-tax benefits to small enterprises themselves***. Compliance may boost record-keeping capacities and financial sophistication, for instance, and so improve capital market access. If enterprises fail to appreciate such benefits themselves, or the consequent productivity gains yield wider spillover benefits, intervention by the tax authorities beyond that justified by revenue considerations would be warranted.

65. **Small businesses tax regimes vary widely,[61] but a coherent structure can be built around a relatively high VAT threshold.** All too often, a low VAT threshold and overly-

[59] Biggs and Shah (1998) find large firms to be the dominant creators of manufacturing jobs in sub-Saharan Africa.

[60] Gauthier and Gersovitz (1997) on Cameroon; and Gauthier and Reinikka (2006) on Uganda. This may also partly explain the 'missing middle' in the distribution of firm size in developing countries.

[61] Bodin (2010) and Bodin and Koukpaizan (2008) review recent developments and options in taxing small businesses in lower income countries, including withholding and advance collection schemes discussed below.

complex PIT provide incentives to remain outside the tax system. A reasonably high VAT threshold—the Fund commonly advises around US$50–100,000 in developing countries—provides a natural reference point for taxpayer segmentation, as firms above it can be assumed to have basic record- keeping capacity. Two groups can then be distinguished below it: (1) micro businesses, which can be subject to a simple 'patente,' akin to a license fee (likely best implemented at local level)—the aim being to secure their participation in the political process and gather information useful for an eventual graduation to the standard tax system; (2) an intermediate group of taxpayers that can be taxed on their cash flow (i.e. with immediate expensing of investment and disallowance of financing costs) or turnover, to broadly replicate the regular PIT (so that progressive rates, including standard exemptions, would apply to unincorporated businesses).[62] The difficulty is not that small traders cannot keep simple accounts—it is persuading them to share them.[63]

66. **Withholding taxes and advance collection schemes can help improve small business compliance, but need to be used sparingly.** Small taxpayers transact with medium and large ones, and they import: withholding at these points can improve compliance. Advance collection on imports is common in Africa and found elsewhere too, sometimes at higher rates for unregistered enterprises. In most cases the advance payment is creditable only against income tax, though some apply forms of VAT withholding. Some countries (Burkina Faso, Mali) have also introduced advanced collection on domestic transactions. Although having some appeal in principle, and often raising considerable revenue,[64] such schemes generally cause significant difficulty when widely applied: the very ease with which they raise revenue can reduce the incentive to undertake hard reforms, amplify crediting and refund problems, invite corruption, and become so pervasive as to undermine the coherence of the wider tax system.[65]

H. Real Estate Taxation

67. **Real estate taxes can be efficient and equitable, and particularly suitable for local governments.** Their efficiency appeal is that location-specific attributes provide a relatively immobile tax base, less vulnerable to tax competition than others; and since rates are currently low, the inefficiencies from marginal increases are likely to be modest. Their progressivity arises

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[62] Where countries are reluctant to raise a VAT threshold set too low, this treatment might appropriately be applied to some above it.

[63] Social contributions can pose particular difficulties in managing smaller enterprises. Where retirement and healthcare benefits are linked to individual contributions, simple presumptive schemes will not capture all the information required: so there is no obvious alternative to withholding. This issue will come increasingly to the fore as countries expand their social systems, making it harder to justify special regimes for smaller taxpayers.

[64] Araujo-Bonjean and Chanbai (2003) report that withholding on car imports accounted for 18 percent of direct tax revenue in Benin (2001), but this is an extreme case.

[65] There are also potential issues of WTO-consistency, if refund and crediting does not eliminate any additional burden on imports by the tax-compliant.

from the positive correlations between property ownership, income, and wealth. Since property values largely reflect the provision of local services, they are well-suited as instruments of local taxation (Plimmer and McCluskey, 2010).[66]

68. **Their revenue potential is modest in absolute terms, but significant for local governments.** Real estate taxes in developing countries often yield under 0.1 percent of GDP, and rarely more than 0.5 percent (Bolivia, Cape Verde, Honduras, and Kazakhstan). But they can be more than 50 percent of local government revenues (Armenia, Lesotho, and Peru). While the potential of real estate taxes to strengthen national revenues is limited, the potential to finance improved local government services—local and government accountability and governance—is considerable. Many developing countries (including Egypt, Namibia, and Vietnam) have consequently embarked on real estate tax reforms.

69. **Low revenues reflect weaknesses of design and implementation—but, for the longer-term, there are ways ahead.** The base is often corroded by multiple exemptions; rates are low; property rights are not always clearly defined, and coverage in the cadastre is poor; property values are not updated (relative price changes being large in fast growing urban centers of developing countries), often reflecting an incentive for undervaluation exacerbated by transfer and capital gains taxes; and enforcement is weak. There are, however, many ways to value and tax property (Mikesell and Zorn, 2008). Valuation techniques, for instance, range from simple unit land taxes (Vietnam, Nigeria), to market-based systems. Computer-assisted mass appraisal systems can be used to value property by hedonic pricing[67] (Eckert, 2008), with satellite technology minimizing the need for on-site inspections. Progress can though take many years. Local capacity has to develop; the alternative of having national agencies take over the administration of property taxes (as in Tanzania) undermines local accountability and diverts attention from more pivotal reforms. Building cadastres is time-consuming. But this is one area in which additional revenues can be found in a way that is efficient, fair, and holds the prospect of improved state responsiveness.

IV. Institutions and Transparency

70. **Political commitment is essential to progress, and 'champions' are key—but lasting reform requires deep institutional change.** Almost all the successful reforms cited here are associated with two or three particular politicians or officials. All too often, however, progress stops, or reverses, on their departure. Sustaining change, including in the face of cyclical shocks—both bad ones that can amplify resistance to base-broadening, and good ones that reduce the pressure to change—requires entrenching gains made at each stage.

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[66] Chambas (2010) stresses the potential to improve local government finance in sub-Saharan Africa.

[67] Using data on observed transactions to predict properties' market values on the basis of their characteristics.

71. **Effective and fair revenue mobilization requires informed and careful analysis, and transparent institutions and practices**. Fact-based policy debate can be critical to developing the political and social consensus needed for lasting improvement. Key elements include:

- ***Simple and transparent tax laws.*** In this respect many developing countries score higher than advanced economies, having enacted high quality laws in recent years. Implementation can though be problematic, for instance, with slow and cumbersome appeals processes;

- ***Quantification and analysis of tax expenditures.*** By indicating the revenue costs of preferential tax arrangements, tax expenditure analyses inform and stimulate analysis and debate as to whether they generate offsetting social benefits. While there are many subtleties in calculating and interpreting tax expenditures (Villela, Lemgruber, and Jorratt, 2010), basic analyses are conceptually straightforward, and are becoming more frequent in developing countries: they are commonplace in Latin America, and are also now produced, for instance, in Morocco and Senegal. And they often point to significant revenue costs—about 5 percent of GDP in Senegal. In many cases, however, the data needed (on activities in free zones, for example) are simply not collected;

- ***Capable tax policy units.*** Policy analysis is often left as an adjunct and reactive function of the tax administration, often lacking the specialist skills and wider view required. Weaknesses in quantifying and understanding tax gaps, in analyzing the revenue and distributional effects of tax changes, and in identifying emerging trends and crafting responses to them are often considerable. Without allocating expertise and authority to tax policy analysis experience suggests a dedicated unit within the ministry of finance, working closely with the revenue administration and empowered to collect information from a range of government agencies—the design of tax changes will be hampered and their ownership inherently limited; and

- ***Involvement of the wider community***. Timely interaction between the tax authorities and taxpayers educates both sides fosters trust, and can lead to measures that are both better-designed and more widely accepted. Interactions with CSOs and local academics, and well-informed media coverage, can communicate and guide reform priorities.

72. **Initiatives to further foster transparency in tax relations merit close examination.** One widely discussed instance is 'country-by-country reporting,' now under study by both the European Commission and the OECD/DAC Task Force on Taxation and Development. The aims of these initiatives, seeking to generalize to some degree the Extractive Industries Transparency Initiative, are typically dual: to promote accountability of governments for the revenues they raise; and to promote public transparency in the taxes paid by enterprises, permitting, it is hoped, the policing of transfer pricing abuses. Broadly speaking, the goal is to make clear the match—not necessarily required under current tax rules—between the location of corporate financial profit and/or activity and the location and amount of corporate income taxes paid. Progress likely requires clarifying both the objectives and the value-added of such exercises. Publicly-owned

companies, for instance, already have tax reporting obligation in many countries. This highly technical issue bears further study and international discussion. At a minimum, this can spur greater needed thinking regarding the best ways to promote greater transparency within the existing international tax architecture.

73. **There is increasing recognition of the importance of revenue mobilization within the historical sweep of state development**. One strand of literature stresses that the capacity to collect tax revenue reflects prior investment decisions, and explores how these are shaped by such considerations as political stability, the extent of common interests—external threats being a leading instance—and the degree of political consensus (Acemoglu, 2005; and Besley and Persson, 2009 and 2010). More evident in recent policy documents is the 'new fiscal sociology,' which argues that taxation can foster state-building both by providing a focal point for bargaining between the state and citizenry and through the development of high quality institutions for tax collection (Bräutigam, 2008).

74. **It remains unclear, however, how these concerns might temper standard tax advice.** Some dimensions of state-building are beyond its scope. Constitutional structures are known to impact tax performance, for instance, and political instability is associated with low VAT C-efficiency (Aizenman and Jinjarak, 2008): but these are matters beyond fiscal advice. And standard recommendations on exemptions, management of resource wealth, and decentralization are already largely driven by concerns beyond the narrowly fiscal. Recent contributions have stressed the importance of strengthening perceived links between paying tax and enjoying the benefits of public spending, and increasing awareness of this can clearly be constructive (in advanced economies too). Here there is a critical role for improving public financial management—and public confidence in it—together with the transparency of public spending decisions. Whether more extensive earmarking of taxes can help, as some have argued, is debatable: even apart from the corruption with which it has sometimes been associated, if earmarking truly constrains spending on particular items it can lead to harmful inflexibility while if it does not, then it runs counter to transparency. Many of the 'nuisance taxes' in developing countries that reform often aims to remove, moreover, originated precisely in some form of earmarking. The implications of state-building concerns for small business taxation—strengthening the case for efforts to include them in the tax system, to increase the accountability they require of government—are fairly clear; the question is how they weigh relative to other considerations discussed above.

75. **Donors have a role too.** They need to honor their aid commitments, and consider how aid can be best structured, including through the use of monitorable benchmarks, to encourage revenue mobilization. Coordination in the substance and processes of tax-related TA can be improved. There is also a case for easing (as some are now doing) the requirement of tax exemptions for donor-financed projects. These create administrative complexities and legitimize exemptions as a routine policy tool, while their rationale (given an increased willingness to provide direct budget assistance to countries with adequate governance arrangements in place) is increasingly unclear (International Tax Dialogue, 2006).

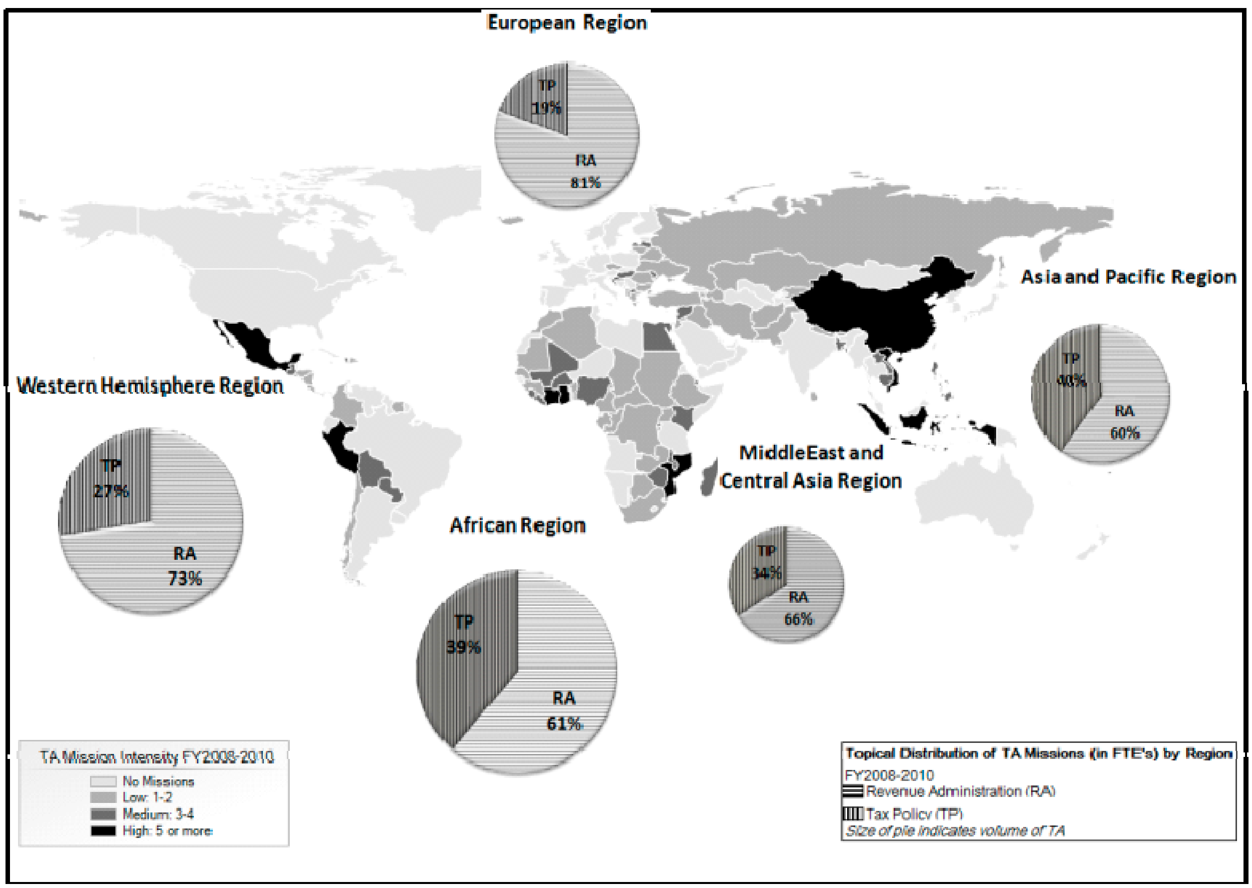
V. Issues for Discussion

- Do the Directors agree that there is scope to raise significant additional revenue to meet high priority spending needs in many low-income countries?
- Do the Directors believe that the principles for administration and policy reforms set out in this paper provide a firm basis for further progress in revenue mobilization in lower-income countries?
- Do the Directors agree that under-taxation of high-income/wealth individuals and elites needs to be addressed more forcefully?
- Do the Directors agree that efforts should continue to strengthen VAT design and implementation so as to realize its full potential?
- Do the Directors agree that exemptions and preferential tax treatments seriously impede revenue mobilization in many developing countries, and that more needs to be done to remove them?
- Do the Directors agree that addressing compliance and governance problems in taxation can make an important contribution to wider state-building?
- Do the Directors agree that greater international tax cooperation, including between advanced and developing countries, can significantly help to strengthen revenue mobilization?

Appendix I. Technical Assistance on Tax Matters

The TA that the Fiscal Affairs Department (FAD) provides to Fund members, at their request, is extensive, and takes a variety of forms. In FY11, there will be around 35 HQ-led missions on tax policy issues, and around 61 in revenue administration. Some of these are to advanced economies, and related to crisis response, but the great bulk continues to be to developing countries (Appendix Figure 14). Specialist staff also join area department missions (again including also to advanced countries) to address specific topics. Short-term support is provided through the seven[68] regional technical assistance centers, all of which include a specialist advisor on revenue administration. FAD offers occasional workshops on specialist topics (such as the taxation of small businesses and revenue forecasting), as well as periodic high profile conferences (most recently on the taxation of natural resources). This TA work will benefit from two recently established Topical Trust Funds: on tax policy and administration, and on managing natural resource wealth (IMF, 2010b, c).

Appendix Figure 14. Revenue Administration and Tax Policy Mission Intensity, FY2008–10



Source: IMF staff calculations.

[68] A new center will soon be opened in Southern Africa, and another is planned for Central Asia.

Lessons from FAD TA work are gathered in several books (in recent years, on the VAT, customs administration, and the taxation of natural resources),[69] demand for which has proved strong, and a series of technical notes on revenue administration.

The Legal Department provides extensive assistance in drafting tax laws, closely coordinated with FAD's work. A typical year might see about 25 short-term LEG missions for drafting; over the past two decades LEG has assisted in drafting about 200 tax laws or regulations enacted in about 60 countries.

The World Bank, regional development banks and donors also, to varying degrees, provide tax-related TA: International Tax Compact (2010) and Michielse and Thuronyi (2010) provide initial overviews, and a fuller mapping is among the requests of the G-20. While the concordat is silent on the respective roles of the Fund and Bank, in practice the Fund has for several years been more prominent on tax policy issues and strategic revenue administration advice, and the Bank in financing and managing large administrative reform projects.

The Fund maintains close links with associations of tax administrations, such as the new African Tax Administrators Forum and the Inter American Association of Tax Administrations (CIAT). It was also a founding member, along with the OECD and World Bank, of the International Tax Dialogue (the ITD). The ITD seeks to be an information source for officials on technical issues, through its website (www.itdweb.org), which also provides a platform for the exchange of information on TA and other activities, encourages experience-sharing through a large biannual conference (the next to be on "Tax and Inequality") and, with DfID support, has also undertaken work gathering comparative information on tax administration in Africa.

[69] Respectively Ebrill et al. (2001), Keen (2003), and Daniel, Keen and McPherson (2010).

Appendix II. Tax Reform in Post-Conflict and Successor States

Strategies for establishing effective taxation in post-conflict states, set out in Gupta et al. (2005), are illustrated by the experiences of Liberia and Mozambique; FYR Macedonia is an example of reform in an upper middle-income successor state focused on establishing a business-friendly environment.

Liberia: Prolonged civil conflict decimated the tax and customs administrations. With extensive TA in policy and administration, in which FAD was prominent, revenue recovered from 6.2 percent of GDP in 2003 to almost 20 percent by 2009. Initial efforts focused on the major revenue handles of customs and a small number of larger businesses managed from a small special office. Attention then turned to multipronged administrative reform covering organizational arrangements, forms and procedures, systems and governance arrangements, and to a range of policy issues, including a fiscal framework for natural resources (petroleum, mining, forestry, and logging). Next steps include transition to a common external tariff and the replacement of the sales tax by a VAT, as agreed within ECOWAS. The medium-term revenue effort for natural resources, however, has recently been put at risk by a number of special concessions in the mining sector, and by problems in enforcing the land rentals under forestry contracts.

Mozambique.[70] A cornerstone of the extensive reform efforts since the end of the devastating civil war in 1992 has been a far-reaching reform, with extensive technical support from FAD and others, of tax policy and administration. Initial efforts focused on simplifying the tariff and overhauling customs administration. Attention then turned to reforming domestic indirect taxes, replacing cascading taxes with a VAT and selective excises, and strengthening the domestic tax administration. In the final phase, direct taxes were transformed (establishing a unified CIT and moving from a schedular to a global PIT) and a revenue authority created. Revenue collection (excluding receipts from natural resources), which stood at about 8.5 percent of GDP in 1992/93, is now around 15 percent.

FYR Macedonia. Administrative effort—with FAD assistance, partly funded by the Dutch government—focused on integrating the collection of social insurance contributions (SICs) with that of the PIT. This required a host of legal, organizational and policy reforms (harmonizing the bases of the PIT and SICs, for instance, and aligning administrative procedures and IT systems). The minimum SICs were also reduced, with potentially beneficial employment and compliance effects. Integrated collection began in January 2009, and is reported to have yielded substantial benefits for (a) the government, through increased SIC collections (despite the economic downturn, the number of declared workers increased by around 16 percent and the sum of PIT and SIC receipts by about 8 percent), (b) employees, through a reduction in wage payment delays (because mechanisms for strong enforcement of SIC payment also ensured prompt wage

[70] This account draws on Castro et al. (2009).

payment), and (c) employers, through significant simplification. In parallel, with the aim of attracting FDI and stimulating employment, a flat tax was introduced, the main feature of which (given that the vast majority of workers already paid at a single marginal rate) is the very low rate of 10 percent (both PIT and CIT). FAD advice in this area—aimed at safeguarding revenue by eliminating a multiplicity of tax concessions and allowances—has had much less impact.

Appendix III. Data

The analysis in this paper draws on a mix of GFS, WEO and other data, from 1980 on. This eclecticism reflects limitations of available revenue data for developing countries. While the *Government Financial Statistics* is widely used, there are significant gaps and figures can differ markedly from those prepared by desks and assembled for the *World Economic Outlook*. Important compositional detail is often missing, including between the VAT and other indirect taxes and (increasingly important) of receipts related to natural resources.

Creating a comprehensive set of revenue variables poses several challenges. First, reporting standards in the GFS, initially following the 1986 manual, underwent a major overhaul with the introduction of the new GFS framework in 2001. This makes it difficult to construct consistent, comparable government statistics before 1999. There are breaks in the data across time, with differences in the terminology and composition of the specific series, and some scaling problems. Second, reporting may be either on a cash or on an accrual basis. To maximize the sample of lower income countries, this paper uses revenue data reported on a cash basis. Third, alternative government data sources suffer from similar problems. WEO collects data directly from the countries' fiscal files, but much of the historical data is unavailable as the system is transitioning to a new environment and only recent data has been formatted for this system. OECD revenue data has better time coverage, but limited country coverage.

Total government revenue as a share of GDP. As a first step, WEO general government revenue data are used. Some of the gaps this leaves prior to 2001 are filled with data from an older WEO dataset compiled by FAD. For the rest, GFS general government revenue is used and, when this is not available, we use GFS consolidated central government.[71] Since most cases of missing general government data occur for lower income developing economies, this seems a reasonable proxy as most of the revenue collection in such countries tends to be at central government level. GFS2001 and GFS1986 differ in that the latter excludes social contributions by government as employer in the consolidation of government data, meaning that the data might be skewed downwards in the early years of the sample which rely on GFS1986.

Non-grant government revenue as a share of GDP is calculated by using the same approach as described above, but by extracting WEO and GFS grants from total government revenue.

Tax revenue as a share of GDP is total tax revenue, inclusive of social security contributions, collected by the general government relative to GDP at market prices. The main components are (i) taxes on income, profits, and capital gains; (ii) taxes on payroll and workforce; (iii) taxes on property; (iv) taxes on goods and services; and (v) taxes on international trade and transactions. This variable is constructed by first using total tax revenue for the general government from OECD, which has comprehensive time coverage except for the last year of the sample as data

[71] The specific series are "total revenue" from GFS2001 and "total revenue and grants" from GFS1986.

available at the time of this work ran only to 2009. OECD reports social security contributions as a sub-component of total tax, but WEO/GFS reports them as a separate non-tax category. In compiling the complete data series over 1980-2010, we start with the tax measure from OECD, and then fill in the gaps with the sum of tax and social contributions from WEO and GFS2010.

Income taxes as share of GDP are taxes on income, profits, and capital gains generally levied on (i) compensation for labor services; (ii) interest, dividends, rent, and royalty incomes; (iii) capital gains and losses; (iv) profits of corporations and partnerships; (v) taxable portions of social security, retirement account distributions, and life insurance; and (vi) miscellaneous other income items. Data are collected on total income tax, and corporate and individual income tax. As for total tax revenue, OECD and WEO are used as primary sources, and remaining gaps filled with GFS data.

Taxes on goods and services as share of GDP are taxes levied on the production, extraction, sale, transfer, leasing, or delivery of goods and rendering of services, as well as on the use of such goods. The main components are (i) general taxes on goods and services (value-added taxes, sales taxes, and turnover and other general taxes on goods and services); (ii) excises; (iii) other taxes on profits of fiscal monopolies, specific services, and the use of goods to perform activities. Data is constructed, in order, from OECD, WEO and GFS.

Value-added tax revenue as share of GDP is constructed from OECD and GFS sources only, as WEO does not report at this level of disaggregation. When data from GFS are not available, for Sub-Saharan African countries the Keen and Mansour (2010) dataset, compiled from country documents and IMF fiscal files is used. In some cases, if a country has a value-added tax in place and no other source is available, we proxy VAT revenue with revenue from general taxes on goods and services.

Trade tax revenues as a share of GDP includes customs and other import duties, taxes on exports, profits of export or import monopolies, exchange profits, and exchange taxes. Sources used are the OECD series (as the sum of import duties and export taxes) and WEO, with remaining gaps filled from Baunsgaard and Keen (2010) and GFS.

Statutory CIT rates are taken from KPMG's *Corporate and Indirect Tax Survey 2010* from 2001 onward, and from FAD's database of rates for the years before 2001. The latter source draws on the *World Tax Database* compiled by the University of Michigan.

Resource wealth. This dummy is calculated using resource rents from the World Bank's Net Adjusted Saving framework which derives hydrocarbon and mineral rents as the difference between world prices and the average unit cost of extraction, multiplied by total volume of production in any given year. To construct a country-wide resource endowment measure, rents are aggregated to include oil, natural gas, bauxite, copper, lead, nickel, phosphate, tin, zinc, gold, silver, and iron. Resource rich countries at each date are those with estimated rents of more than 10 percent of GDP.

Income groups

Fixed. Countries are grouped following the World Bank methodology which divides countries according to the 2009 gross national income (GNI per capita), calculated using the World Bank Atlas Method.[72] The groups are: low-income, $995 or less; lower middle-income, $996–3,945; upper middle-income, $3,946–12,195; and high-income, $12,196 or more. See Appendix Table 3.

Dynamic. Groups are defined using the GNI per capita in each year, similarly calculated using the World Bank Atlas Method. Low-income countries are those in the bottom 25th percentile of the GNI distribution in any given year. Lower middle-income countries are those in the next 25th percentile, followed by upper middle-income. High-income countries are economies in the top 25th percentile.

[72] To reduce the impact of transitory exchange rate fluctuations in the cross-country comparison of national income, the World Bank converts the GNI in national currency into US dollars using the Atlas conversion factor. The conversion factor is calculated as a three-year average of exchange rates adjusted for the difference between the rate of inflation in the country (using the country's GDP deflator) and that in a selected group of advanced economies (using a weighted average of the countries' GDP deflators in SDR terms).

Appendix Table 2. Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
All countries in the sample					
Government revenue, %GDP	4808	28.7	12.4	0.0	72.7
Government revenue excluding grants, %GDP	4783	27.8	12.8	0.0	72.7
Government taxes, %GDP	4587	20.5	10.9	0.0	61.4
Income Tax, %GDP	3361	6.9	5.6	0.1	46.3
Income Tax - corporate, %GDP	2642	3.0	2.5	0.0	24.2
Income Tax - individuals, %GDP	2445	4.7	4.8	0.0	26.5
Tax on goods and services, %GDP	3269	7.4	4.2	0.0	32.2
VAT revenue, %GDP	1588	5.9	2.5	0.0	14.5
Trade Tax, %GDP	4208	3.6	4.2	0.0	41.8
Resource wealth dummy	5394	0.2	0.4	0.0	1.0
Corporate income tax rate	3080	33.5	11.1	0.0	75.0
VAT rate, 2010	4309	15.8	4.6	3.0	25.5
High income: OECD [N=30]					
Government revenue, %GDP	885	41.5	9.0	17.8	70.9
Government revenue excluding grants, %GDP	885	41.4	9.0	17.8	70.9
Government taxes, %GDP	864	35.4	7.3	8.4	52.2
Income Tax, %GDP	861	12.9	5.2	4.0	31.2
Income Tax - corporate, %GDP	855	3.1	1.8	0.3	13.0
Income Tax - individuals, %GDP	850	9.7	4.9	0.1	26.5
Tax on goods and services, %GDP	859	11.2	3.1	3.7	22.0
VAT revenue, %GDP	691	6.8	2.1	1.0	14.5
Trade Tax, %GDP	750	0.6	0.8	0.0	4.9
Resource wealth dummy	930	0.0	0.1	0.0	1.0
Corporate income tax rate	835	33.8	9.3	8.5	56.0
VAT rate, 2010	899	18.0	5.7	5.0	25.5
High income: nonOECD [N=18]					
Government revenue, %GDP	511	33.8	12.6	13.1	71.6
Government revenue excluding grants, %GDP	511	33.7	12.6	13.1	71.6
Government taxes, %GDP	430	15.7	10.8	0.1	49.3
Income Tax, %GDP	297	5.9	5.6	0.1	39.3
Income Tax - corporate, %GDP	241	2.4	3.3	0.0	24.2
Income Tax - individuals, %GDP	133	2.8	1.8	0.0	6.8
Tax on goods and services, %GDP	238	5.1	4.9	0.0	18.5
VAT revenue, %GDP	81	6.2	3.6	0.1	14.3
Trade Tax, %GDP	387	2.7	3.2	0.0	22.5
Resource wealth dummy	558	0.4	0.5	0.0	1.0
Corporate income tax rate	393	28.9	16.9	0.0	55.0
VAT rate, 2010	279	16.3	4.3	7.0	23.0

Appendix Table 2. Summary Statistics (continued)

Variable	Obs	Mean	Std. Dev.	Min	Max
Low income [N=37]					
Government revenue, %GDP	1023	18.4	8.0	3.1	60.1
Government revenue excluding grants, %GDP	996	15.2	7.0	0.1	52.8
Government taxes, %GDP	1008	13.0	5.5	0.0	36.5
Income Tax, %GDP	619	3.5	2.5	0.4	15.4
Income Tax - corporate, %GDP	283	2.2	2.2	0.1	13.9
Income Tax - individuals, %GDP	304	1.6	1.4	0.1	7.8
Tax on goods and services, %GDP	577	5.0	3.0	0.0	32.2
VAT revenue, %GDP	224	4.9	2.1	0.0	11.1
Trade Tax, %GDP	957	3.7	2.6	0.1	22.0
Resource wealth dummy	1147	0.0	0.2	0.0	1.0
Corporate income tax rate	302	39.0	8.3	20.0	60.0
VAT rate, 2010	837	16.2	2.7	10.0	20.0
Lower middle income [N=48]					
Government revenue, %GDP	1298	26.4	10.8	5.8	72.7
Government revenue excluding grants, %GDP	1300	25.6	10.5	5.8	72.7
Government taxes, %GDP	1223	17.7	7.9	1.1	61.4
Income Tax, %GDP	780	5.0	4.7	0.2	46.3
Income Tax - corporate, %GDP	639	2.9	2.5	0.1	16.5
Income Tax - individuals, %GDP	558	1.9	1.4	0.0	7.3
Tax on goods and services, %GDP	799	6.1	3.1	0.2	18.1
VAT revenue, %GDP	243	5.0	2.4	0.4	14.4
Trade Tax, %GDP	1162	4.9	5.3	0.0	41.8
Resource wealth dummy	1488	0.2	0.4	0.0	1.0
Corporate income tax rate	786	33.5	10.4	0.0	60.0
VAT rate, 2010	1209	13.8	4.1	5.0	20.0
Upper middle income [N=41]					
Government revenue, %GDP	1091	28.5	9.5	0.0	70.1
Government revenue excluding grants, %GDP	1091	27.9	9.2	0.0	70.1
Government taxes, %GDP	1062	20.7	8.2	2.8	50.6
Income Tax, %GDP	804	5.4	3.5	0.2	30.8
Income Tax - corporate, %GDP	624	3.4	2.8	0.0	18.6
Income Tax - individuals, %GDP	600	2.3	1.8	0.0	9.4
Tax on goods and services, %GDP	796	7.1	4.0	0.1	19.6
VAT revenue, %GDP	349	5.2	2.4	0.6	11.8
Trade Tax, %GDP	952	4.6	4.7	0.1	37.9
Resource wealth dummy	1271	0.2	0.4	0.0	1.0
Corporate income tax rate	764	33.3	9.7	10.0	75.0
VAT rate, 2010	1085	15.7	4.1	3.0	22.0

Source: IMF staff estimates.

Appendix Table 3. Fixed Country Grouping

Highlighted countries are those that are ‘resource-rich’ in at least one sample period.

Low-income

Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Central African Rep., Chad, Comoros, Congo, Dem. Rep. of, Eritrea, Ethiopia, Gambia, The, Ghana, Guinea, Guinea-Bissau, Haiti, Kenya, Kyrgyz Republic, Lao People's Dem. Rep, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Sierra Leone, Solomon Islands, Tajikistan, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

Lower middle-income

Angola, Armenia, Belize, Bhutan, Bolivia, Cameroon, Cape Verde, China, P.R.: Mainland, Congo, Republic of, Côte d'Ivoire, Djibouti, Ecuador, Egypt, El Salvador, Georgia, Guatemala, Guyana, Honduras, India, Indonesia, Jordan, Kiribati, Lesotho, Maldives, Moldova, Mongolia, Morocco, Nicaragua, Nigeria, Pakistan, Papua New Guinea, Paraguay, Philippines, Samoa, Senegal, Sri Lanka, Sudan, Swaziland, Syrian Arab Republic, São Tomé & Príncipe, Thailand, Tonga, Tunisia, Ukraine, Uzbekistan, Vanuatu, Vietnam, Yemen, Republic of.

Upper middle-income

Albania, Algeria, Antigua and Barbuda, Argentina, Azerbaijan, Rep. of, Belarus, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Fiji, Gabon, Grenada, Iran, I.R. of, Jamaica, Kazakhstan, Lebanon, Libya, Lithuania, Macedonia, FYR, Malaysia, Mauritius, Mexico, Namibia, Panama, Peru, Russian Federation, Seychelles, South Africa, St. Kitts and Nevis, St. Lucia, St. Vincent & the Grenadines., Suriname, Turkey, Uruguay, Venezuela, Rep. Bol. de

High-income: OECD

Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Republic of, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States.

High-income: nonOECD

Bahamas, The, Bahrain, Kingdom of, Barbados, Brunei Darussalam, China, P.R., Hong Kong SAR, Croatia, Cyprus, Equatorial Guinea, Estonia, Kuwait, Latvia, Malta, Oman, Qatar, Saudi Arabia, Singapore, Trinidad & Tobago, United Arab Emirates.

Appendix IV. Understanding Tax Performance and Effort

An extensive empirical literature[73] **finds revenue performance to be correlated with a wide range of developmental, structural and institutional indicators**. There are many papers regressing some measure of revenue performance against a series of country characteristics. Results vary quite markedly across data sets, with estimation methods and functional form, but there are common findings. These, with the rationales commonly offered, include:

- A higher share of ***agriculture*** in GDP is associated with lower revenue, whether because the sector is hard-to-tax and/or granted preferential tax treatment or because public service provision yields especially high social returns in urban centers;

- Increased ***openness*** tends to be associated with higher revenue. This is most naturally interpreted as reflecting the ease of taxing trade, though Rodrik (1998) argues rather that it reflects a stronger demand for social insurance associated with the greater riskiness implied by increased exposure to external developments. ***Landlocked*** countries, conversely, tend to raise less;

- ***Income per capita*** is positively associated with revenue performance, whether as a proxy for administrative and compliance capacity or through its impact on the demand for public services. Controlling for other variables, however, many studies find—contrary to 'Wagner's Law' (that the share of government tends to increase with income levels)—an income elasticity below unity (or even negative). One possibility is that the distortionary costs of taxation mean the revenue share optimally decreases at higher incomes (Keen and Lockwood, 2010);

- ***Demographics*** can also play a role. Larger ***populations*** are associated with lower tax ratios, reflecting economies of scale in providing public goods (Alesina and Wacziarg, 1998), a negative correlation with openness; and, perhaps, an advantage in international tax games (attracting base from abroad by setting lower tax rates being less costly in terms of revenues from the domestic base foregone). Faster ***population growth*** is associated with lower revenue, perhaps because of the difficulty of tracking and administering a rapidly changing tax-payer population and, in more developed countries at least, ***aging population*** is associated with a higher tax effort, presumably to finance higher social spending;

- Higher ***inflation*** is associated with lower tax revenue: it is an easy tax to collect, bypassing classic channels of legislation and administration—indeed optimal seignorage

[73] Recent examples include Gupta (2007), Le, Moreno-Dodson, and Rojchaichaninthorn (2008), Bird, Martinez-Vazquez and Torgler (2008), Brun, Chambas, and Guerineau (2008) and Pessino and Fenochietto (2010).

is likely higher where administration is weak;[74] it erodes tax revenues when collection lags are significant (Tanzi, 1978):[75] and failure to index specific taxes together with opportunities to expand deductions (of nominal interest against the CIT, for instance) can dominate the positive revenue impact of failing to index PIT and other thresholds and brackets;

- The direction of the contemporaneous relation with ***public debt*** is theoretically ambiguous—high debt may signal low tax collection, or encourage high tax collection—and results differ. In the dataset used in this paper, the latter effect appears to dominate (not reported);

- A ***deep financial sector*** is associated with higher tax ratios. Gordon and Li (2009) emphasize the monitoring role of financial institution, reducing cash transactions and the size of the informal sector. Moreover, banks often collect some forms of tax on capital income;

- Recent work has stressed the potential importance of indicators of the quality of ***governance*** and of ***political and legal institutions***. Corrupt revenue administrations would be expected to collect less official revenue; and a poor quality of the public sector can increase resistance to taxation that expresses itself in avoidance or evasion. There is evidence too that political instability is associated with low tax ratios, and that legal origins also have an impact, with civil law countries generally raising more (see, for instance, Keen, 2010). Bird, Martinez-Vazquez and Torgler (2008) find that greater political 'voice' and accountability is associated with higher revenue, while Persson and Tabellini (2003) report evidence that parliamentary systems are associated with stronger revenue mobilization than presidential ones. Many of these variables tend to be strongly correlated, so disentangling the effects remains works in progress;

- The impact of ***decentralization*** on tax effort has not been clearly established. Assessment of tax performance often focuses on central government tax revenue; this may be justified in developing countries where local tax revenues remain at very low (less than 1 percent of GDP); and

- The links between own-revenue mobilization and ***aid*** and receipts from ***natural resources*** are discussed in Box 3 in the text.

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[74] Developing countries differ in their access to and use of this tool, for instance, in the two monetary unions in Africa: the West African CFA Franc and the Central African CFA Franc. Aisen and Veiga (2008) find that inefficient tax systems induce countries to rely more heavily on seignorage revenue.

[75] Dixit (1991), however, shows that charging interest on tax debts makes the optimal inflation tax independent of the length of the collection lag.

Great caution needs to be used, however, in drawing conclusions on the scope for specific countries to raise more. To the extent that regressors are exogenous—legal and constitutional structures, for instance—they will, by definition, be difficult to change. Attention then shifts to the residuals from such estimated equations. Further difficulties then arise. If the regressors are exogenous (or at least statistically predetermined), the coefficients will reflect not only feasibility constraints—conceivably the same for all countries—on what can be raised (depending on whether a country is landlocked, for instance, or has a particular political structure)—but also the unobserved and (potentially idiosyncratic) policy choices (tax rate and bases) that countries then make in the light of those constraints. Estimates are thus of a reduced form whose coefficients (as in the case of the agriculture share, for instance) conflate constraints and policy functions. This makes it problematic, for instance, to infer scope for the additional revenue that any country might raise simply by examining the residuals of such regressions. For that one would need to identify the feasibility constraint alone.

Appendix V. Estimating Tax Effort

Revenue can be conceived of as a function $R(x,p)$ of exogenous variables x and policy choices p. Assuming a multiplicative form $r(x)I(p)$, and normalizing $max_p I(p) = 1$, maximum revenue is $r(x)$ and $I(p) \in [0,1]$ is an index of 'effort.' To the extent that policy choices—exemptions, intensity of audit activities, and so on—are unobserved, effort is in statistical terms an error term bounded above (in contrast to that in standard regression estimates) by unity. Stochastic production frontier techniques enable country- and time-specific estimation of effort. Intuitively, they do this by comparing revenue raised in each country with that raised by others with similar characteristics.

Appendix Table 4 sets out results based on the application of this methodology (see Greene, 2008) in Pessino and Fenochietto (2010). Further details of estimation strategy, data sources and sample—an unbalanced panel over 1991–2006, excluding countries with receipts from hydrocarbons of more than 30 percent of total tax revenue—are given there. Variables treated as entering *r* are income per capita, the degree of openness of an economy, the value added of the agriculture sector as percent of GDP, public spending on education, and income inequality; corruption and inflation are treated as entering *I*. The two columns show actual tax revenue and estimated effort for the most recent year available. While the technique currently clearly has limitations—in dealing with endogeneity issues, for instance, and in extension to deal with resource wealth—the results are suggestive, and in most cases would conform to widely held presumptions.

Appendix Table 4. Estimated Tax Effort

Country	Tax Ratio (in percent of GDP)	Estimated Effort (in percent)
Low-income		
Bangladesh	8.1	41.0
Burkina Faso	11.3	62.0
Ethiopia	13.2	81.0
Gambia,The	17.1	85.7
Ghana	22.4	86.4
Kenya	18.3	80.6
Madagascar	10.7	52.2
Mali	15.5	74.9
Sierra Leone	11.0	64.8
Togo	14.6	80.3
Uganda	12.9	67.6
Zambia	17.0	92.4
Median	13.9	77.6
Lower middle-income		
Armenia	17.1	55.4
Bolivia	26.6	67.6
Cameroon	12.4	57.6
China, People's Republic of	14.9	42.6
Côte d'Ivoire	16.6	96.1
Egypt	14.1	61.8
El Salvador	15.3	53.8
Guatemala	10.7	38.1
Honduras	17.9	64.6
India	16.4	52.2
Indonesia	12.8	59.8
Jordan	26.4	66.3
Moldova	34.7	88.4
Mongolia	27.2	67.2
Nicaragua	21.5	65.2
Pakistan	9.5	46.9
Papua New Guinea	24.7	94.0
Paraguay	15.3	64.5
Philippines	14.3	60.2
Senegal	16.1	71.6
Sri Lanka	14.8	62.0
Syrian Arab Republic	17.5	74.8
Thailand	19.5	49.0
Ukraine	36.6	87.1
Median	16.5	63.2

Table 4. Estimated Tax Effort (continued)

(In percent of GDP, unless otherwise indicated)

Country	Tax Ratio (in percent of GDP)	Estimated Effort (in percent)
Upper middle-income		
Albania	21.6	79.3
Argentina	27.4	63.6
Belarus	45.7	98.4
Botswana	22.5	64.7
Brazil	34.2	98.0
Bulgaria	33.8	82.5
Colombia	19.6	71.6
Costa Rica	22.2	66.7
Dominican Republic	14.2	48.3
Jamaica	32.4	95.0
Lithuania	30.2	70.7
Malaysia	18.8	50.4
Namibia	26.1	93.8
Panama	14.3	48.3
Peru	15.3	55.3
Romania	27.9	75.1
Russia	32.3	88.0
South Africa	31.2	81.0
Turkey	32.5	89.6
Uruguay	25.0	87.5
Median	26.8	77.2

Table 4. Estimated Tax Effort (continued)
(In percent of GDP, unless otherwise indicated)

Country	Tax Ratio (in percent of GDP)	Estimated Effort (in percent)
High-income		
Australia	30.9	67.2
Austria	41.9	89.1
Belgium	45.4	92.3
Canada	28.5	65.8
China, Hong Kong SAR	16.6	28.3
Croatia	40.2	75.3
Czech Republic	36.7	81.2
Denmark	49.1	94.7
Estonia	30.8	71.7
Finland	43.5	95.1
France	44.7	96.0
Germany	35.7	78.2
Greece	27.4	64.3
Hungary	37.1	92.5
Iceland	41.4	71.0
Ireland	30.6	69.1
Italy	42.7	96.6
Japan	27.4	59.0
Korea, the Republic of	26.8	52.8
Latvia	29.3	68.7
Luxembourg	36.3	72.0
Netherlands	39.5	85.3
New Zealand	34.3	80.1
Norway	43.6	80.3
Poland	34.3	86.2
Portugal	35.4	78.6
Singapore	12.7	22.3
Slovak Republic	29.6	75.1
Slovenia	39.4	85.2
Spain	37.2	79.5
Sweden	50.1	98.1
Switzerland	30.1	60.3
United Kingdom	37.4	79.9
United States	27.3	62.4
Median	36.0	78.4

Source: FAD, based on Pessimo and Fenochietto (2010), Table 3, truncated normal.

Appendix VI. Strong Performers—Three Examples

El Salvador

Significant and well-designed base-broadening measures have been adopted over the last six years, improving both efficiency and fairness. These reforms included: (1) restricting VAT zero-rating to exports; (2) eliminating exemptions on interest earned in banks licensed abroad and on income from interest and capital gains of individuals; (3) establishing a tax on registration of new vehicles; (4) broadening the income tax withholding base for non-residents; (5) introducing a mixed (ad valorem and specific) system of excises on tobacco and alcoholic and non-alcoholic beverages, replacing the previous system of ad valorem rates to ensure that reasonable tax is paid even on the cheapest products; (6) introducing provisions to deal with transfer pricing, previously absent, and rules addressing thin capitalization; (7) eliminating subsidies on exports; and (8) increasing the tax on lottery prizes from 5 to 15 percent, partly to counter money laundering.

These simplifications reduced the burden on an already challenged tax administration. As a result of these reforms the tax system is now simpler and the tax laws are of good quality by international standards. With only a few and largely standard exemptions (financial services, health, education, and imported capital goods) and only one positive rate (13 percent) the Salvadorian VAT has a good design; at 52 percent, C-efficiency is among the highest in Latin America.

Reflecting these reforms, tax revenue increased from 10.9 percent of GDP in 2004 to 13.4 percent in 2010. Beyond the revenue increase, these policy changes have taken El Salvador significantly further towards a tax system centered on low customs duties, a broad-based VAT and sensitivity to equity concerns. Progress on administrative reform, however, has been less marked.

Tanzania

Major reforms of policy and administration have been undertaken over the past decade to address low revenue collection, with implementation guided by five-year plans of the semi-autonomous Tanzania Revenue Authority (TRA) and supported by development partners.

The authorities sought to raise revenue without increasing tax rates by strengthening the TRA's capacity, through: integrating its operations, introducing taxpayer segmentation, and making better use of IT. Key reforms included: the introduction of a common taxpayer identification number (TIN) for all taxes, creation of a Large Taxpayers Department and consolidation of VAT and income tax administration into a single, functionally-structured Domestic Revenue Department. Registration compliance was improved by such measures as allocating geographical groups of taxpayers to a specific team with clear performance targets, and improving assistance to small taxpayers in understanding and complying with their obligations. A new income tax law (2004) introduced self-assessment and rationalized small taxpayer administration, and an increase in the VAT threshold focused the TRA's operations on high-yield taxpayers. Modernization of the customs department focused on interfacing its operations with domestic revenue operations, better risk management (expediting clearing procedures for importers with a good record) and introducing web-based customs clearance operations.

Policy reforms brought significant simplification. The number of brackets of the PIT was reduced and the top marginal rate was cut (from 35 to 30 percent) and aligned with the CIT rate. The exempt amount under the PIT was increased, and indefinite carry forward of losses allowed. Presumptive income tax rates were adjusted to reduce inconveniences to small-scale businesses, capital gains taxation was reinstated, and an alternative minimum tax was introduced for companies reporting losses for 3 consecutive years. Special VAT reliefs to nonprofits were scaled down, and excise duty rates inflation-indexed.

Tax revenue increased steadily, from 9 percent of GDP in 2000 to 15.3 percent in 2009 (a retreat to 14.6 percent in 2010 being partly due to a two point cut in the VAT rate in response to the financial crisis). There remains scope to do more—including by scaling back exemptions (amounting to 3½ percent of GDP in 2007/08), enforcing property taxes, moving to a single domestic tax department and reviewing the mining tax regime—but the achievements are considerable.

Vietnam

The last five years have seen sweeping reforms in both policy and administration. These have been guided by a five-year Tax Reform Plan (2005–10) intended to create a tax system appropriate to Vietnam's changing economic conditions. Their implementation has benefited from substantial IMF TA.

The tax policy regime has been considerably rationalized. The CIT has been strengthened by: unifying the rate structure (at 25 percent, rather than 28 and 15); removing some incentives; permitting deductions for reasonable expenses; and transferring unincorporated businesses to the PIT. The VAT has been improved by restricting zero-rating to exports, eliminating the discrimination between domestic and imported products and reducing exemptions. The PIT has also undergone comprehensive change: capital income has been brought into tax; the 30 percent surcharge was eliminated; the tax brackets were significantly broadened; the top marginal rate has been lowered (from 40 percent to 35 percent); and tax allowances for dependents have been introduced.

Tax administration has also undergone significant transformation and strengthening. A new Law on Tax Administration, enacted in 2006, combined in a single law all administrative procedures common to each substantive tax law and considerably broadened the powers of the General Department of Taxation (GDT) to administer the tax system. The GDT's headquarters and its network of tax offices were re-organized into functionally-based units. The traditional system of administrative assessments—which had been applied to the VAT, for which it is especially unsuited—has been replaced by a modern self-assessment system, and a supporting set of tax administration procedures has been introduced. All tax offices are now connected via a computer network and a broad range of IT applications has been developed to support core tax administration functions. Steps have also been taken to upgrade staff skills, which has been supported by the creation of a tax college within the GDT.

Reflecting these reforms, tax revenue has increased significantly and other important benefits have been realized. As a share of GDP, tax revenues increased from an average of 19.6 percent over 2001–04 to an average of 23.7 over 2005–08. Beyond the revenue increase, the tax policy reforms have been positive steps towards building a tax system conducive to economic development and dealing with increased exposure to the global economy. Similarly, the tax administration reforms have better-positioned the GDT to administer an increasingly market-oriented economy.

Appendix VII. Taxing Natural Resources—Issues and Principles[76]

The features of the natural resource sector pose particular challenges for tax design—and mistakes can be very costly. Investments commonly involve high sunk costs, perhaps billions of dollars for a project that can last decades; rents are potentially substantial; output prices are highly variable; revenue is often the major benefit for the home country; investors are commonly multinationals capable of sophisticated tax planning; and—for hydrocarbons and minerals—the resource itself is exhaustible. Issues of credibility, the sharing of risk and return between investors and home government, and effective administration are thus paramount. While similar issues arise in other sectors, they loom especially large in natural resources. They also make errors especially damaging. Granting exemptions or preferences not available under general legislation, for instance, is costly and hard to undo without damaging the government's credibility. Examples of this abound, especially in sub-Saharan Africa, among which recent mining agreements in Sierra Leone and Liberia are prominent.

For developing countries, a combination of royalties and profit-sensitive taxes is often appropriate, with close attention to detail and implementation also needed. While royalties can distort extraction and investment decisions, they pass additional risk to investors—who may be better placed to accept them than are the governments of many lower-income countries—and assure an early and visible revenue return to the government. Profit-sensitive taxes can ensure that the government shares visibly in any rents, not least when prices are high—this is both fair in itself and potentially conducive to sustainability and credibility of tax regimes. Schemes of broadly this kind are in place in, for instance, Angola, Mozambique, and Namibia for petroleum, and in Botswana, Liberia, and Malawi under general legislation for mining. Detail of other aspects can be important too, such as depreciation and exploration allowances, and the ring-fencing of projects (to limit the use of tax losses to shield profitable projects from tax).

FAD provides extensive TA in resource taxation—now supported by a dedicated Topical Trust Fund—and has developed specialist software. By enabling project-specific simulation of fully-specified tax or contract regimes, the 'FARI' (Fiscal Analysis for Resource Industries) model is intended to better inform governments' policy decisions.

Efficient natural resource fiscal regimes complement other initiatives towards sound management of natural resource revenues. The IMF has published a *Guide on Resource Revenue Transparency*, extending the principles of the Extractive Industries Transparency Initiative across not only tax policy but also public financial management. The Kimberley Process Certification Scheme for diamonds began as an effort to eliminate conflict diamonds, but also supports revenue assessment and collection. The Natural Resource Charter is an

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[76] The analysis here is spelled out in the various contributions to Daniel, Keen and McPherson (2010). On the challenges that natural resource wealth poses for macroeconomic management more widely, including the allocation between productive investment, current consumption and the accumulation of financial assets, see Davis, Ossowski, and Fedelino (2003) and Venables (2010).

independent initiative to set out principles of good practice in natural resource revenue management, to which FAD staff has also contributed. Transparent and well-designed fiscal regimes for natural resources are now widely recognized as essential for effective governance in resource-rich countries.

Appendix VIII. Estimated Revenue Gains from Increasing VAT Efficiency

C-efficiency is $E^C \equiv R/\tau C$, where R denotes VAT revenue, τ the standard rate and C consumption. Rearranging, the change in revenue associated with increasing efficiency at an unchanged standard rate, as reported in Appendix Table 5, is:

$$\Delta\left(\frac{R}{Y}\right) = \tau\left(\frac{E^C}{E^Y}\right)\Delta E^C$$

where $E^Y \equiv R/\tau Y$, Y being *GDP*, and E^C/E^Y is treated as constant.

Appendix Table 5. VAT Efficiency by Income Group

Country	Standard VAT rate	VAT revenue (in percent of GDP)	**C- efficiency (%)**	Revenue gain from raising C-efficiency to: 100% median	80% median	120% median
Australia	10	3.9	**52.8**	0.09	--	0.89
Austria	20	8.0	**54.3**	--	--	1.54
Belgium	21	7.1	**45.6**	1.31	--	2.99
Canada	7	3.3	**64.4**	--	--	0.02
Czech Republic	19	7.2	**53.3**	0.09	--	1.55
Denmark	25	10.0	**54.0**	--	--	2.00
Finland	22	8.7	**53.3**	0.11	--	1.87
France	19.6	7.3	**46.1**	1.25	--	2.95
Germany	16	6.2	**50.2**	0.47	--	1.82
Greece	19	6.9	**40.6**	2.26	0.44	4.08
Hungary	20	8.4	**54.2**	--	--	1.65
Iceland	24.5	11.1	**53.9**	0.01	--	2.23
Ireland	21	7.5	**57.8**	--	--	0.90
Israel	16.5	8.0	**59.4**	--	--	0.72
Italy	20	6.0	**37.8**	2.56	0.85	4.27
Japan	5	2.6	**69.6**	--	--	--
Korea, Republic of	10	4.2	**61.7**	--	--	0.21
Luxembourg	15	6.0	**77.2**	--	--	--
Netherlands	19	7.5	**54.6**	--	--	1.41
New Zealand	12.5	8.7	**90.6**	--	--	--
Norway	25	7.9	**50.5**	0.54	--	2.23
Portugal	21	8.5	**46.9**	1.27	--	3.21
Singapore	5	1.8	**72.2**	--	--	--
Slovak Republic	19	7.9	**54.7**	--	--	1.44
Slovenia	20	8.6	**59.1**	--	--	0.84
Spain	16	6.2	**51.3**	0.33	--	1.63
Sweden	25	9.0	**48.2**	1.08	--	3.09
Switzerland	7.6	3.9	**71.7**	--	--	--
Trinidad & Tobago	15	3.0	**36.9**	1.37	0.50	2.23
United Kingdom	17.5	6.7	**44.0**	1.50	--	3.13
Average high income	*17.1*	*6.7*	***55.6***	*0.95*	*0.60*	*1.96*

Appendix Table 5. VAT Efficiency by Income Group (continued)

Country	Standard VAT rate	VAT revenue (in percent of GDP)	C-efficiency (%)	Revenue gain from raising C-efficiency to: 100% median	80% median	120% median
Bangladesh	15	2.8	**23.4**	1.70	0.80	2.60
Benin	18	7.4	**44.7**	--	--	0.06
Burkina Faso	18	6.3	**36.6**	0.17	--	1.46
Central African Rep.	18	3.7	**20.6**	3.00	1.67	4.33
Chad	18	0.7	**5.1**	4.27	3.28	5.25
Ethiopia	15	6.1	**42.9**	--	--	0.31
Ghana	12.5	9.7	**80.4**	--	--	--
Guinea	18	3.3	**22.6**	2.20	1.10	3.31
Kenya	16	8.5	**57.2**	--	--	--
Madagascar	20	6.2	**34.5**	0.55	--	1.91
Malawi	17.5	8.1	**44.1**	--	--	0.19
Mali	15	7.3	**52.4**	--	--	--
Mozambique	17	7.1	**44.7**	--	--	0.07
Nepal	13	3.8	**33.7**	0.44	--	1.29
Niger	19	4.0	**22.9**	2.55	1.25	3.86
Nigeria	5	1.5	**47.9**	--	--	--
Pakistan	15	3.6	**27.4**	1.34	0.35	2.33
Rwanda	18	5.9	**35.7**	0.30	--	1.54
Tanzania	20	6.5	**38.6**	--	--	1.10
Togo	18	3.2	**19.5**	2.93	1.71	4.15
Uganda	18	7.3	**45.9**	--	--	--
Zambia	17.5	7.4	**54.6**	--	--	--
Average low income	*16.4*	*5.5*	***38.0***	*1.77*	*1.45*	*2.11*
Armenia	20	5.9	**34.3**	2.24	0.61	3.87
Cameroon	19.25	5.0	**31.4**	2.51	1.02	4.01
Cape Verde	15	7.0	**50.1**	--	--	0.93
China,P.R.: Mainland	17	6.5	**71.0**	--	--	--
Congo, Republic of	18.9	2.3	**29.3**	1.42	0.67	2.16
Côte d'Ivoire	18	5.3	**35.3**	1.80	0.38	3.21
Georgia	18	8.5	**56.0**	--	--	0.12
Lesotho	14	7.8	**44.6**	0.47	--	2.12
Moldova	20	12.2	**55.5**	--	--	0.29
Paraguay	10	5.2	**63.3**	--	--	--
Peru	19	5.6	**38.9**	1.23	--	2.60
Ukraine	20	7.7	**50.0**	--	--	1.04
Average lower middle income	*17.4*	*6.6*	***46.6***	*1.61*	*0.67*	*2.03*
Belarus	18	6.34	**48.4**	0.26	--	1.58
Botswana	10	4.01	**70.5**	--	--	--
Bulgaria	20	11.21	**63.6**	--	--	--
Chile	19	8.14	**61.9**	--	--	--
Croatia	22	12.20	**69.1**	--	--	--
Equatorial Guinea	15	0.05	**2.2**	1.18	0.93	1.43
Gabon	18	4.46	**58.6**	--	--	0.14
Jamaica	16.5	6.98	**48.8**	0.22	--	1.67
Kazakhstan	15	4.49	**49.0**	0.13	--	1.05
Latvia	18	7.47	**51.9**	--	--	1.23
Mexico	15	3.45	**29.9**	2.37	1.21	3.53
Namibia	15	5.29	**42.3**	1.01	--	2.27
Poland	22	7.56	**42.2**	1.47	--	3.28
Russian Federation	18	6.77	**56.3**	--	--	0.50
South Africa	14	8.58	**74.2**	--	--	--
Tunisia	18	6.58	**46.4**	0.56	--	1.99
Turkey	18	5.29	**35.2**	2.28	0.76	3.79
Uruguay	23	9.31	**50.4**	--	--	1.86
Venezuela, Rep. Bol.	14	6.42	**79.3**	--	--	--
Average upper middle income	*17.3*	*6.6*	***51.6***	*1.05*	*0.97*	*1.87*

Source: IMF staff estimates.

Notes: Standard rates and C-efficiency as at 2005, calculated using final consumption expenditure.

Appendix IX. Zambia: Building and Maintaining a VAT

Rate and base. When introduced in 1995, the VAT had a single rate of 20 percent, and a broad base with zero-rating only for exports. But more preferences were added over time (for some agricultural products, foods, medical supplies and drugs) including, since 2002, increasing numbers of tourist activities. From 2008, the standard rate was reduced from 17.5 percent to 16 percent.

Revenue and efficiency. Revenues peaked at 6.1 percent of GDP in 2001, but since 2004 have been declining steadily to around 3.8 percent of GDP in 2009. This was not simply a consequence of the rate cut: the efficiency ratio (relative to GDP) has fallen from about 29 percent in 2002 to around 24 percent in 2009. Options to increase the yield include bringing fee-based banking and property and casualty insurance into tax, removing the exemption of passenger transportation services (raising about 0.1 percent of GDP) and fully taxing tourism (0.2 percent).

Organizational reform. As is typical in Anglophone countries, Zambia created a new division separate from income tax administration, but under the roof of a semi-autonomous revenue authority created a year earlier to deliver common services and systems. In 2009, integration of VAT and income tax administration culminated in the creation of a specialized large taxpayer office.

Threshold and small businesses. The original VAT threshold was K 30 million (then US$ 30,000), but by 2001 it was equivalent to only US$ 8,000. Half of the then 10,000 registered taxpayers were below the threshold and had registered voluntarily, but exhibited very poor compliance. The threshold was increased in 2002 to K 200 million (then around US$75,000, now US$45,000) and voluntary registration removed. Given the difficulties that small businesses then faced in transacting with registered VAT taxpayers, voluntary registration was reintroduced in 2007. As commonly found elsewhere in Anglophone Africa, all VAT taxpayers were required to file and pay monthly until 2007, when quarterly arrangements were introduced for voluntary VAT registrants.

Mineral exports. Zambia's dependence on mineral exports made effective VAT refunding especially important. After an initial attempt to avoid the difficulty by deferring VAT on imports resulted in revenue leakage and noncompliance, a robust refund mechanism was introduced in 2005. Since 2005, financing of refunds has been ring-fenced, based on returns submitted by the end of one month, and is made from gross VAT (domestic and import) collections in the following month, before the net balance is transferred to the Treasury. Refund processing times have since averaged a few weeks, and between 2004 and 2006 Zambia refunded approximately 38 percent of gross VAT collections, a much higher ratio than many African countries, and consistent with more developed exporting economies. Given the revenue importance of the sector and of managing its refunds appropriately, the LTO now includes a specialized mining audit unit.

Appendix X. Dangers of Tax Holidays

Tax holidays are time-limited exemptions from the CIT, which may or may not be renewable. They are widely regarded as a particularly ill-designed form of investment incentive, and one that poses considerable dangers to the wider tax system:

- Unless offered for periods so long that investors are likely to doubt their credibility, they are most attractive to the most footloose firms, which are those likely to bring the least benefit to the wider economy (such as textiles and assembly of light manufacturing goods).

- They are open to abuse, undermining tax revenue by providing entrepreneurs with a strong incentive to use transfer pricing and financial arrangements to shift taxable profits into holiday enterprises: by arranging, for example, for taxpaying companies (able to deduct the interest payments) to borrow from holiday companies (not taxable on interest received). Such devices can operate across national borders, and also between domestic firms. However clever the legal provisions crafted to address this risk, experience suggests that companies will prove adept in finding ways to avoid them. Even the most developed tax administrations have great difficulty dealing with such abuse.

- For foreign investors resident in countries operating a foreign tax credit system, the benefits of the holiday will be undone when profits are repatriated. All the holiday then achieves (unless a double tax agreement with the residence country provides for 'tax sparing'—meaning that they do not offset the holiday by reducing the foreign tax credit available—which is now rarely the case) is a transfer of tax revenues to the residence country. It may well be, however, that multinationals have enough ways of deferring repatriation for this not to be a primary consideration in practice.

- Unless depreciation allowances can be carried forward out of the holiday period, the incentive to invest towards the end of a holiday may actually be lower than it would be under the regular corporate tax system, as investors defer investment in order to take full advantage of such allowances (Mintz, 1990).

- By offering tax holidays, a government is in effect, to some degree, signaling its own untrustworthiness in tax matters: otherwise a firm that intends to stay beyond the holiday period (which is presumably the type that it is the object of policy to attract) would find even more attractive the promise of a low, constant rate of tax implying a present value of payments below that implied by the holiday.

- Many companies apparently find holidays attractive because they spare them the necessity of dealing with corrupt or inefficient tax administrations. Thus offering a holiday can itself signal a corrupt or inefficient tax administration, and distract from the need to address such underlying problems.

Appendix XI. Regional Agreement on Corporate Taxation—Possible Principles

Freedom to Invest: All investors, domestic and foreign, can invest in all sectors, subject to investment registration, and with the following exceptions: [A short negative list, different for each country, could be inserted here].

National Treatment: Domestic and foreign investors shall be entitled to make investments in participating countries on the same terms.

Non-Discrimination: There will be no discrimination between foreign investors and domestic.

Repatriation: Each country will permit prompt transfer of funds related to foreign investment—such as profits, dividends, royalties, loan payments and from liquidations—in freely convertible currency.

Expropriation: Investments will not be expropriated except for a public purpose and on a non-discriminatory basis. If property is expropriated, there will be prompt payment of adequate compensation.

Transparency: The investment incentive system of each country, including its laws, regulations, guidelines, and administrative procedures, shall be transparent and readily available.

Investment Incentives:

- Any incentives must be in the law and available to all investors on the same terms and not subject to administrative discretion.

- Countries agree not to compete by offering tax holidays or profit-tax rates below the standard rate in each country.

- Any investment tax incentives that are provided must be directly related to the amount of investment (such as accelerated depreciation, investment allowances, or tax credits) and cannot favor particular sectors or activities.

Standard Tax Rate: Each country commits not to reduce the standard corporate tax rate below [insert rate].

New Investment Tax Incentives: Countries agree not to introduce new investment tax incentives or extend the scope of or increase existing ones that are inconsistent with the guidelines above.

Rollback of Existing Investment Tax Incentives: Countries commit to amend their existing laws and established practices to eliminate investment tax incentives inconsistent with these principles by [insert date]. Companies that, prior to [date] have been awarded incentives counter to these principles should be ‘grandfathered,’ that is, continue to enjoy the incentives during the period the incentives were promised, assuming they continue to meet the conditions for them.

Tax Expenditures: Each country will develop and publish tax expenditures that will cover, at a minimum, all tax incentives inconsistent with these principles.

Monitoring and Enforcement: A committee will be established to monitor compliance, including identifying tax measures in each country that are not in accordance with these principles. Each country will be allowed to lodge a complaint against the practice of another country. The latter will be given a chance to respond, and the committee will issue a non-binding opinion at the end of the process.

Appendix XII. Experience with Unilateral Removal of Tax Incentives

China removed in 2008 a five-year break for foreign investors (two years at zero percent, then three at half the standard rate of 33 percent), in favor of a single rate of 25 percent. Reduced CIT rates (of 15 percent and 24 percent) were also eliminated in favor of the single 25 percent rate.

Egypt passed a new income tax law in mid-2005 that reduced the top marginal tax rates on income and profits from 32 to 20 percent for individuals and from 40 to 20 percent for corporations and partnerships (rates for petroleum, the Suez Canal authority, and the central bank were left at 40 percent). This reform also increased the personal exemption threshold, liberalized normal depreciation (equipment and machinery are now eligible for a 30 percent deduction in the first year of use with normal depreciation rates applying therefore to the remaining balance), and provided for the phasing out of tax holidays while grandfathering current beneficiaries. Importantly, these reforms have been accompanied by extensive and continuing reforms of tax administration, including the successful introduction of self-assessment and a reform of the tax treatment of small- and medium-size enterprises. Between 2005 and 2006, FDI into Egypt doubled.

Mauritius removed most existing tax incentives (tax holidays, exemptions and investment tax credits) for companies with the exception of those already granted. The only notable remaining investment incentive is a four-year tax holiday for income derived by a small enterprise or handicraft enterprise under the Small Enterprises and Handicraft Development Authority Act of 2005, designed to encourage regularization of informal businesses. In addition, the standard corporate tax rate was reduced from 25 to 15 percent from July 2007, thereby harmonizing it with the prevailing rate on tax-incentive companies. (The PIT rate structure was also changed to a flat rate of 15 percent). Foreign direct investment was strong following these changes, with net inflows as a percent of GDP doubling in 2006 over 2005, to about 1 2/3 percent, and almost tripling in 2007, to 4½ percent of GDP. The share of net inflows was similar for 2008 and 2010, although there was a slight dip in 2009. Most of the increase in FDI was in the tourism, real estate (including purchase of property by nonresidents), and, especially, the financial services and insurance sectors (where there were a number of regulatory changes). During this period, CIT revenue also increased significantly, from about 2½ percent of GDP in 2006/07 and 2007/08 to 3.8 percent in 2008/09, and 3.6 percent of GDP for the six-month period July–December 2009.

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