Taxation in PEFA Assessments

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On behalf of
Federal Ministry
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and Development

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Findings from 26 Country Reports

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The International Tax Compact (ITC) is an international initiative to fight against tax evasion and inappropriate tax practices in developing countries. The German Federal Ministry for Economic Cooperation and Development (BMZ) has launched the initiative and commissioned GIZ and KfW to support the implementation.

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Content

Acronyms and Abbreviations

DAC	Development Assistance Committee
EC	European Commission
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH / German Technical Cooperation
IMF	International Monetary Fund
ITC	International Tax Compact
KfW	German Development Bank
M1	Scoring Method 1
M2	Scoring Method 2
OECD	Organisation for Economic Cooperation and Development
PEFA	Public Expenditure and Financial Accountability
PFM	Public Financial Management
PI	Performance Indicator
UK	United Kingdom
HDI	Human Development Index

Executive Summary

The strengthening of tax systems and support for developing countries' efforts to increase their domestic revenues are receiving growing attention within development cooperation. The Public Expenditure and Financial Accountability (PEFA) Framework is an important source of information regarding public financial management in specific countries, including data on tax systems and practices. This paper aims to analyse the tax-related information in PEFA assessments in order to: (a) systematise existing knowledge on the performance of the revenue side of PFM systems, and (b) identify lessons learned with a view to intensifying efforts to mobilise domestic resources, especially in the fight against tax evasion and tax avoidance.

Furthermore, this growing interest in tax matters poses challenges to aid effectiveness and donor coordination in the area. PEFA is sometimes used as benchmark for public financial management issues – mainly on the expenditure side of the budget – but has not similarly been used until now for domestic revenues issues. An examination of PEFA indicators applied to the field of tax might therefore also help appraise and develop a comparable tax tool or adapt PEFA as a tool to assess tax administration performance.

To this end the tax indicators of 26 countries' PEFA assessments were analysed, equivalent to approximately 50% of those countries with publicly available reports. The analysis includes 11 sub-Saharan African countries, 4 Latin American countries and 6 from Eastern/Central Europe along with Central Asia and Bangladesh, India (Himachal Pradesh), Morocco, Nepal and Yemen.

The PEFA Measurement Framework includes four tax-related indicators: PI-3 Aggregate revenue out-turn compared to original approved budget; PI-13 Transparency of taxpayer obligations and liabilities; PI-14 Effectiveness of measures for taxpayer registration and tax assessment; and PI-15 Effectiveness of collection of tax payments. Of these, PI-3 is a one-dimensional indicator, while PI-13, 14 and 15 each contain three sub-dimensions to be assessed. PEFA reporting therefore includes a total of 10 tax-related indicators.

The results can be summarised as follows:

With regard to indicator PI-3, most countries do not have substantial problems in forecasting their revenues. However, this indicator captures only negative variations from planning and many countries have weak forecasting capabilities, resulting in highly underestimated revenues, while still scoring (A). The validity of this indicator is limited and the PEFA Secretariat is therefore currently in the process of revising it.

In terms of the relationship of taxpayers to revenue authorities, measured with indicator PI- 13, the PEFA analysis at first suggests a positive pattern, which becomes more critical when the sub-indicators are examined more closely. In summary, comprehensiveness and clarity regarding all major taxes is exceptional in our sample – the great majority of countries do not have fair, transparent and effective appeals systems, although around half the governments provide sufficient information about the revenue framework. Assessments must be read with great caution – there are many indications that the PEFA evaluation teams utilise different scoring values for similar situations. Furthermore, the design of the indicators does not necessarily imply that a positive rating in PI-13 goes hand in hand with well-oriented taxpayers, who are aware of how to comply with their tax responsibilities.

Taxpayer registration and tax assessment, measured through PI-14, are clearly an issue in many countries. Only two countries – Peru and South Africa – were found to have fully implemented effective measures for taxpayer registration and tax assessment as defined in the PEFA framework. For most countries, there is no guarantee of taxpayer registration in complete database systems; data processing is at the very least hampered by the heterogeneous systems for various types of taxes, not to mention the lack of linkage to other important databases. This means that revenue administrations are seriously limited in their capacity to work with information from various sources, which in turn constrains their ability to audit and investigate, even though many countries have carried out the required audit planning.

The indicator PI-14 is most important in the (automatic) exchange of information – a major topic in the debate on international efforts to fight tax evasion and avoidance. The PEFA assessments on indicator PI-14 (i) demonstrate that most countries in the sample do not have the technical background – or possibly capacity – to provide tax-related information reliably and systematically and are therefore unable to make the required information available to the Global Forum on Transparency and Exchange of Information on Tax Purposes (OECD).

The fourth tax indicator (PI-15) measures the effectiveness of tax collection on an aggregate level. The picture is dominated by low scores for sub-indicator PI 15 (i) – the collection ratio for gross tax arrears. Tax arrears are a major problem for many countries, even those pursuing major reform programmes. Indicator PI (15) does not distinguish between former and actual arrears and therefore cannot appraise reform efforts against historical problems that often lack the legal basis for resolution in the present. Furthermore, PI (15) is an aggregated indicator revealing more about treasury cash flow management than about the capacity of tax administrations to collect taxes. Such tax-collecting capacity is of utmost interest and should possibly be measured through a framework such as the PEFA.

Do PEFA indicators relate to macro and development indicators?

We compared the PEFA indicator scoring in our sample with other general indicators from the respective countries, in spite of methodological concerns about converting ordinary PEFA letter ratings into numbers. We anticipated that better PEFA indicators would go hand in hand with higher tax ratios, a better HDI index and higher GDP growth rates.

Overall, it proved impossible to identify any strong correlation: the only PEFA tax indicator that can be related to other indicators is PI-3 – a rather general measure of budget planning compliance for domestic revenues. The only conclusion that can therefore be drawn from this exercise is that countries with high tax ratios or higher ranking on HDI tend to overestimate their revenues in the budget to a lesser extent than others. This is not a very far-reaching conclusion.

Benchmarking tax performance with PEFA assessments: Benchmarking with PEFA is difficult, because there are strong methodological objections to comparisons of assessments between countries and over time. Nevertheless, the screening of the 26 reports demonstrates that PEFA assessments can provide very valuable information at country level and that it is worth continuing to refine the set of indicators in order to enable an appropriate reflection of the performance of tax systems. The emergence of taxation and development as high priorities on the international development policy agenda has intensified the need for discussion of reform objectives, agendas, the sequencing of reforms and best practice criteria.

PEFA tax indicators do not currently provide a full and clear picture of the status of national public revenue systems and their administrations, and only where reports provide ample and additional information it is possible to identify the main constraints of such systems and set priorities for reform. This is precisely what is needed in order to coordinate and harmonise support for public resource mobilisation in developing countries. It is therefore important to intensify international discussion on essential elements in the assessment of tax systems.

PEFA is broadly accepted and used as an assessment tool in development cooperation and we suggest using PEFA as the starting point for a discussion as to whether benchmarking is at all possible and desirable in the area of public revenues, and if so, even to a limited extent, what its essential elements would be. Other available assessment tools can provide useful guidance regarding the essential elements to be included. Finally, this discussion should acknowledge the sensitivity of the topic by including a broad range of partners and individual countries, regional tax fora and organisations, UN actors in the field and bilateral and multilateral donors.

1. Introduction

1.1 Why this analysis?

The strengthening of tax systems and support for developing countries' efforts to increase their domestic revenues are receiving growing attention within development cooperation. The Monterrey (2002) and Doha (2008) declarations emphasised the importance of domestic resource mobilisation for sustainable development. Many international and national initiatives and platforms have emerged in recent years, further underlining the importance of the issue. Most recently, for example, the EU Council adopted the communication on "Tax and Development – Cooperating with Developing Countries on Promoting Good Governance in Tax Matters". The African Development Bank has also dedicated its "African Economic Outlook 2010" to the issue of domestic resource mobilisation.

The mapping of existing support programmes and assessment of needs in order to design appropriate support for partner countries have become major pre-occupations in the various fora. The International Tax Compact (ITC) – an initiative to strengthen international cooperation with developing and transition countries to fight tax evasion and avoidance – is especially interested in the capacities of partner countries to implement reforms in tax policy and administration, with a view to increasing domestic resources and contributing to state building.

The PEFA Framework is an important source of information regarding public financial management in specific countries, including data on tax systems and practices. This paper aims to analyse the tax-related information in PEFA assessments in order to

(a) systematise existing knowledge on the performance of the revenue side of PFM-systems;

(b) identify lessons learned with a view to intensifying efforts to mobilise domestic resources, especially in the fight against tax evasion and tax avoidance.

Furthermore, this growing interest in tax matters poses challenges to aid effectiveness and donor coordination in the area. PEFA is sometimes used as benchmark for public financial management issues – mainly on the expenditure side of the budget – but has not similarly been used until now for domestic revenues issues. An examination of PEFA indicators applied to the field of tax might therefore also help appraise and develop a comparable tax tool or adapt PEFA as a tool to assess tax administration performance.

1.2 PEFA Assessments

The PEFA Program was launched in December 2001. It has since been steered and financed by the World Bank, the European Commission (EC), the International Monetary Fund (IMF) and the UK, Switzerland, Norway and France.

Its methodology – the PEFA Public Financial Management (PFM) Performance Measurement Framework – was developed by 2004, based on the HIPC expenditure tracking benchmarks, and tested during 2005/06. The refined June 2005 version is in widespread use today and has been translated into 11 languages.

The latest PEFA monitoring report[1] referring to the period 2007–2009 lists 151 "substantially completed" assessments in 102 countries. These collected PEFA reports have generated an extensive database, and besides being used for its initially intended purposes – policy formulation and measuring PFM progress over time for monitoring and evaluation at country level and feeding into respective policy dialogue – PEFA data are also used by donors for reporting, by the World Bank for its Country Policy and Institutional Assessment (CPIA) and increasingly by researchers. This broader use has led the PEFA Secretariat to distribute some guidance[2] material on the use of PEFA assessment data over time and across countries, which has also been taken into consideration in the present analysis.

The PEFA Performance Measurement Framework identifies six critical dimensions of performance in an open and orderly PFM system: (1) credibility of budget; (2) comprehensiveness and transparency; (3) policy-based budgeting; (4) predictability and control in budget execution; (5) accounting, recording and reporting; and (6) external scrutiny and audit. For these core dimensions, a set of 28 indicators (see list in Annex 1) measures the

1 http://www.pefa.org/report_studies_file/Monitoring%20Report%20MR09%20-Final%20-%20Feb2010_1266426682.pdf

2 http://www.pefa.org/report_file/Note%20on%20aggregation%20and%20comparison%20of%20PEFA%20ratings-May09Final_1245358650.pdf

operational performance of key elements of the PFM systems, processes and institutions of a country's central government, legislature and external audit. It also includes a set of 3 indicators measuring donor performance. Within this framework, four indicators refer directly to taxation.

1.3 The Sample: Country Selection

This analysis focuses only on tax indicators. In order to compare the scoring by indicators and use the narratives in the PEFA reports to assess scoring results – as universally recommended by the PEFA Secretariat[3] – it was necessary to restrict the sample to a manageable size.

The sample for our analysis was chosen from the publicly available reports on the PEFA website at the end of 2009: 55 reports and 3 assessments without report in 49 countries. Consequently only finalised and published reports were included. A key selection criterion was that reports were up-to-date, i.e. the most recent reports from end 2009. We also sought to include as broad a regional perspective as possible, which proved difficult as most PEFA assessments are elaborated on to sub-Saharan Africa. Moreover, as a study initiated by German Development Cooperation, we sought where possible to choose countries where Germany has made contributions to budget support.

Data from 26 countries were finally included in the analysis, covering slightly more than half of the countries with available reports:

- Sub-Saharan Africa – 11 countries:
  4 Francophone: Benin, Burkina Faso, Madagascar and Mali
  5 Anglophone: Ghana, Kenya, South Africa, Uganda and Zambia
  Rwanda and Mozambique

- Latin America – 4 countries:
  Dominican Republic, Haiti, Paraguay and Peru

- Eastern/Central Europe and Central Asia – 6 countries:
  Armenia, Kosovo, Serbia, Ukraine, Tadzhikistan, Kyrgyzstan.

- Bangladesh, India (Himachal Pradesh), Morocco, Nepal and Yemen.

[3] PEFA Secretariat, Issues in Comparison and Aggregation of PEFA Assessment Results Over Time and Across Countries, Final, May 13, 2009 (p.iii)

2. Analysis results

Indicators and scoring methods

The four tax indicators within the PEFA Measurement Framework fall under two dimensions:

- **Dimension (1) credibility of the budget:**
  PI-3. Aggregate revenue out-turn compared to original approved budget

- **Dimension (4) predictability and control in budget execution:**
  PI-13. Transparency of taxpayer obligations and liabilities
  PI-14. Effectiveness of measures for taxpayer registration and tax assessment
  PI-15. Effectiveness of collection of tax payments

PI-3 is a one-dimensional indicator. PI-13, 14 and 15 each contain three sub-dimensions to be assessed. PEFA reporting therefore includes a total of 10 tax-related indicators (Annex 2 contains the entire list of indicators and sub-indicators).[4]

All indicators refer to domestic revenue and its administrative bodies in the respective countries, e.g. Internal Revenue Agency and Customs Authority. Revenues from extractive industries should also be included.

The four tax indicators are rated with two different scoring methods – one (M1) designed for one-dimensional indicators such as PI-3 or for interdependent sub-indicators, where poor performance in one dimension is likely to under-mine the impact of good performance in other dimensions of the same indicator. In our sample PI-3 and PI-15 are measured by Method 1. The second scoring method (M2) is used for indicators with independent dimensions and averages the scoring of the single dimensions. In the sample this applies to PI-13 and PI-14.

The PEFA system therefore provides highly technical, complex and multi-dimensional data. Reading the reports also reveals very different approaches to the assessments. Some reports provide differentiated and broad insights; others are extremely brief and score the various indicators very literally.

[4] **The Bangladesh assessment does not break down scoring into sub-indicators, only providing scoring per overall indicator.**

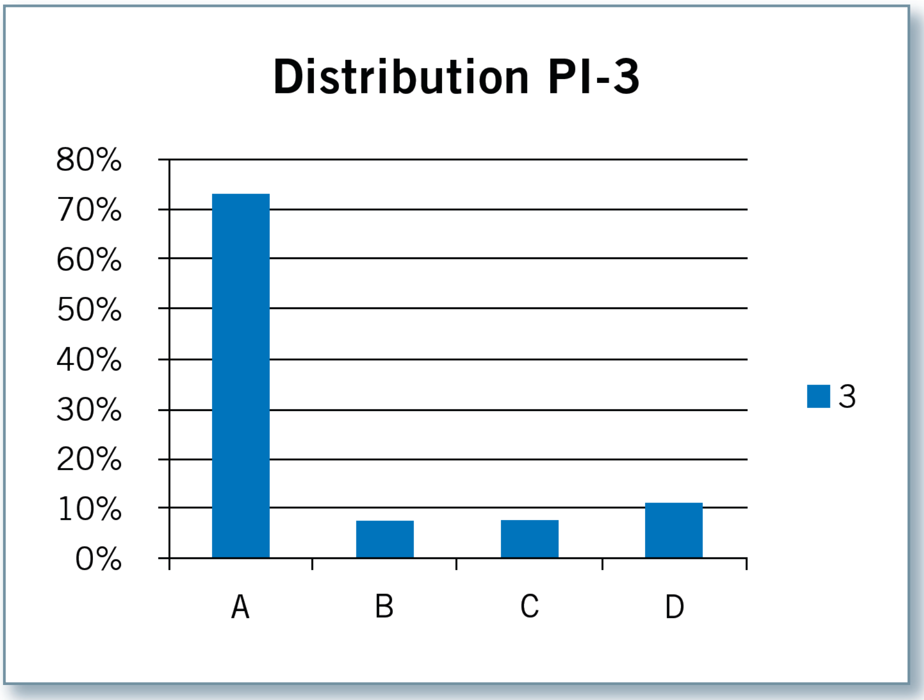
Consequently, Bangladesh data can only be included in respect of the overall indicators and not when analysing sub-indicators.

Scoring also depends on the expectations and values of the mission teams – a (B) for Mozambique might constitute a (C) for Serbia. Consequently, only the most cautious comparisons are possible. Below, we therefore give an overview of the ratings for each indicator and interpretations are assessed against the narratives of individual reports.

PI-3. Aggregate revenue out-turn compared to original approved budget

PI-3 is a one-dimensional indicator measuring actual domestic revenue collection compared to domestic revenue estimates in the original approved budget over the previous three years. The scoring relates to actual domestic revenue collection: below 97% of budgeted domestic revenue estimates in no more than one of the previous three years scores (A), below 94% (B), below 92% (C), and (D) is scored if two or all of the previous three years score below 92%.

This indicator measures reliability of planning and accuracy of revenue forecast rather than tax administration performance or taxation efficiency, although it might be affected by underestimation if the administration's remuneration system is tied to quantitative revenue targets. It refers to all domestic revenues, which might be dominated by revenues other than taxes, such as revenues from extractive industries.



Results:

Most countries in the sample have no substantial problems with forecasting their revenues. 21 out of 26 countries (80%) score (A) or (B). Worst is the situation in Haiti, Madagascar and Burkina Faso (D), Bangladesh and Mozambique score a (C). This conforms to past experience – within the set of revenues of developing countries, domestic resources are much less volatile than aid flows.[5]

Beyond the general picture, the situation in the countries with an A-rating looks quite different, from those where revenues are extremely overestimated (Yemen up to 160% of forecast, Morocco 122%) to those with a clear negative tendency (Kenya), despite the fact that they all score (A). On the other hand Mozambique with a C-rating shows a clear positive trend – achieving a 100% match between actual and forecasted revenues in the most recent year included in the assessment.

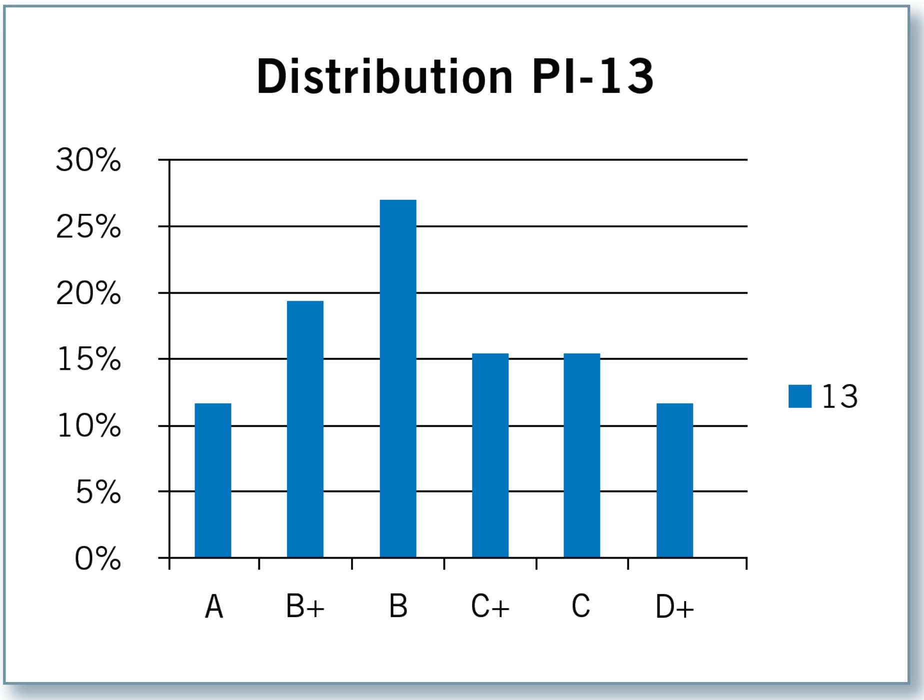
The indicator also reflects the entirety of domestic revenues and in some cases, as in Madagascar, whereas the tax forecast is not particularly negative, significant revenues through customs are largely below estimated figures. The indicator does not allow for any differentiation.

All in all, indicator PI-3 offers only a very general impression. It ensures that revenues do not fall too far below planned figures, but does not permit an accurate performance measurement because it relates only to negative variations. This has led the PEFA Secretariat to begin the process of revising indicator PI-3, with a view to incorporating both positive and negative deviations. As the consequences of the latter are more severe, more weight still should be given to under-realisation of revenues.

PI-13. Transparency of taxpayer obligations and liabilities

Similar to indicators PI-14 and PI-15, PI-13 covers three dimensions. It focuses on the role of the taxpayer in the taxation system and the relation between taxpayer and the authorities through (i) the clarity and transparency of the system; (ii) the capacity of taxpayers to access relevant information; and (iii) the possibility of limiting an administration's discretionary powers through an appeals system. The three dimensions are classified as independent and therefore the overall scoring averages the sub-indicator scores (M2).

[5] See DAC Monitoring Survey 2007 (p. 10): "The survey indicates for nearly all countries that the credibility of development budgets is undermined by sizable inaccuracies in the budget estimates of aid flows."



Results:

In general the rating for PI-13 is quite positive: Over half the countries (14 out of 26) score (A), (B+) or (B) and the median scoring is (B), meaning that they are described as having an acceptable level of transparency in respect of tax-payer obligations and liabilities. A closer look reveals a much more problematic situation.

For the **first sub-indicator PI-13 (i)**, only six out of 25 countries were deemed to have comprehensive and clear legislation and procedures with limited discretionary powers of the administration for all major taxes without restrictions (A). This indicator also refers to the quality of tax policy, assuming that clarity is a positive characteristic of a tax system. Many reports elaborate on the complications of tax laws and procedures, the many amendments and exemptions, all of which leave room for interpretation and discretionary action by the administration.

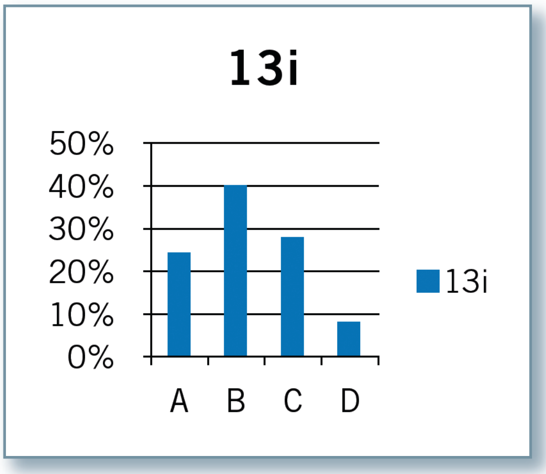
19 out of 25 countries therefore have limitations even in terms of major taxes and leave room for the discretionary power of the administration. The fairness of the system is seriously questioned in 9 out of 25 countries (C) and (D).

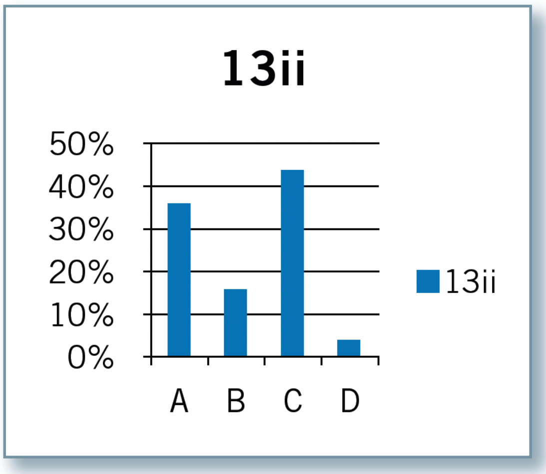
The sub-indicator (i) does not include an assessment of whether taxpayers can access available legal information; this is specified by **sub-indicator PI-13 (ii)**. According to this sub-indicator, taxpayers have full, easy and user-friendly access to the relevant tax information in 9 out of 25 countries, suggesting that in certain countries, tax legislation and procedures are not fully comprehensive but taxpayers can at least access the available information. Indeed, sub-indicator PI-13 (ii) rates higher than PI 13 (i) in 8 countries.

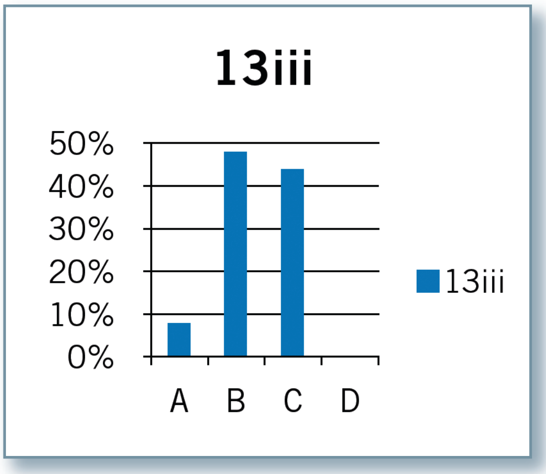
Overall around half the countries attempt to provide relevant information to their taxpayers (A), (B), while the other half still has significant problems in doing so. The indicator does not assess whether taxpayers, for their part, have the technical capacity to access the information or the ability under-stand such published information.

Sub-indicator PI-13 (iii) focuses on the individual level of taxpayer treatment. Based on an evaluation of complaints/appeals mechanisms, it assesses whether the administration offers independent and fair treatment in practice. Only two countries – Morocco and South Africa – fully comply with the requirements (A), but on the other hand none of the countries has no appeals system at all (D). Most rate (C), meaning that while some sort of system is in place, it would need substantial redesign to become fair, transparent and effective.

In sub-Saharan Africa the majority of countries – 7 out of 11 – rate (B), although three of those receive this rating as whereas the system is fully set up, it is too new to be assessed in practice (Ghana, Mozambique,







Uganda). Similar to the other two sub-indicators of PI-13, indicator PI-13 (iii) shows substantially better ratings in Anglophone African countries than in Francophone countries.

All countries in Central Asia and Eastern Europe rate (C), which might suggest interregional differences of interpretation of the assessment missions rather than systematically different practices. For example, where Rwanda gets a (B) for a fully designed appeals system that is judged by the private sector to be unfair and lacking in independence, Kosovo – with a very similar description – scores (C).

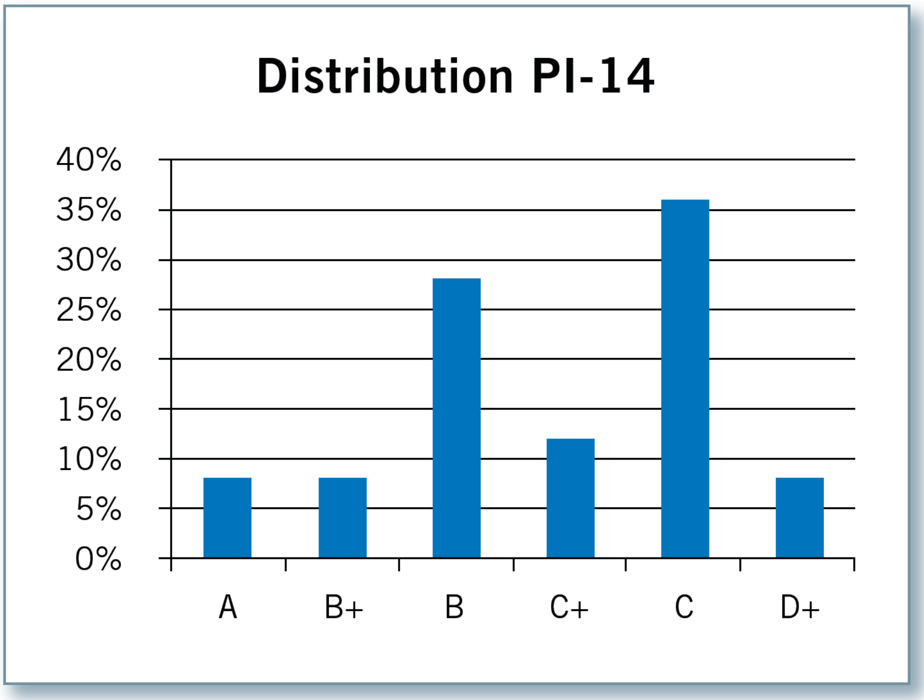
Sub-indicator PI-13 (iii) does not reflect whether the appeals mechanism is integrated in a constitutionally sound financial/fiscal jurisdiction framework. Many reports rather refer to complaints mechanisms being restricted to the administration and/or the Ministry of Finance.

Overall, the assessment of the PI-13 indicators must be read with caution because situations with similar scoring vary greatly. What can be gleaned is that, in our sample, comprehensiveness and clarity for all major taxes is exceptional – the great majority of countries do not provide fair, transparent and effective appeals systems – but that around half the governments provide sufficient information about the revenue framework.

PI-14. Effectiveness of measures for taxpayer registration and tax assessment

In the context of the international discourse on tax evasion and tax avoidance, indicator PI-14 provides the most interesting information, because it addresses the basic revenue collection and examination functions of revenue administrations. The indicator measures the effectiveness of tax assessments based on three dimensions: (i) the taxpayer registration system and its linkages to other governmental information systems and financial sector regulations; (ii) the effectiveness of the penalty systems for non-compliance; and (iii) the planning of tax audits and fraud investigations.

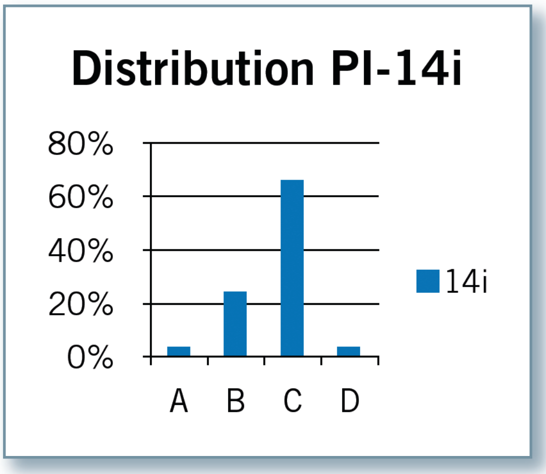
The sub-indicators are considered independent and are formulated in a way that allows for such independence. Consequently, the overall scoring of PI-14 averages the sub-indicator scores (M2). This approach is somewhat questionable as a penalty system cannot operate very effectively if taxpayers are not reliably registered in the first place, even if the system in itself might be adequately designed and administered. Moreover, tax audits and fraud investigations will not achieve much without effective taxpayer registration and linkages to other information systems, even where there is a sophisticated audit plan in place.

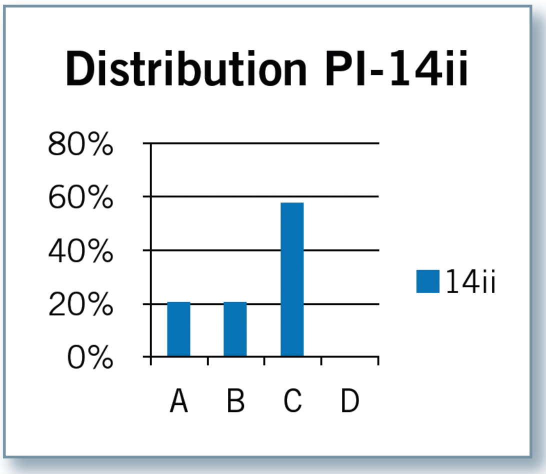


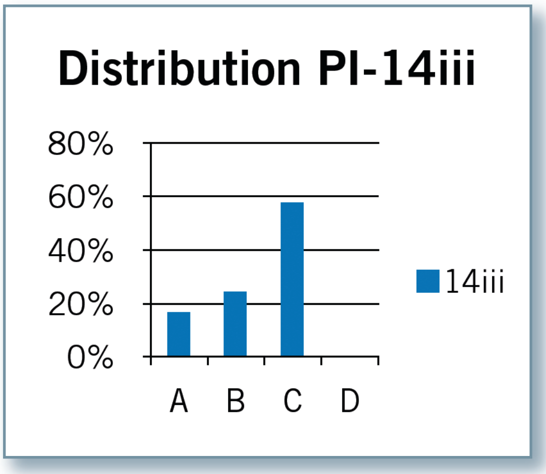
Results:

For overall indicator PI-14, only two countries – Peru and South Africa – were observed as to have fully implemented effective measures for taxpayer registration and tax assessment (A). Two countries (Bangladesh and Tadzhikistan) lacked even the basic elements (D). Half of the countries – 12 out of 24 – are rated (C), while 9 receive a (B).

For **sub-indicator PI-14 (i)**, concerning registration systems, the overall picture may prove rather optimistic, because in two thirds of the sample countries – 16 out of 24 – taxpayers registration has no complete database system, and linkages to other registration and licensing functions are weak (C) and (D). Furthermore, six countries have a complete data system but with weak linkages to other systems (B). Only South Africa fully meets the requirements in all dimensions.







The penalty systems measured with sub-indicator **PI-14 (ii)** score higher on average. Most reports examine the issue independently as required in the PEFA framework, so the impact on compliance refers to taxpayers that are actually registered. Still, for 14 out of 24, the assessment states that while there is a penalty system in place, real impact on compliance can only be achieved with substantial changes.

Sub-indicator PI-14 (iii) concerning tax audits and fraud investigations gives a similar picture to indicator PI-14 (ii): 4 countries are assessed as managing and reporting on comprehensive audit plans with clear risk assessment criteria (A), 6 do so at least for one major tax area (B) and the remainder (14 countries) are following continuous programmes of tax audits and fraud investigations but with no clear risk assessment criteria.

Interestingly, although there is some evidence of higher income countries performing better than lower income countries for overall indicator PI-14, the opposite is the case for sub-indicator PI-14 (iii). This might be due to the fact that four of the five reports that rate PI-14(iii) higher than PI-14 (i) apply to sub-Saharan African countries. In a literal sense it is possible to implement tax audits based on audit plans with risk criteria for those taxpayers who are registered in systems, and to operate audits with limited cross-checking possibilities for missing linkages, but the scope and impact of such audits will certainly be limited.

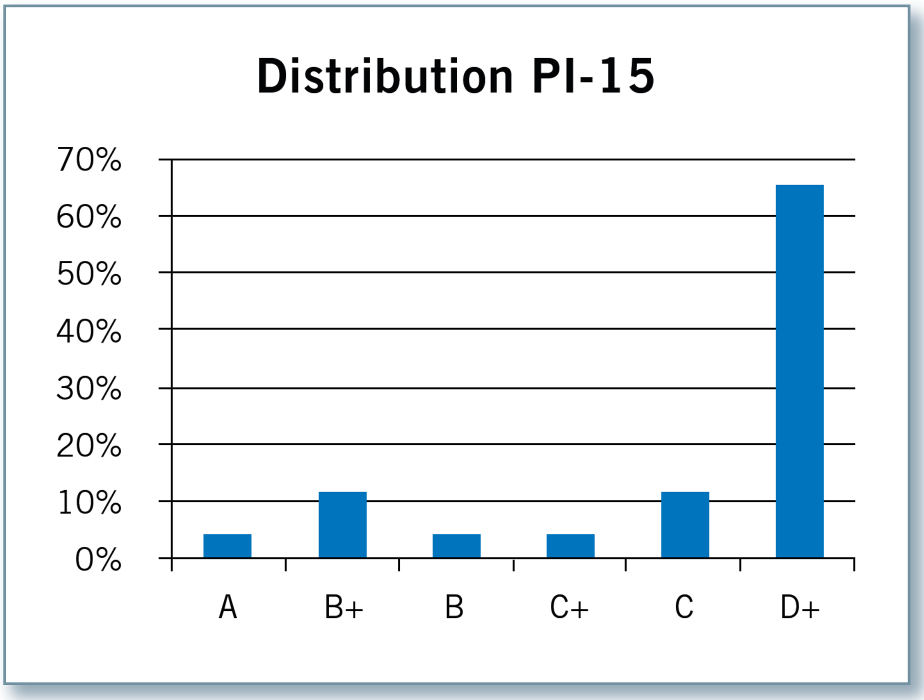
Overall, the data show some correlation between sub-indicators, and many of the reports – 16 out of 24[6] – did not score better on sub-indicators (ii) and (iii) than indicator (i), demonstrating that taxpayer registration is a basic benchmark for the effectiveness of a system.

In summary, taxpayer registration is clearly an issue in many countries. For most countries there is no guarantee of full registration of all taxpayers. Data processing is at the very least hampered by the heterogeneous systems for various types of taxes, not to mention the lack of linkage to other important databases. This means that revenue administrations face seriously constraints in working with information from various sources, in turn limiting their ability to audit and investigate, although sub-indicator PI-14 (iii) paints a more positive picture.

[6] PI-14 has not been rated in the Kirgizstan assessment because of lack of detailed information. For Bangladesh only general scores are available.

PI-15. Effectiveness of collection of tax payments

Indicator PI-15 measures the effectiveness of tax collection on an aggregate level, rather than the technical administration level, through three dimensions: (i) the level of tax arrears (average tax debt collection in the two previous fiscal years); (ii) the prompt transfer of taxes collected to the treasury (daily, weekly, monthly, less regularly); and (iii) regular comprehensive reporting to the treasury on tax assessments, tax collections and arrears in tax transfers to treasury.



Results:

Indicator PI-15 is measured by method 1 – used for those cases where poor performance in one sub-indicator is likely to undermine good performance in other sub-indicators. In consequence, the overall score cannot be better than the lowest scored sub-indicator, alleviated by a (+) if higher scorings on other-sub- indicators are available. Thus, the overall rating of PI-15 paints a gloomy picture: 18 countries rate (D+)[7], 3 rate (C+) and 3 rate (B+) while only one receives an (A) – the Dominican Republic, which has smoothly running systems, but differentiates between historical and current arrears – the positive rating referring to current arrears. Most country assessments calculate the entire amount of arrears.

The bottleneck in the scoring is clearly **sub-indicator PI-15 (i)**: 3 countries cannot provide precise data. 14 out of 22 countries (25 minus the three countries where no data is available) rate (D), meaning that the total tax collected is less than 60% of the taxes assessed. All the sub-Saharan African countries except Mali rate (D+). For South Africa, this is the only one of all its ratings below (A) – the category (D) given here being due to historical arrears that are steadily decreasing though still very high, so that overall the arrears ratio consequently remains under the threshold of 60%.

Tax arrears have a tendency to persist even in countries known as good reform performers for many reasons, including tax amnesties, ongoing tax reforms, deficiencies in the tax information systems or bureaucratic obstacles, for example regulations in Rwanda prohibiting the designation of those arrears that cannot be retrieved as “non-collectable”. The indicator would be a more accurate reflection of the effectiveness of tax collection if it concentrated on actual arrears.

With **sub-indicator PI-15 (ii)** most countries do not seem to have major problems. Very rarely – only in Haiti and Madagascar - does transfer of tax collection to the treasury require more than a week (C). 12 countries transfer the taxes on daily basis (A) – all Central Asia and East Europe apart from Tadzhikistan and all Latin American countries apart from Haiti in the sample. The remainder – 11 out of 25 – require a week for collection transfer (B).

Sub-indicator PI-15 (iii) shows mixed results: Countries are either able to reconcile tax assessments, collections, arrears and transfers and send the information easily to treasury, as in the 10 countries scoring (A), or they are able to do so only with great difficulty – the 8 countries scoring (D). A number of countries that send collected taxes easily to treasury take more time than

[7] Based on the actual reports, the figure would be 17, but the overall rating for Ghana is false – D/B/C does not score (C) as stated in the Ghana report but should in fact have scored (D+).

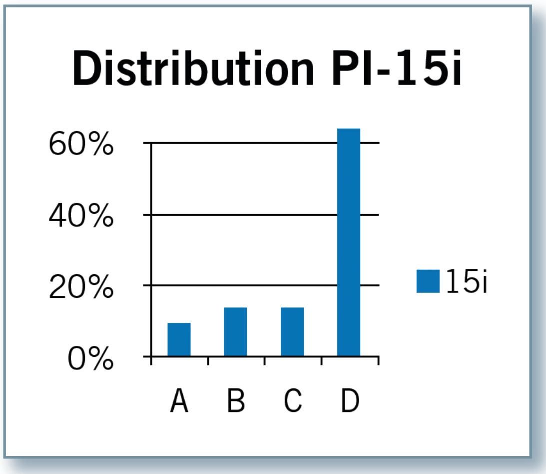
The same applies to Kosovo, which is rated (B) with C/A/B, where it should be (C+).

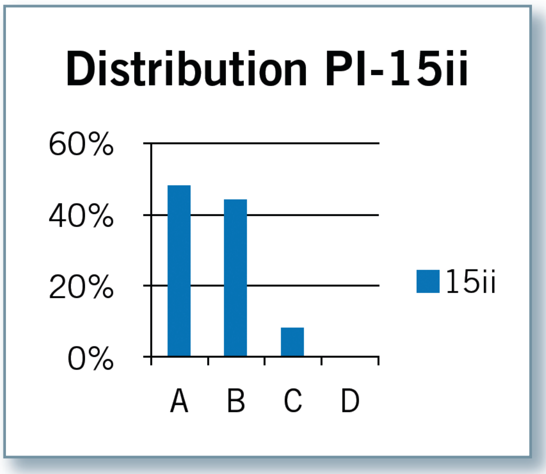
anticipated in the PEFA scoring system to reconcile and send the data to treasury. To some extent sub-indicator PI-15 (iii) should reflect the development and linkage of information systems, as reconciliation and reporting can easily be carried out on a daily basis in fully automatised and well-connected systems. However, such linkages cannot be expressed through the available data: there is no correlation between the sub-indicators PI-14(i) and PI-15 (iii).

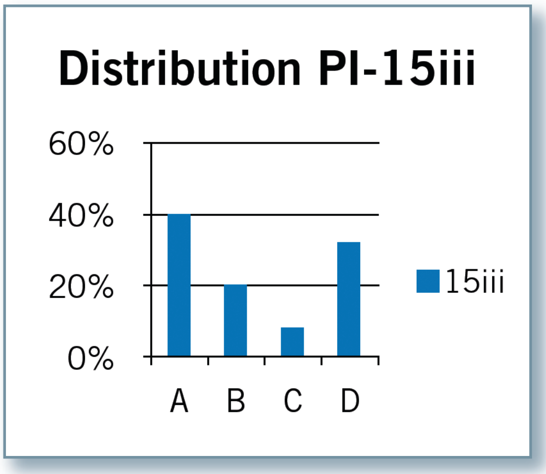
Sub-indicator PI-15 (iii) ensures that taxes collected are controlled and used for budget expenses. It does not assess the quality of data transferred to treasury. Where, as in Zambia, the tax administration can only collect taxes from companies that have voluntarily registered to the taxpayer registration system – rating (C) – and is unable to capture others because of a lack of data, the reconciled data can only refer to those cases actually captured by the system.

All in all, tax arrears are a major problem for many countries, even if they are pursuing major reform programmes. Indeed in many cases the scoring reflects earlier situations that have not been worked up until present. In any case, in order to assess the actual reform progress, it should be possible to distinguish between former and actual arrears.

In addition, PI (15) is an aggregated indicator which provides more information concerning treasury cash flow management than about the capacity of tax administrations to collect taxes. This administrative capacity to collect taxes is of the utmost interest and it should be measurable through a framework such as PEFA.







3. Discussion and Conclusions

In the following section we briefly summarise what the PEFA tax assessments tell us so far. We then relate the assessments to other country indicators – while recognising the methodological constraints – in order to interpret the PEFA scorings discussed below.

3.1 What do the PEFA tax indicators tell us so far?

Assessing the capacity of the countries concerned, **indicator PI-3** suggests that **revenue forecasting** is mostly unproblematic in the sense that sufficient resources are generated compared with the planning. However, as this indicator captures only negative variations from planning, many countries score (A) despite their weak forecasting capabilities. The PEFA Secretariat is currently in the process of revising indicator PI-3.

Concerning **the relationship of taxpayers to revenue administration in indicator PI-13**, the PEFA experience paints a rather critical picture of tax policy: comprehensiveness and clarity for all major taxes is exceptional. However, the indicator assessments have to be read very cautiously – there are many suggestions of differing scoring between countries for similar situations. And the design of the indicators does not necessarily imply that a positive rating in PI-13 goes hand in hand with well-oriented taxpayers, who comply with their tax responsibilities and are aware of the consequences of not doing so.

Taxpayer registration and tax assessment measured through **PI-14** are clearly an issue in many countries. For most countries there is no guarantee of full taxpayer registration, the data processing is at the very least hampered by heterogeneous systems for various types of taxes, and also by the lack of linkage to other important databases. This means that revenue administrations face serious constraints in their capacity to work with information from various sources, which in turn limits their ability to audit and investigate, although the relevant sub-indicator PI-14 (iii) paints a more positive picture.

This PEFA indicator is of vital importance to one key area in the debate on international efforts to fight tax evasion and avoidance: (automatic) exchange of information. PEFA assessments of indicator PI-14 (i) demonstrate that most countries do not have the technical background – or possibly capacity – to provide taxrelated information reliably and systematically. The OECD ToR for the peer review process to monitor and review progress towards transparency and exchange of information for tax purposes[8] requires the availability of banking, ownership, identity and accounting information, appropriate access to that information and the existence of exchange of information mechanisms. PEFA indicator PI-14 suggests that most countries in the sample are not able to fulfil the essential requirements of the above OECD ToR.

The fourth tax indicator PI-15 on the effectiveness of tax collection looks at the level of tax arrears. It is therefore rather an aggregated indicator important to treasury cash flow management, but does not reveal much about the capacity of tax administrations to collect taxes. Irrespective of this, tax arrears remain a major problem in many countries, especially in terms of clearing historical tax arrears.

3.2 Do PEFA tax indicators ratings relate to macro and development indicators?

Leaving methodological concerns to one side, PEFA data can be compared to other general indicators by transferring the ordinary PEFA letter ratings into numbers. For the purposes of the present paper we tested whether PEFA scoring correlated to tax ratio, anticipating that a better rating in PEFA tax indicators would go hand in hand with higher tax ratios. We also expected to find that countries which are better off in development terms (in respect of the human development index [HDI 2008]) would achieve a higher PEFA scoring. Our final inquiry investigated whether economically dynamic countries would achieve distinct PEFA scores and compared this to the countries growth rates. Overall, it was not possible to identify any remarkable relation.

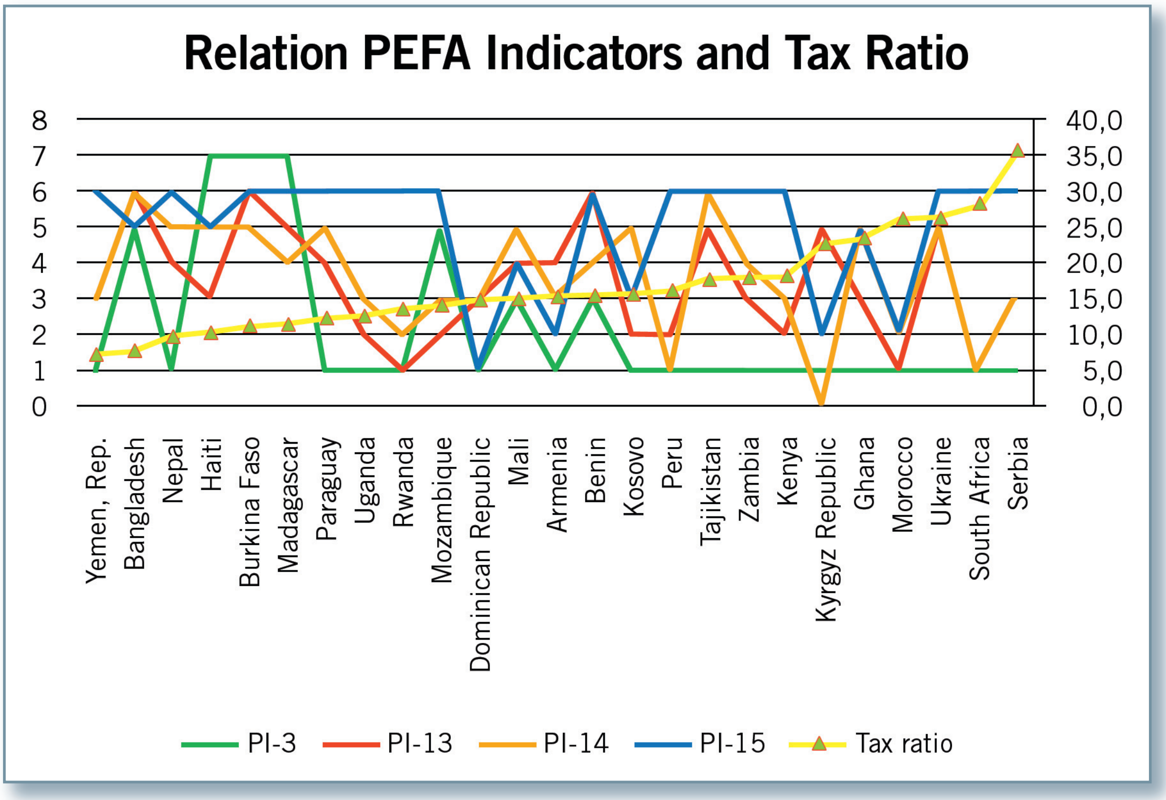
A comparison of PEFA indicators with each country's respective tax ratio[9] reveals that only indicator PI-3, concerning revenue forecasts, shows some correlation.[10] No country scoring below (A) for indicator PI-3 has tax ratios above 15% and all countries with tax ratios higher than 15,5 % score (A). In contrast, the score of (A) is associated with a tax ratio below 8% of GDP (Yemen, 7.7%) as well as with a tax ratio of 35.8% (Serbia). The other indicators show either a very slight correlation or no consistent correlation at all. If tax ratio is accepted as an indicator of a country's taxation capacity, it is interesting to note that the PEFA assessments do not match the overall category provided by the tax ratio. Irrespective of a country's tax ratio, its tax administration can still be rated as performing well or badly.

8 Global Forum on Transparency and Exchange of Information for Tax Purposes (2010), see:

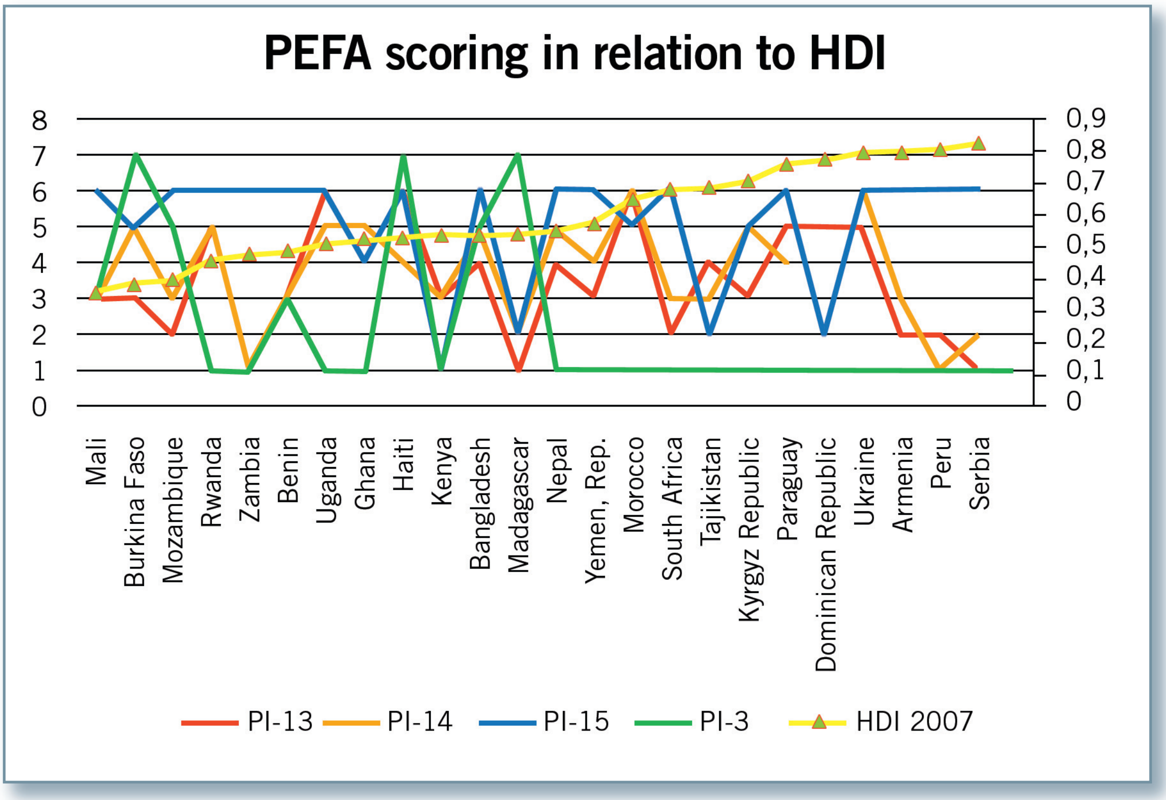
http://www.oecd.org/document/16/0,3343,en_2649_37427_44826640_1_1_1_1,00.html

9 For this purpose PEFA scores have been converted into numbers: 1 (A), 2 (B+), 3 (B), 4 (C+), 5 (C), 6 (D+), 7 (D). The source of the tax ratio data is US Aid, mostly from 2007. India could not be included in the sample because no tax ratio is data is available for federal states.

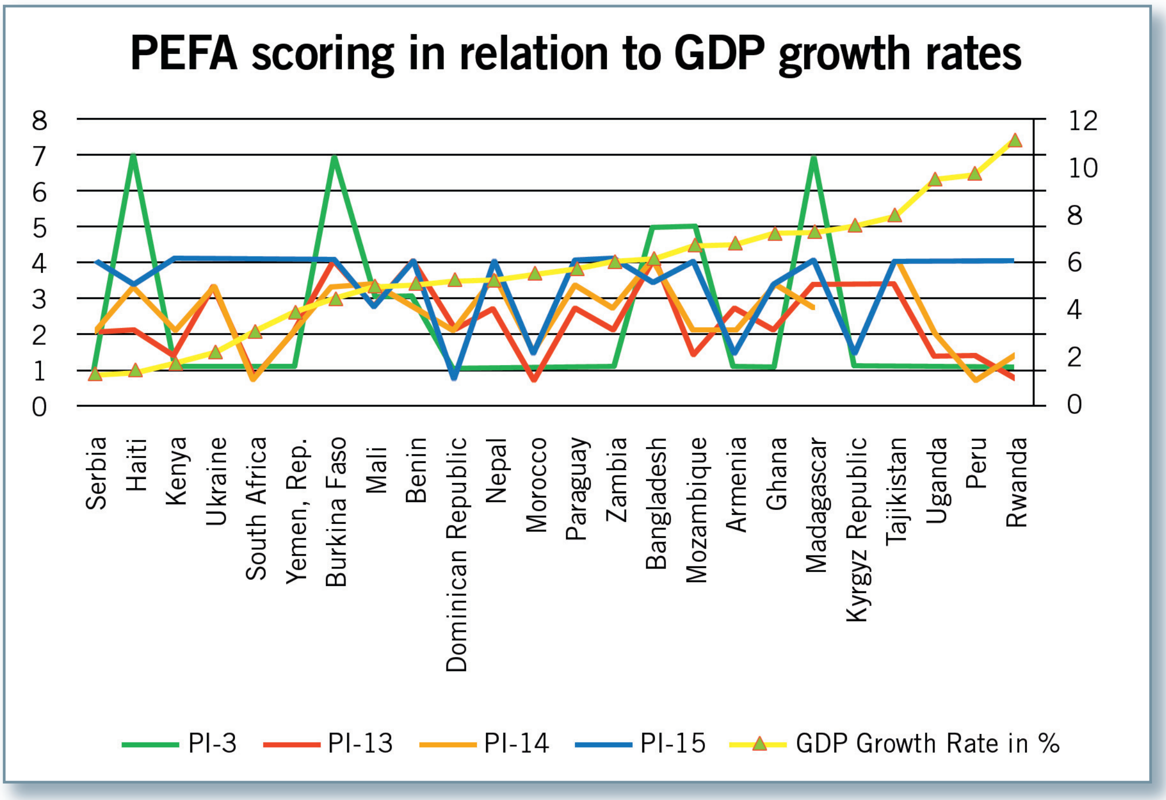
10 Spearman Rank Order Correlation Coefficient for P-3 = 0.5; all others below 0.3 (see correlation table in Annex 4). These results should be read with great caution, as the conversion of PEFA letter scores into numbers is highly problematic.



Indicator PI-3 shows some correlation with the **Human Development Index**: all countries with a HDI above 0.55 rate (A). However, as with the tax ratio, a low HDI is not generally associated with low PI-3 scoring: Rwanda, Zambia, Uganda and Ghana are low in HDI but rate (A) on PI-3. Again, the other indicators do not show a consistent correlation with the position of the country in the Human Development Index.



No correlation at all can be observed with a country's growth rate (World Bank data 2008, GDP growth annual):



Overall, the only PEFA tax indicator that can be related to the other indicators is PI-3, which rather generally measures budget planning compliance for domestic revenues. The only conclusion that can therefore be drawn from this exercise is that countries with high tax ratios or higher HDI ranking tend to overestimate their revenues in the budget to a lesser extent than others. This is not a very far-reaching conclusion and PI-3 is one of the three purely numerical indicators in the PEFA system. Furthermore, it should be used with considerable caution on account of the methodological constraints we summarise below.

3.3 Benchmarking tax performance with PEFA Assessments

In May 2009 the PEFA Secretariat published a paper on the methodological constraints in comparing and aggregating PEFA assessment results over time and across countries, spelling out many concerns about the validity of comparing country results through numerical conversions, such as:[11]

[11] See http://web.worldbank.org/WBSITE/EXTERNAL/PEFA/0,,contentMDK:22687716~menuPK:7357662~pagePK:7313176~piPK:7327442~theSitePK:7327438,00.html

- Quality differences between each grade – i.e. between (B) and (C) – might differ and may not be identifiable through numerical scoring;
- Scoring between the methods used differs: (D+) under method 1 does not equal (D+) under method 2.
- Not all indicators are rated for all countries, so the incidence of "no scores" might produce misleading results in calculations based on numerical conversions.

In the present exercise we further observed that reports provide information at quite different levels. Some provide differentiated and broad insights, while others are extremely brief and score the various indicators very literally. That means that the subjectivity of assessments cannot be controlled, in spite of the very detailed indicator technical descriptions. The experience in practice is also, that between the first draft of a report and its finalised ready-for-publication version approved by all parties involved – initial ratings might be adapted.

Rating also depends on the expectations and values or standards of mission teams. Assessments may vary largely under the same scoring; and a (B) for Mozambique does not necessarily describe a better situation than a (C) for Serbia. For example, the tax appeals system in Serbia – PI-13iii, rated (C) – is established and integrated in the regular judiciary system, whereas in Mozambique the system is not only recent – and therefore rated (B) – but also rather limited in comparison to the Serbian system.

Overall, screening the 26 reports has shown that PEFA assessments can provide very valuable information at country level. Although methodological constraints limit comparisons over time and across countries, it is worth continuing to refine the set of indicators in order to achieve an appropriate reflection of tax system performance. The emergence of taxation and development as high priorities on the international development policy agenda has intensified the need for guiding discussions on reform objectives, agendas, the sequencing of reforms and best practice criteria.

As an assessment framework PEFA should not be overly expanded, in order for it to remain manageable, but refining the set of indicators could help to give a more accurate picture of the tax system. The current PEFA tax indicators do not provide a clear picture of the status of national public resource systems and their administrations, and only where reports provide ample and additional information it is possible to identify the main constraints of the system and set respective reform priorities. However, this is precisely what is needed in order to coordinate and harmonise support for public resource mobilisation in developing countries and to focus international discussions on essential elements.

There are valuable assessment and benchmarking tools other than PEFA, which provide useful guidance regarding essential elements: for example the EU fiscal blueprints the above-mentioned peer review criteria of the Global Forum on Transparency and Exchange of Information for Tax Purposes (OECD).

- The "Fiscal blueprints: a path to a robust, modern and efficient tax administration" of the European Commission (2007) were designed as a self-assessment tool for tax administrations. They consist of five categories (i) framework, structures and basis; (ii) human and behavioural issues; (iii) systems and functioning; (iv) taxpayer services; and (v) support (information technology and communications). Furthermore, they define strategic objectives for each category, which can then be weighted, reflecting the relative importance of each of the objectives. For each category there is a set of specific indicators with a maximum scoring. The final scoring reflects the level of achievement and the repetition of the scoring exercise over time enables the administrations monitor long-term progress. While the fiscal blueprints are designed more for European

Member states and transition countries, they provide a comprehensive picture when assessing tax administrations and could also serve development cooperation as an important resource for enriching the PEFA tool.

- The Global Forum's essential elements relate specifically to the area of exchange of information in taxation. They adopt a two-tier approach – the first phase assesses the legal and regulatory framework regarding (i) the availability of information; (ii) appropriate access to information; and (iii) the existence of exchange of information mechanisms. In the second phase the actual implementation of the standards concerning the three dimensions is assessed. The differentiation between these two phases and dimensions creates a relatively accurate picture. Nonetheless, it requires exhaustive analysis and might constitute an overload and be impracticable when conducting overall assessments of tax systems.

- The IMF in turn outlines ten principles of effective taxation, including the legal framework, organisational and staffing arrangements, service orientation and the use of IT.[12]

The broad acceptance and use of PEFA as an assessment tool in development cooperation practice render it attractive in responding to assessment needs in the taxation area. Aid effectiveness in this area still poses a challenge and PEFA could be the starting point for a discussion on whether benchmarking is at all possible and desirable in the area of public revenues, and if so, even in a limited sense, what its essential elements would be.

Nevertheless, it is highly recommended that such processes be approached with considerable caution and respect for the legitimacy of taxation. Discussions on benchmarking in development policy tend to reflect donor preferences and taxation is the basic governmental function that assures governmental accountability to their taxpayers – not to donors, as the aid effectiveness agenda tends to assume. Comparable assessments and benchmarking in tax policy is therefore neither easy nor even desirable. Benchmarking is only possible in rather technical areas of taxation: PEFA tax indicators consequently concentrate on such technical elements. Considering these arguments, we conclude here by suggesting that the actual discourse on taxation and development in the various international fora be supplemented by a discussion on assessment needs in order to harmonise approaches to supporting the area. PEFA is a suitable starting point as an instrument, but discussions should acknowledge the sensitivity of the topic by including a broad range of partners – individual countries, regional tax fora and organisations, UN actors in the field and bilateral and multilateral donors.

[12] As described in the Program Document Multi Donor Trust Fund for IMF Capacity Building Technical Assistance in Tax Policy and Administration (Version August 2010), p. 22

Annex

Annex 1:
PEFA Performance Measurement Framework Indicator Set

	A. PFM-OUT-TURNS: Credibility of the budget
PI-1	Aggregate expenditure out-turn compared to original approved budget
PI-2	Composition of expenditure out-turn compared to original approved budget
PI-3	Aggregate revenue out-turn compared to original approved budget
PI-4	Stock and monitoring of expenditure payment arrears
	B. KEY CROSS-CUTTING ISSUES: Comprehensiveness and Transparency
PI-5	Classification of the budget
PI-6	Comprehensiveness of information included in budget documentation
PI-7	Extent of unreported government operations
PI-8	Transparency of inter-governmental fiscal relations
PI-9	Oversight of aggregate fiscal risk from other public sector entities
PI-10	Public access to key fiscal information
	C. BUDGET CYCLE
	C(i) Policy-Based Budgeting
PI-11	Orderliness and participation in the annual budget process
PI-12	Multi-year perspective in fiscal planning, expenditure policy and budgeting
	C(ii) Predictability and Control in Budget Execution
PI-13	Transparency of taxpayer obligations and liabilities
PI-14	Effectiveness of measures for taxpayer registration and tax assessment
PI-15	Effectiveness in collection of tax payments
PI-16	Predictability in the availability of funds for commitment of expenditures
PI-17	Recording and management of cash balances, debt and guarantees
PI-18	Effectiveness of payroll controls
PI-19	Competition, value for money and controls in procurement
PI-20	Effectiveness of internal controls for non-salary expenditure
PI-21	Effectiveness of internal audit
	C (iii) Accounting, Recording and Reporting
PI-22	Timeliness and regularity of accounts reconciliation
PI-23	Availability of information on resources received by service delivery units
PI-24	Quality and timeliness of in-year budget reports
PI-25	Quality and timeliness of annual financial statements
	C (iv) External Scrutiny and Audit
PI-26	Scope, nature and follow-up of external audit
PI-27	Legislative scrutiny of the annual budget law
PI-28	Legislative scrutiny of external audit reports
	D. DONOR PRACTICES
D-1	Predictability of Direct Budget Support
D-2	Financial information provided by donors for budgeting and reporting on project and program aid
D-3	Proportion of aid that is managed by use of national procedures

Annex 2:
Overview over PEFA Tax Indicator's Scoring

Indicator		Scoring
PI-3. Aggregate revenue out-turn compared to original approved budget		
		Score A: Actual domestic revenue collection was below 97% of budgeted domestic revenue estimates in no more than one of the last three years. **Score B:** Actual domestic revenue collection was below 94% of budgeted domestic revenue estimates in no more than one of the last three years. **Score C:** Actual domestic revenue collection was below 92% of budgeted domestic revenue estimates in no more than one of the last three years. **Score D:** Actual domestic revenue collection was below 92% of budgeted domestic revenue estimates in two or all of the last three years.
PI-13 Transparency of taxpayer obligations and liabilities		
(i)	**Clarity and comprehensiveness of tax liabilities**	**Score A:** Legislation and procedures for all major taxes are comprehensive and clear, with strictly limited discre-tionary powers of the government entities involved. **Score B:** Legislation and procedures for most, but not necessarily all, major taxes are comprehensive and clear, with fairly limited discretionary powers of the government entities involved. **Score C:** Legislation and procedures for some major taxes are comprehensive and clear, but the fairness of the system is questioned due to substantial discretionary powers of the government entities involved. **Score D:** Legislation and procedures are not comprehensive and clear for large areas of taxation and/or involve important elements of administrative discretion in assessing tax liabilities
(ii)	**Taxpayer access to information on tax liabilities and administrative procedures**	**Score A:** Taxpayers have easy access to comprehensive, user friendly and up-to-date information tax liabilities and administrative procedures for all major taxes, and the RA supplements this with active taxpayer education campaigns. **Score B:** Taxpayers have easy access to comprehensive, user friendly and up-to-date information tax liabilities and administrative procedures for some of the major taxes, while for other taxes the information is limited. **Score C:** Taxpayers have access to some information on tax liabilities and administrative procedures, but the usefulness of the information is limited due coverage of selected taxes only, lack of comprehensiveness and/or not being up-to-date. **Score D:** Taxpayer access to up-to-date legislation and procedural guidelines is seriously deficient.

Indicator		Scoring
(iii)	**Existence and functioning of a tax appeals mechanism**	**Score A:** A tax appeals system of transparent administrative procedures with appropriate checks and balances, and implemented through independent institutional structures, is completely set up and effectively operating with satisfactory access and fairness, and its decisions are promptly acted upon. **Score B:** A tax appeals system of transparent administrative procedures is completely set up and functional, but it is either too early to assess its effectiveness or some issues relating to access, efficiency, fairness or effective follow up on its decisions need to be addressed. **Score C:** A tax appeals system of administrative procedures has been established, but needs substantial redesign to be fair, transparent and effective. **Score D:** No functioning tax appeals system has been established
PI-14 Effectiveness of measures for taxpayer registration and tax assessment		
(i)	**Controls in taxpayer registration system**	**Score A:** Taxpayers are registered in a complete database system with comprehensive direct linkages to other relevant government registration systems and financial sector regulations. **Score B:** Taxpayers are registered in a complete database system with some linkages to other relevant government registration systems and financial sector regulations. **Score C:** Taxpayers are registered in database systems for individual taxes, which may not be fully and consistently linked. Linkages to other registration/licensing functions may be weak but are then supplemented by occasional surveys of potential taxpayers. **Score D:** Taxpayer registration is not subject to any effective controls or enforcement systems
(ii)	**Effectiveness of penalities for non-compliance with registration and declaration obligations**	**Score A:** Penalties for all areas of non-compliance are set sufficiently high to act as deterrence and are consistently administered. **Score B:** Penalties for non-compliance exist for most relevant areas, but are not always effective due to sufficiently scale and/or inconsistent administration. **Score C:** Penalties for non-compliance generally exist, but substantial changes to their structure, levels or administration are needed to give them a real impact on compliance. **Score D:** Penalties for non-compliance are generally non-existent or ineffective (i.e. set far too low to have an impact or rarely imposed).

Indicator		Scoring
(iii)	**Planning and monitoring of tax audit and fraud investigation programs**	**Score A:** Tax audits and fraud investigations are managed and reported on according to a comprehensive and documented audit plan, with clear risk assessment criteria for all major taxes that apply self-assessment. **Score B:** Tax audits and fraud investigations are managed and reported on according to a documented audit plan, with clear risk assessment criteria for audits in at least one major tax area that applies self-assessment. **Score C:** There is a continuous program of tax audits and fraud investigations, but audit programs are not based on clear risk assessment criteria. **Score D:** Tax audits and fraud investigations are undertaken on an ad-hoc basis if at all.
PI-15. Effectiveness in collection of tax payments (M1)		
(i)	**Collection ratio for gross tax arrears, being the percentage of tax arrears at the beginning of a fiscal year, which was collected during that fiscal year (average of the last two fiscal years).**	**Score A:** The average debt collection ratio in the two most recent fiscal years was 90% or above OR the total amount of tax arrears is insignificant (i.e. less than 2% of total annual collections). **Score B:** The average debt collection ratio in the two most recent fiscal years was 75-90% and the total amount of tax arrears is significant. **Score C:** The average debt collection ratio in the two most recent fiscal years was 60-75% and the total amount of tax arrears is significant . **Score D:** The debt collection ratio in the most recent year was below 60% and the total amount of tax arrears is significant (i.e. more than 2% of total annual collections).
(ii)	**Effectiveness of transfer of tax collections to the Treasury by the revenue administration.**	**Score A:** All tax revenue is paid directly into accounts controlled by the Treasuryor transfers to the Treasury are made daily. **Score B:** Revenue collections are transferred to the Treasury at least weekly. **Score C:** Revenue collections are transferred to the Treasury at least monthly. **Score D:** Revenue collections are transferred to the Treasury less regularly than monthly.
(iii)	**Frequency of complete accounts reconciliation between tax assessments, collections, arrears records and receipts by the Treasury.**	**Score A:** Complete reconciliation of tax assessments, collections, arrears and transfers to Treasury takes place at least monthly within one month of end of month. **Score B:** Complete reconciliation of tax assessments, collections, arrears and transfers to Treasury takes place at least quarterly within six weeks of end of quarter. **Score C:** Complete reconciliation of tax assessments, collections, arrears and transfers to Treasury takes place at least annually within 3 months of end of the year. **Score D:** Complete reconciliation of tax assessments, collections, arrears and transfers to Treasury does not take place annually or is done with more than 3 months' delay.

Annex 3:
Summary of Tax Indicators' Scoring Results

	3	13				14				15			
CEA	3	13i	13ii	13iii	13	14i	14ii	14iii	14	15i	15ii	15iii	15
Armenia	A	B	C	C	C+	B	B	C	B	B	A	A	B+
Kosovo	A	A	A	C	B+	C	C	C	C	C	A	B	B
Kyrgyz Rep.	A	C	C	C	C				0	B	A	B	B+
Serbia	A	B	B	C	B	C	A	C	B	D	A	A	D+
Tajikistan	A	C	C	C	C	D	C	C	D+	0	B	D	D+
Ukraine	A	C	C	C	C	C	C	C	C	D	A	D	D+
LA													
Dominican Republic	A	B	B	B	B	B	B	C	B	A	A	A	A
Haiti	D	A	C	B	B	C	C	C	C	C	C	C	C
Paraguay	A	B	C	C	C+	C	C	C	C	A	A	D	D+
Peru	A	A	A	C	B+	B	A	A	A	D	A	A	D+
SSA													
Benin	B	D	C	C	D+	C	C	B	C+	D	B	D	D+
Burkina Faso	D	D	C	C	D+	C	C	C	C	D	B	D	D+
Ghana	A	B	C	B	B	C	C	C	C	D	B	C	C
Kenya	A	B	A	B	B+	C	B+	B	B	D	B	A	D+
Madagascar	D	C	D	B	C	C	B	C	C+	0	C	D	D+
Mali	B	B	C	C	C+	C	C	C	C	C	A	B	C+
Mozambique	C	B	A	B	B+	B	B	B	B	D	B	A	D+
Rwanda	A	A	A	B	A	C	A	A	B+	D	B	A	D+
Zambia	A	B	B	B	B	C	C	B	C+	D	B	A	D+
South Africa	A	A	A	A	A	A	A	A	A	D	A	A	D+
Uganda	A	B	A	B	B+	C	C	A	B	0	B	D	D+
Others													
Bangladesh	C				D+				D+				C
India/Himachal Pradesh	A	C	B	B	B	C	C	C	C	D	B	B	D+
Yemen	A	C	A	B	B	B	C	B	B	D	A	A	D+
Morocco	A	A	A	A	A	B	A	B	B+	B	A	B	B+
Nepal	A	C	C	B	C+	C	C	C	C	D	B	D	D+

Annex 4:
Correlation between PEFA-Indicators and tax ratio

- **Tax ratio data from USAid, mostly as of 2007**
- **Spearman Rank Order Correlation Coefficient**

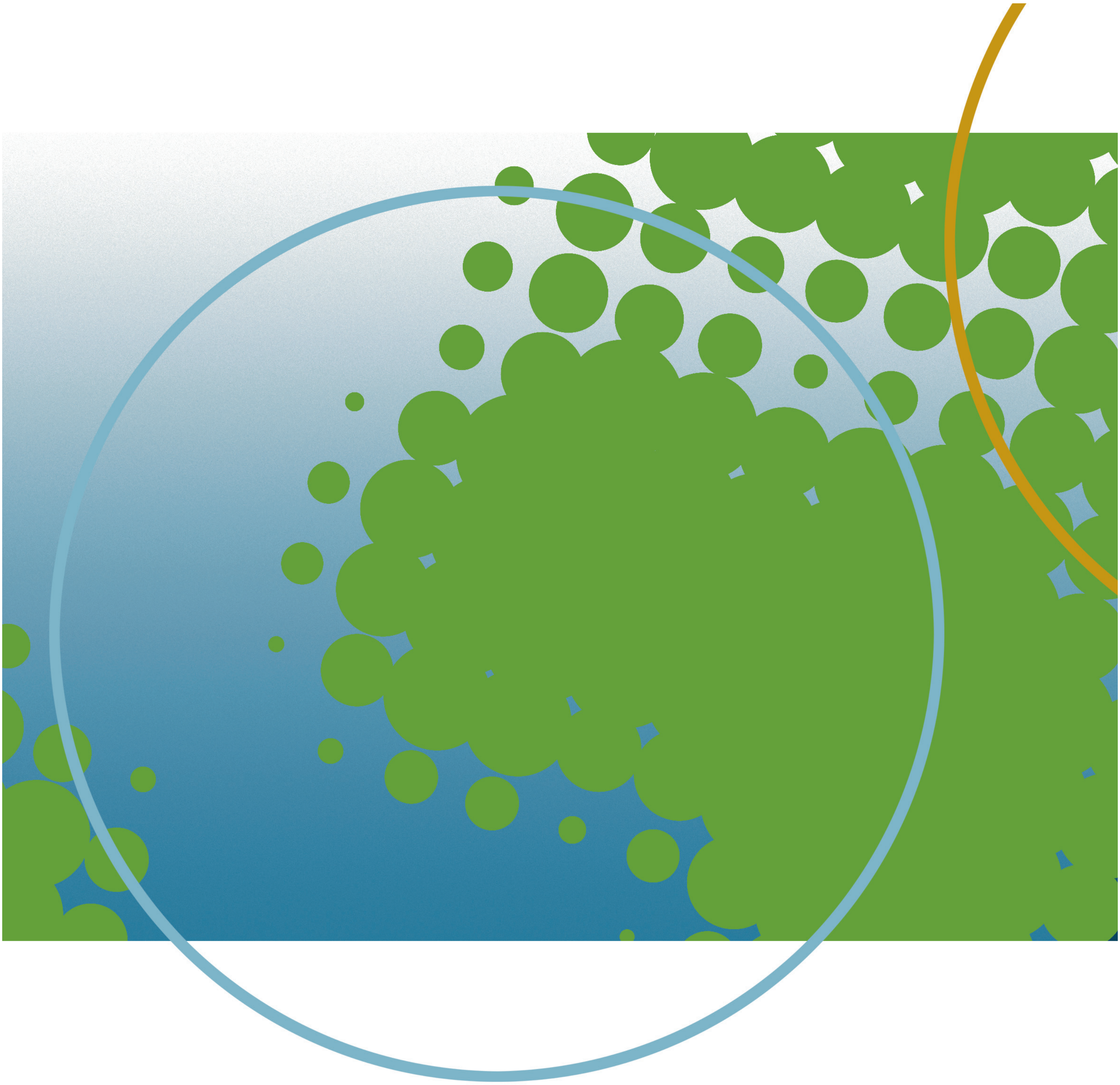
Scale:

0 – 0.2: weak or no relationship
0,2 – 0.5: moderate relationship
0.5 – 0.8: strong relationship
0.8 – 1: very strong or perfect relationship

Indicator	Score
Pi-3	**-0.5**
Pi-13	**-0.28**
Pi-13i	-0.23
PI-13ii	-0.17
PI-13iii	0.08
PI-14	**-0.3**
PI-14i	-0.07
PI-14ii	-0.39
PI-14iii	-0.13
PI-15	**-0.09**
PI-15i	-0.11
PI-15ii	-0.40
PI-15iii	-0.27

Results:

- PI-3 and the tax ratio show a moderate/strong correlation (r=0.5)
- PI-14ii (r=-0.39) and PI-15ii (r=-0.4) correlate equally with the tax ratio
- Other indicators: very moderate (PI-13, PI-13i, PI-14 and PI-15iii) or weak correlation (PI-13ii, PI-13iii, PI-14i, Pi-14iii and PI-15)



international tax compact

initiative to strengthen international cooperation with developing countries to fight tax evasion and tax avoidance