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Assessing Domestic Revenue Mobilization: Analytical Tools and Techniques

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Abstract

The main objective of this paper is to provide support for the World Bank's task team leaders of PERs that would include a chapter on taxation. It seeks to provide broad guidance for the TTLs to:

- Lead dialogues with client countries on the scope of the tax chapter in view of Government's on-going and planned reforms of tax policy and/or tax administration.
- Evaluate the magnitude of data requirements and limitations in the country-specific context.
- Establish an appropriate team, particularly consider selection of technical staff or consultant and discuss with the team on scope of the chapter on taxation and suitable analytical tools and techniques to be applied.

The paper may also serve as a helpful input on tax components in the preparation of lending operations, in this way supplementing other diagnostic tools. To serve these objectives, the paper aims to presents an overview of major taxes and respective list of data requirements as well as possible sources; tool and techniques in assessing the efficiency, effectiveness and equity in tax policy design (at both national and sub-national levels) and tax administration. In doing so, the authors acknowledge that this is not a straightforward task. No one-size-fits-all approach would exist to covering the revenue chapter, and this is driven by the complexities on the ground in terms of (1) the existing literature, and the mismatch between rigorous application of appropriate tools and techniques on the one hand and data available on the other; (2) existence of or immediate plan for parallel studies on tax revenues (including the IMF TA on tax policy and administration being provided); (3) the country's economic structure, including the factors such as country's abundance of extractive resources or aid dependence; and (4) the government's requests for further support in revenue mobilization (tax policy or administration or both).

This paper consists of four parts. The first part discusses major taxes at the national or central level of government with a reference to generally accepted notion or principles of a 'good' tax system. Part two is focused on the major tools and techniques for analysis of the performance of a tax system and of tax expenditures.[1] The discussion of revenue modeling covers different methods, such as GDP based, micro-simulation, national accounts/inputs-outputs tables based and regression analyses. Part three sheds light on subnational government taxation. It covers the revenue issues at both at the regional and local levels. In addition, it introduces a framework on measuring taxing powers at subnational level, with a view to ensure appropriate ground for the fiscal dialog across levels of government. Finally, part four points to potential questions to assist in assessing the strengths and weaknesses in tax administration, drawing on Jit Gill (2000) and the newly developed tax administration diagnostic tool TADAT (2016).

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[1] Some country examples are provided in the note, to illustrate the various topics and application of tools and techniques. However, with a view to keep the guidance note brief, additional country cases may be found in the PER Database, as prepared by the PER Stock Take team. The database is available on the GGP Spark sites.

Assessing Domestic Revenue Mobilization:
Analytical Tools and Techniques

Tuan Minh Le, Leif Jensen, G. P. Shukla, and
Nataliya Biletska[2]

Introduction

The paper presents, first an overview analysis of major taxes and respective list of data requirements as well as possible sources; and second the tools and techniques in assessing the efficiency, effectiveness and equity in tax policy design (at both national and sub-national levels) and tax administration. The main objective of this paper is to support the World Bank's task team leaders (TTLs) of public expenditure reviews (PERs) that would include a chapter on taxation. It seeks to provide broad guidance for the TTLs to:

- Lead dialogues with client countries on the scope of the tax chapter in view of Government's on-going and planned reforms of tax policy and/or tax administration;
- Evaluate the magnitude of data requirements and limitations in the country-specific context, and explore analytical techniques appropriate to the chapter focus and data availability; and
- Establish an appropriate team, particularly consider selection of technical staff or consultant and discuss with the team on scope of the chapter on taxation and suitable analytical tools and techniques to be applied.

The paper may also serve as a helpful input on tax components in the preparation of lending operations, in this way supplementing other diagnostic tools. It is expected that the paper supports the identification of indicators in Results Matrix, as well as provides the framework for the preparation of technical assessments in Program-for-Results (PforR) financing and investment lending operations.

In serving the said objectives, the authors acknowledge that this is not a straightforward task. No one-size-fits-all approach exists to coverthe revenue chapter in a PER, and this is driven by the complexities on the ground in terms of (1) the existing literature, and the mismatch between rigorous application of appropriate tools and techniques on the one hand, and data available on the other; (2) existence of or immediate plan for parallel studies on tax revenues (including the IMF TA on tax policy and administration being provided); (3) the country's economic structure, including the factors such as country's abundance of extractive resources or aid dependence; and (4) the government's requests for further support in revenue mobilization (tax policy or administration or both).

This paper consists of four parts. The first part discusses major taxes at the national or central level of government with a reference to generally accepted notion or principles of a 'good' tax system. Generally, the revenue collections rely on four main tax types: Corporate income tax (CIT), Personal income tax (PIT), Value added tax (VAT) and Excises. A fifth source of government revenues in countries that are endowed with natural resources such as minerals, oil and gas would be non-tax revenues from this sector. In some

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[2] The authors respectively are Professor GP Shukla (Duke University) and the World Bank's economists, Tuan Minh Le, Leif Jensen, and Nataliya Biletska. The authors appreciate comments by the World Bank's economists Nicola Smithers, Marijn Verhoeven, and Blanca Moreno-Dodson. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

countries this sector might even transcend the traditional taxes in terms of revenue generation. Trade taxes are not included since they have gradually declined in importance as a revenue resource and have become more of an instrument of trade policy[3].

Part two is focused on the major tools and techniques for analysis of the performance of a tax system. The discussion of revenue modeling covers different methods, such as GDP based; micro-simulation; national accounts/inputs-outputs tables-based; and regression analyses. The discussion of incidence analysis includes an approach to assessing how taxation and social spending (including subsidies) are aligned with reducing post-fiscal inequality. Finally, for the estimation of tax expenditures, an overview of three methods is provided - the initial revenue loss, the final revenue loss, and the outlay equivalence approach.

Part three sheds light on subnational government taxation. It covers the revenue issues at both regional and local levels. While the theory of taxation would indicate otherwise, the provincial and municipal governments could resort to using some of the same tax instruments that are used by the central government such as income or sales taxes. They may also take recourse to a different set of taxes such as property taxes and user fees that constitute an important source of their revenues. In addition, the chapter establishes a framework on measuring taxing powers at subnational level, with a view to ensure appropriate ground for the fiscal dialog across levels of government.

Finally, part four points to potential questions to assist in assessing the strengths and weaknesses in tax administration, drawing on Jit Gill (2000). The analysis of strategy and legal aspects of revenue administration, its dedicated financial and human resources, the institutional arrangements, and processes would detect the efficiency gaps and help formulate politically and institutionally compatible reform options and strategies. Together with other diagnostics tools, such as the "Tax Administration Diagnostic Assessment Tool" (TADAT, 2016), this section enlarges the scope of this guidance paper to better support the preparation of a PER chapter on taxation with focus on or reference to tax administration.

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[3] See Baunsgaard and Keen (2010) for a discussion on interplay between tax revenues and trade liberalization.

Part I: Assessing Major Tax Regimes in Developing Countries

Assessing the revenue performance and forecasting of revenues serve three related but distinct budgetary purposes: (i) short term cash management within a financial year, (ii) medium term budgeting, and (iii) tax expenditure forecasting. To evaluate the revenue performance of any kind of income- or consumption tax, the following five types of analyses are helpful.

1. Profile analysis: revenue data are presented as amounts in local currency and as a share of GDP. This is the first and most used statistic in measuring revenue performance.
2. Trend analysis: revenue data are presented as levels, growth rate, and shares of GDP over a period of time and it shows performance over time.
3. Composition analysis data are presented as a share of total revenue to show the contribution of each type of tax revenue to total revenues. Tax expenditures—if readily available or conceivable to be estimated under the coverage of the PER chapter -- would also be included here.
4. Tax revenue deviation analysis: it measures the deviation between actual and targeted revenue collections, and serves as an important entry point for drilled-down performance assessments of revenue agencies. This is further discussed in part IV in the paper.
5. Efficiency and incidence analysis: the assessment covers to what extent taxation can distort investment, consumption and savings and looks into the redistribution impact under the various tax sources.

In addition, it is useful to consider earmarked taxes/revenues in the analysis if they are levied at the central government level and their share in total revenue is significant. As discussed later in the chapter, earmarking has advantages at the local level where there is an explicit link between user charges and services rendered. At the national level, however, earmarked taxation is likely to undermine the efficiency and transparency of public expenditure. Not only the connection between taxpayers' consumption and most of the programs on which earmarked taxes are spent is weak, but also earmarks introduce rigidity in the budget and the designated expenditure programs are subject to less scrutiny than the rest of public spending.

Finally, in all these types of analysis, making comparisons to neighboring countries or relevant international comparator economies puts the information in perspective and gives a better insight into the country's revenue policy options.

Some fundamental criteria for tax analysis and revenue forecasting

Many developing countries face the long-standing problem of persistent revenue shortage concurrent with ever-increasing public expenditures. Some countries resort to myopic approach of changing tax regimes on an ad-hoc basis with tinkering the rates and/or base. Such measures may help boost revenue in the short run but they also raise more uncertainty that is detrimental to investment environment. The long-term solution is of course to improve efficiency and effectiveness of taxation with a three-pronged approach. First, an intensive exploitation of tax capacity; second, instituting a "good tax system" targeting a balanced set of priorities among different criteria (e.g., revenue enhancement, equity, simplicity, and reduced compliance and administration costs); and third, introducing tools and techniques for a sound revenue forecasting system that also contributes to strengthening of tax effort.

Tax capacity and tax effort

It has been demonstrated by a series of studies[4] that tax capacity is mainly determined by some inherent features of the economy such as per capita income; rate of population growth; trade openness; share of agricultural value added in GDP; natural resource endowment; and quality of bureaucratic and political institutions. A country with higher income level, lower rate of population growth, lower share of agriculture in GDP, greater trade openness, good governance and less corruption, and large endowments in terms of natural resources would have higher tax capacity, all other things equal. Tax effort[5] on the other hand, is a function of the extent to which the country is able to exploit its tax capacity and depends on the nature of tax regime, the quality of tax administration and the degree of compliance by the taxpayer. A tax structure that is easy to administer and comply with, an efficient tax administration and the perception by taxpayers that the tax system is fair and they benefit from public services contribute to higher levels of tax effort.

While the factors leading to higher tax capacity and tax effort are intuitive in nature, they may not be always easy to implement, particularly in the short run. Taxation by its very nature is a politically sensitive issue and quite often the political exigencies and the institutional contexts get the better of economic rationale. This often results in ad hoc measures that subsequently result in an unstable tax structure and ineffective tax administration that adversely impact both tax capacity and tax effort.

Common tax policy challenges in developing economies

From several studies in the past on reforming tax systems some common features of tax policy in developing countries emerge that are responsible to a large extent for poor revenue mobilization[6]. The main elements are summarized below.

- With gradual and incremental changes in tax laws in pursuit of higher tax revenues, tax structures often become complex in nature. Sometimes governments go for minor taxes and fees that are costly to comply with and administer. Alternatively, taxes have narrow base and high rates that again increase both costs of administration and compliance. Sales taxes and production related taxes generally suffered from this problem and this is one reason for the spread of Value Added Tax (VAT) in addition to its potential for making up for revenue loss from phasing out trade taxes.
- Some countries even with a VAT continue to have the old mindset. The VAT base is not adequately broad, it has multiple rates and the threshold is low. This is done in the expectation of higher revenues or greater equity. Unfortunately, that kind of VAT neither mobilizes more revenues, nor promotes equity. It again makes the tax system complex both from administration and compliance perspectives and introduces economic inefficiency[7].
- The Personal Income Tax (PIT) is generally weak and poorly managed. Apart from low per capita income and large informal sector including farmers and small businesses, lack of capacity for self-assessment and compliance is a significant hurdle. PIT is seldom a good source of revenues in transition and developing economies[8].

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[4] For an excellent summary of empirical findings on tax capacity and tax effort, see Le et al. (2008, 2012); Bird et al. (2007), and Khwaja and Iyer (2014). Mindful of the centrality of this tax source, see also Keen (2013) on VAT capacity and effort.

[5] Gupta, Abhijit Sen (2007) presents an excellent survey of factors affecting tax revenue efforts in developing countries and Pessino et al. (2010) discuss determining countries' tax efforts.

[6] Bird (2008) presents the common tax challenges facing the developing countries.

[7] Ebrill et al. (2001) offers an exhaustive treatise on the various aspects of modern day VAT in developing countries and covers every aspect of theory and practice of VAT. The advantage is the findings are suitably backed by evidence collected by the International Monetary Fund.

[8] See Jenkins et al. (2002) for a discussion on income taxes in low income and developing countries and why it has remained an unimportant

- The corporate income tax (CIT) often has a narrow base focusing on foreign and large domestic companies and the depreciation and carry forward provisions are complicated. High CIT rates are invariably accompanied by an abundance of tax incentives including tax holidays and free trade zones that are bound to undermine the revenue potential.[9]
- CIT on multinationals is always a concern as they have greater avenues for profit-shifting, transfer pricing and tax avoidance. The problem is more pronounced due to weak legislative framework and asymmetry of capacity between the tax administration and the transnational companies.
- In developing countries, there is always a pressure on government for granting exemptions by interest groups under all taxes. Granting exemption in a few cases results in gradual exemption creep. This jeopardizes revenues as well as hinders sound tax administration.
- Taxation of small businesses and informal sector has always been a challenge in developing countries and trade off in policy making is necessary (taxation at the level equal to the formal sector in order to bring in equity and to avoid splitting of businesses or at significantly lower level so as to encourage these businesses to grow in formality).

Revenue forecasting

Two critical elements to achieve robust revenue forecasting are the choice of appropriate approach and the availability of data[10]. As outlined below, in addition to getting an estimate of tax revenues for budgeting purposes, the revenue forecasting is crucial for impact analysis of taxes and economic changes or shocks. Presently, most developing countries have a superficial forecasting structure in place and do not follow any systematic approach. It is not uncommon to come across cases where the forecasting exercise is done by a few individuals situated in the tax administration or the Ministry of Finance (MoF) simply by increasing last year's forecast or actual tax collections by the expected GDP growth rate next year or worse simply by "gut feeling". In the worst case scenario, demand for next year's budget expenditures are collected through a call circular to all ministries, departments and agencies (MDAs). Out of the total expected budgetary expenditures, expected borrowings and deficit financing are subtracted and the remaining amount is given to the tax department as next year's revenue targets.

While the primary objective of revenue forecasting is to provide a realistic revenue envelope for initiating the annual budget process, its importance as a policy tool in support of a broad range of fiscal decision-making situations cannot be overemphasized[11]:

- As government adopts medium-term fiscal framework and performance-based budgeting, it is imperative that the revenue "envelope" is determined with accuracy before the expenditure decisions are made. Reliable revenue forecasts provide the basis for the budget and economic stability by avoiding unanticipated deficits to be filled by unplanned borrowing, expenditure cut backs, and other emergency measures.
- Assessing revenue impact of policy changes is another use of revenue forecasting.

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revenue source. Alm et al. (2004) has a similar discussion on whether developing countries can impose an individual income tax successfully?

[9] Impact of tax incentives on revenues is bound to be negative unless the incentives bring in so much additional investment that the revenue loss is more than made up. Unfortunately, the overwhelming evidence has been that incentives have little impact on investment, while revenue loss is certain and substantial. The basic reason is that much of the incentive is captured by investors who do not need it so that it becomes a windfall gain to the investor and straight revenue loss to the government. See Holland et al. (1998) and Zee et al. (2002).

[10] King, John R. ed. (1999) in Tax Policy Handbook discusses the importance of revenue forecasts and presents alternative methods of revenue forecasting and revenue estimation.

[11] Glenday et al (2011) presents an exhaustive treatise on tools and techniques of revenue forecasting of all types of taxes.

- Revenue forecasting also helps in appraising revenue impacts of economic changes or shocks; for instance, impact of GDP growth, devaluation, inflation, changing trade patterns, political situation in the neighboring countries, long drought, etc.
- The tax analysis and revenue forecasting exercise allows the identification of ways to expand the tax base under the existing tax legislation and improve the tax administration. The inter-sectoral comparison of revenue forecasts vis-a-vis the actual collections gives an insight into the directions for tax policy reform.
- It is also an instrument for measuring tax capacity and tax effort. With a good quality revenue forecast, it is possible to measure the extent to which tax revenue potential has been realized giving an indication of the tax effort. The revenue forecasts can be used to establish benchmark for monitoring collection performance, stimulate effort and finally measure the performance of the Revenue Department which can then be linked to an incentive scheme.

Benchmark for assessing tax regimes

Based on the theory and experience of the past several decades, principles of a "good" tax system have been developed for guidance in designing tax systems to minimize any adverse effects[12]. The features of a good tax system are multi-dimensional: equity, economic efficiency, revenue adequacy, technical efficiency, stability of tax revenues, and tax neutrality (outlined in Annex 1). These may be kept in view while assessing tax regimes. It is worth noting that they are not always complementary. They are sometimes in conflict and trade-offs have to be made. For instance, equity and efficiency measures do not necessarily go together. Efficiency asks for lower and less differentiated tax structure while equity demands lower tax rates on income of poor people and goods and services consumed by them. Broadening a tax base generally improves the horizontal equity, stability, and allocative efficiency of a tax. At some point, however, increase in the breadth of a tax base raises administrative costs through complicated laws, which cause higher transaction costs.

1.2. Central Government - Assessing major tax regimes

If a country is to meet its goal of adequate and stable resource mobilization and achieve its desired growth rates in the future, it is imperative to critically examine the nature of the various kinds of taxes in the country and the way they are administered. The major taxes in a developing economy are analyzed in the following sub-sections, keeping in view the criteria for a "good" tax system, viz. efficiency, equity, revenue stability and technical efficiency outlined above and detailed in Annex 1[13].

Value added tax (VAT)

In recent decades, the value added taxes around the developing countries have evolved as the main workhorse of taxation. The modern VAT is generally consumption based, follows destination principle, uses the credit invoice method for calculating tax liability and could have single or multiple rates. This implies that investment goods are not part of the tax base and/or producers get refund for taxes paid on capital goods; exports are zero-rated while imports are taxed; credit is given for taxes paid on inputs and there is a single or a set of multiple rates in addition to a zero rate.

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[12] Glenday et al. (2012) presents the theory and practice of public finance for practitioners in developing countries.

[13] See Auriol et al. (2005) for a general discussion of tax base in developing countries. Gordon (2010) presents six country case studies on policy implications for developing countries.

The base generally extends to the retail level and covers both goods and services. Ideally, in the interest of a broad base, only exports should be zero-rated while the number of exempt goods/services should be preferably zero or minimal at the most. However, in practice, the VAT is often riddled with numerous exemptions either for equity or administrative reasons. Traders below a certain turnover or threshold are kept tax exempt for the reasons of administrative expediency[14]. For practical purposes, in developing countries, the threshold should not be too low otherwise it unduly increases the burden on tax administration.

Traders below threshold should be subject to some form of taxation based on their turnover while they should be given the option of joining the regular VAT system. Only those traders should be completely out of the tax net who are so small that the revenue collections from them would not be adequate to cover even the cost of administration and compliance.

As theory of taxation indicates, an optimal tax structure seeks a pattern of tax rates on different tax bases that will minimize efficiency cost of taxation while avoiding extensive income inequality[15]. A broad based, moderate rate VAT tends to encourage compliance and generate adequate revenue leading to stability of the tax system. More importantly, this has been advocated for reasons of administrative feasibility. As such, the preferred international practice is of keeping a single rate in addition to the zero rate. Where higher rates are desirable in case of "sin" goods, luxury items or environmentally harmful goods, use of Excises rather than application of multiple VAT rates is recommended.

As refund is essential for maintaining the integrity of VAT system, there should be a reasonable refund system in place where refunds are not selective and nor are they unduly delayed. It is a delicate balancing act between risk of fraud and increasing cost of compliance. Interests should be paid by revenue authority to taxpayers for any late refund. While flawed design and poor implementation are generally the root cause for the lack of effectiveness of VAT in most developing countries, complaints of delays in refund is the one most highlighted.

Information and data required for VAT policy analysis

Table 1 below presents a set of questions to ask in assessing the strengths and weaknesses of a value added tax policy in a developing economy, the information to be sought from the country administration, sources of information and the agency responsible for that information set.

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[14] Threshold should be determined with due consideration to the tradeoff between revenue and cost of administration plus compliance due to raising or lowering the threshold by $1. Ebrill et al. (2001) present a simple model for this computation.

[15] For the concept of optimality in commodity taxation, see Zee, Howell H. (1999) in ed. Shome Tax Policy Handbook.

Table 1: List of questions on the design of aVAT

Tax Regime Feature	Information Required	Information Source	Responsible Agency
1. Rate structure	1. Standard rates 2. List of commodities/ services that are subject to each tax rate	1. Tax Law (VAT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority
2. Zero-rating	1. List of goods/ services subject to zero rate, except for exports 2. Is there any plan or policy discussion on reducing or expanding this list?	1. Tax Law (VAT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority
3. Base and Exemptions	1. List of exempt goods and services 2. Is there any plan or policy discussion on reducing or expanding this list of exemptions? 3. How many taxpayers are in total (VAT and non-VAT registrants)?	1. Tax Law (VAT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority 3. Statistics Department
4. VAT Threshold	1. Current VAT Threshold level; how was this threshold determined? 2. How many taxpayers are registered under VAT with this threshold? 3. How many taxpayers are below the threshold? Their numbers preferably by business size – small, medium?	1. Tax Law (VAT code) 2. Regulations issued from time to time	1. MoF Tax Policy Unit 2. Revenue Authority
5. Taxing traders below threshold	1. How does the country deal with those businesses with turnover below threshold? 2. Is there a special tax regime to cover such small businesses? 3. If yes, what is the tax rate and tax base and who administers it?	1. Tax Law (VAT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority
6. VAT Refund	1. Does refund entitlement extend to all traders or is limited to exporters and importers of capital only? 2. Is there a mandated period in the law/regulations within which VAT refund should be made? 3. In case of delay in payment, are the taxpayers entitled to interest	1. Tax Law (VAT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority 3. Trade and industry organizations and chambers

Tax Regime Feature	Information Required	Information Source	Responsible Agency
	payment? If yes, is it the market rate or the interest applied on delayed VAT payments? 4. Is there a threshold below which VAT refund is not paid? Can traders offset refund against other tax liabilities?		

Excises or special consumption tax

Excise is another type of indirect tax targeted to selective types of consumption. The tax is used mainly for three reasons. First, for the sake of revenue generation since excises are generally levied on goods and services with inelastic demand such as alcohol, tobacco, petroleum products, and telecommunication services. Second, as a consumption tax, excises are not progressive by nature but they can be made progressive to some extent by levying taxes on those goods and services which are primarily consumed by people in high income groups such as motor vehicles and others. Finally, since excise taxes are imposed on selected goods, it is easy to administer them since the number of producers is small and taxes are collected directly from those select few producers.

The base of excises is not broad as the excisesare imposed on certain goods and services only. As the tax rates are high, there is a tendency on the part of consumers to shift consumption to substitutes. Therefore, it becomes necessary to define the taxable goods and services carefully and precisely. In any case, taxation of close substitutes should be ensured and too much rate differential for goods in the same category avoided.

Excises are generally levied at a single rate either as a tax per unit or as an ad-valorem tax. While unit tax is easy to administer, as price level increases with inflation over time, the tax revenue remains the same and therefore decreases in real terms. It is best suited to target some negative externality such as the amount of nicotine in cigarettes, alcoholic content in drinks or pollutants in gasoline, but it needs to be indexed to inflation and revised periodically. However, that is not always politically feasible. Ad valorem tax rates are levied on value so price increases are automatically built into the structure and the revenues are more elastic. Compared to a unit tax, ad valorem taxes may be harder to administer.

In an effort to fine tune the excise tax regime, sometimes the rate structure becomes quite complex, which in turn complicates both the administration and compliance. Also, since excises are applied in combination with the value added taxes, their rates should be fixed keeping this fact in mind. If the combined rate becomes higher than the revenue maximizing rate, total revenues may fall rather than increase.

Information and data required for Excise tax analysis

Table 2 below presents a set of questions to ask in assessing the nature of excises, the information to be sought from the country administration, sources of information and the agency responsible for that information set.

Table 2: List of questions on the design of Excises

Tax Regime Feature	Information Required	Information Source	Responsible Agency
1. Rate structure	1. Standard tax rates 2. List of commodities/ services that are subject to each tax rate 3. Are there unit taxes and if yes on what goods/services? On cigarette and alcohol, are the rates linked to alcoholic or nicotine content? Are the unit taxes inflation indexed? 4. Are some items subject to both unit and ad valorem rates? If yes, what is the rationale? 5. Would the combined VAT and excise rate still be less than revenue maximizing rate?	1. Excise Tax Law 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority
2. Tax base	1. Are the goods and services to be taxed clearly and accurately defined? 2. Are all close substitutes subjected to excises? 3. Are categories of goods/services clearly separated for different tax rates?	1. Excise Tax Law 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority

Personal income tax (PIT)

Personal income tax is a type of direct tax – levied on income earned by individuals. Tax liability can be calculated in two ways - the global system and the scheduler system. In a global system, the income from different sources is pooled and then the tax schedule applied. If income from all sources can be measured accurately, the global system is more likely to result in both horizontal equity and greater progressivity. Global PITs have however, proved quite difficult to implement in low income countries. In a scheduler system, different tax rates are used to calculate the tax liability on income from different sources, such as wages, interest, dividends and rents. The scheduler system may be a fairer system by applying different rates on wage income versus passive incomes such as interest, dividends and rents. The taxes are often withheld at source and can become the final tax which may be helpful in countries with weak system of tax administration and compliance.

Several features of income tax make it an attractive source of revenue. It has the potential to yield substantial revenues, is elastic by nature offering stable revenue source, and it helps create an investment friendly environment. A major advantage of personal income tax (PIT) is that it can be designed to be progressive by applying higher tax rates on higher income brackets. The tax serves well some key principles of a good tax system, i.e., the ability to pay, and equity (both horizontal and vertical). While the economic definition of taxable income is quite broad as the sum of consumption and change in net worth and in theory it can be applied in all countries but the measurement of income is often problematic. To calculate the taxable income, the cost of earning income is deducted. In addition, there are many other allowances and deductions for family members, medical expenses and charitable contributions. This naturally makes personal income taxes complex.

The progressivity in an income tax system can be changed by changing the marginal tax rates, changing the level of standard deduction (zero bracket threshold), varying the size of tax brackets and credit schemes. However, the larger the number of brackets and higher the marginal tax rates, administration becomes more complex and chances of evasion go up which can lead to revenue loss. There is a trade-off between making PIT more progressive and ensuring that administration and compliance do not become too complicated.

For income tax to function properly, an important element is taxpayers' capacity and willingness to comply with the law. Therefore, income taxes are an important source of tax revenues in developed economies that have strong administration and a culture of self-compliance. On the other hand, in most developing countries, there are a large number of tax payers whose per capita income and average payments are low which increases both the cost of compliance and administration.

In the absence of a strong administration, lack of tax culture, and sizable informal sector, income taxes are often not an important source of revenue in developing countries. Receipts from PIT are low and stagnant in such countries and come predominantly from wage withholding on public sector employees and workers of large enterprises[16].

Information and data required for PIT policy analysis

Table 3 below presents a set of questions to ask in assessing the tax regime as applied to PIT, the information to be sought from the country administration, sources of information and the agency responsible for that information set.

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[16] While the difficulties for the PIT to set off in developing countries may be an empirical fact, there is nothing in the research that suggests that personal income tax should not be a suitable and robust tax source, in particularly in emerging countries as a means to reduce the progressivity of the tax structure, due to reliance on indirect taxes. See C. Heady (2004) for a broad discussion.

Table 3: List of questions on the design of the PIT

Tax Regime Feature	Information Required	Information source	Responsible agency
1. Rate structure	1. Standard rates 2. Income brackets on which different rates apply 3. Does the tax schedule have too few or too many income brackets? 4. If there are scheduler tax rates, types of incomes on which they apply with the respective rates.	1. Tax Law (PIT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority
2. Base and Exemptions	1. Does the tax base include income from all sources: wage, bonus, overtime payment, rental income, interests, dividends, income from self- employment, business, commerce, agriculture, industry, transport; income from copyright, franchise, annuity, etc.; 2. List of exempt or excluded income with rationale for exemption 3. Treatment of pension. Is contribution to pension funds tax deductible? Is the distribution of income taxable? 4. What about income from capital gains? Are they treated as part of normal income or taxed separately? 5. What percentage of labor force are paying PIT?	1. Tax Law (PIT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority 3. Statistics Department
3. Treatment of foreigners	1. Does the same tax schedule apply to foreigners or there are differences in treatment? 2. What about tax on distributed dividends to foreigners?	1. Tax Law (PIT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority
4. Deductions, allowances and tax credits	1. Standard and other deductions 2. List of allowances 3. Are tax credits available on taxes paid in a foreign jurisdiction? With treaty or without treaty?	1. Tax Law (PIT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority

Corporate income tax (CIT)

The corporate income tax is imposed on the net profit of the company, i.e. the gross revenue minus all deductible expenses. Income arising from all sources including business, trading as well as non-business income is included in the base. Most developed countries tax capital gains at the full corporate income tax rate but a few countries exempt capital gains if reinvested in business.

Deductions are allowed for all expenses incurred wholly and exclusively in earning the income or maintaining the assets. However, there may always be some grey areas where interpretations differ. Mainly deductions for cost of goods sold or purchase of inputs, depreciation of capital assets, financing costs and expenses on overheads are allowed subject to restrictions to prevent tax avoidance. Accounting is on accrual basis.

Tax rates vary considerably. One trend, however, is clear that the top CIT tax rates have been declining over the years both in developed and developing countries. This may be attributed to tax competition as capital is internationally mobile and can be relocated more easily. For the same reason, capital is often taxed lightly compared to labor and the CIT tax rate is usually kept below the highest marginal tax rate under PIT. Most countries have a single CIT rate, but reduced rates on some sectors or some regions are also prevalent. Some countries may apply a higher rate on natural resources like minerals, oil and gas.

Foreign companies including branches pay income tax at normal corporate income tax rate but there may be an additional withholding tax on repatriated profits. Withholding rate for dividends is generally between 15 and 20%. Companies can use foreign taxes paid on business income or dividends as a credit against corporate income tax liability but the credit cannot exceed the amount of tax due domestically.

All countries provide for depreciation allowance, which is the cost of wear and tear in using the assets, but the way of doing it may differ. Many OECD countries have tried to keep depreciation rules such that tax deprecation is as close to economic depreciation as possible. Since accurate computation of economic depreciation is technically and administratively difficult, some standardized method like straight line or declining balance methods or their combination is followed. Also, making depreciation rules more generous is the most common method of providing a tax incentive. Such provisions are often extended for machinery and equipment for research and development, replacement of environment polluting plants and machinery and for small and medium enterprises (SMEs).

Most countries have some loss carry forward provision which may be limited in time or may extend indefinitely. Few countries have loss carry backward provisions that go back for one to three years.

Tax incentives such as reduced tax rate, investment allowance/credit and accelerated depreciation are extended to certain eligible industries for the sake of attracting more investment on the basis of location, business type, economic activity and type of assets. Tax holidays were very common in the past but they have been phased out in the developed countries and are gradually becoming less prevalent now in a number of developing countries except for some preferred sectors. It has been brought out repeatedly through a series of studies that tax incentives have little impact on the quantum of foreign investment flowing into a country. These are, however, still commonly offered mainly due to regional tax competition. Tax incentives attract foreign direct investment only when other business environment and general infrastructure are sound. Some sort of mutually agreed code of conduct in this area among the host countries may limit the

harmful effects of excessive incentives. The hard part is how to get a consensus among the participating countries to restrict tax incentives, particularly on foreign direct investment[17].

The question of transfer pricing becomes particularly relevant in case of multinational companies. Many tax laws have only cursory provisions for transfer pricing. Although this is a very complex issue and the tax policy unit and tax administration in most cases suffer from an asymmetry of capacity vis-à-vis big corporations, both domestic and transnational, but the important thing is that the legal provisions should be there and a unit in government should be specially equipped to deal with this issue. Several models, including those initiated by OECD and UN, are available on transfer pricing laws and rules.

Finally, the question arises whether corporate income tax and personal income constitute double taxation of the same income. After the company's income is subjected to CIT, the net of tax profits are again taxed under PIT on distribution of dividends or under capital gains tax on retained earnings. There are arguments on both sides but most countries recognize the need for some sort of integration between individual and corporate income tax to avoid some undesirable impact on investment. The element of double taxation can be reduced to some extent by applying one of the many methods of tax integration ranging from no integration to partial and then full integration.

Information and data required for CIT policy analysis

Table 4 below presents a set of questions to ask in assessing the tax regime as applied to CIT, the information to be sought from the country administration, sources of information and the agency responsible for that information set.

Table 4: List of questions on the design of the CIT

Tax Regime Feature	Information Required	Information source	Responsible agency
1. Rate structure	1. Standard rate 2. Are there reduced rates on some industries by location or by sector? 3. Are natural resources e.g. minerals, oil and gas subject to higher tax rate?	1. Tax Law (CIT code) 2. Regulations 3. Mining code; Petroleum law	1. MoF Tax Policy Unit 2. Revenue Authority 3. Ministry of mining/petroleum
2. Base and Exemptions	1. Does the tax base include income from all sources: business, trading as well as non-business income? 2. List of categories of incomes or businesses that are exempt for indefinite or given number of years 3. What percentage/number of businesses are in small and medium category (SME)? Any special provisions for SMEs?	1. Tax Law (CIT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority 3. Statistics Department 4. Chambers of commerce and industries

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[17] For empirical evidence on effects of tax incentives, see, for example, Klemm et al. (2009).

Tax Regime Feature	Information Required	Information source	Responsible agency
3. Treatment of non-resident companies or branches	1. Does the same tax regime apply to foreign enterprises or there are differences in treatment? 2. Any differences in treatment of subsidiaries versus branches? 3. Does the law have clear provisions on transfer pricing? Any unit in MoF or revenue authority to deal with this?	1. Tax Law (CIT code) 2. Regulations 3. Tax treaty	1. MoF Tax Policy Unit 2. Revenue Authority
4. Withholding tax	1. Rate of withholding on dividends being repatriated? 2. Rate of withholding on interest or management fees to non-residents?	1. Tax Law (CIT code) 2. Regulations 3. Tax treaty	1. MoF Tax Policy Unit 2. Revenue Authority
5. Depreciation	1. What are different depreciation rules for different asset groups? 2. What industries, sectors are given accelerated depreciation?	1. Tax Law (CIT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority
6. Tax incentives	1. What kind of incentives are available and to which industries – lower tax rates, investment allowance, accelerated depreciation 2. Any tax holidays? If yes, are those industries still required to submit their profit/loss account?	1. Tax Law (CIT code) 2. Regulations 3. Investment promotion law (if applicable)	1. MoF Tax Policy Unit 2. Revenue Authority 3. Ministry of industries
7. Loss carry over	1. Loss carry forward rules for indefinite period or given number of years? 2. Any loss carry backward provisions?	1. Tax Law (CIT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority 3. Ministry of industries
8. Tax integration	Is there any provision for integrating PIT and CIT?	1. Tax Law (CIT code) 2. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority

Natural resource taxes

Exploitation of exhaustible natural resources such as minerals, oil and gas involves a great deal of resource rent because, in this sector, economic optimization rule is not "marginal revenue equals marginal cost". In fact, marginal revenues far exceed the costs of extraction and the difference is the resource rent. Therefore, the government's desire is to capture most of this rent by using various tax and non-tax instruments. In this case, inter-temporal exploitation is an important issue: how much resource to extract in each time period. Also, the quality or grade of the ore is important as it affects the extraction cost.

The tax instruments comprise normal corporate income tax and additional profits tax or resource rent tax which mandates higher tax rates on profits beyond the normal rate of return[18]. Resource rent tax, however, has the same problems of collection as the normal corporate income tax.

Royalty is the main non-tax instrument applied to this sector. It can be applied on quantity of mineral, oil or gas just like a unit tax or on revenue at ad valorem rate. Royalty ensures that revenues begin to flow to the government as soon as production starts. Royalty is therefore an assured source of revenues for the treasury while income tax revenues depend on whether the company makes an accounting profit. The royalty rate should however be moderate since high rates of royalty may cause high grading and extraction of low grade ores and minerals may become uneconomical leading to closure of low grade mines and loss of government revenues. However, to capture the windfall gains due to increase in commodity prices, a sliding rate of royalty where rate is linked to metal/mineral prices is applied. As the mineral, oil or gas prices rise, the rate of royalty increases.

Sometimes, investors ask for profit linked royalty rate on the argument that they should not be expected to pay royalty when they are making losses. This is an erroneous argument because royalty is the payment to factor of production, land in this case, and goes to the owner of land which is the government in this case. Linking royalty rate to profits creates the same problems of revenue realization for the government as the corporate income tax.

In practice, most countries apply a combination of income tax and ad valorem royalty. Some local governments also apply property taxes on ore bodies and oil wells in their jurisdiction but this is only a minor tax in most countries.

In many instances, investors ask for a "Stabilization Clause" which protects them from any future changes in tax law that might be contrary to their interest but gives them the benefit of any favorable changes in the tax or royalty regime. This kind of stabilization clause ties down the hands of the government. So the company benefits by a rate reduction but is protected if the tax rate goes up. The government is barred from revising the laws in any way that might impact on the companies negatively so this type of clause should be entered into with caution. Another relevant issue is whether mines and oil wells are ring fenced, i.e. the profits and losses of one mine or one oil field are assessed independently for tax purposes or they can be clubbed together. In particular, what is relevant is whether losses of one mine/ oil field can be offset against profits of another unit or it can be only carried forward on its own. This has naturally implications for the revenue flow to the treasury.

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[18] For an overview of principles of resource taxation for low income countries, see Paul Collier (2010), and for international experience in mineral taxation see Hogan et al (2010) in Daniel et al. ed.

Finally, sometimes special royalty rates and income tax provisions apply to small or artisanal mines particularly when this type of mining is of sizeable dimension.

Information and data required for Natural Resource tax policy analysis

Table 5 below presents a set of questions to ask in assessing the royalty-income tax regime as applied to natural resources, the information to be sought from the country administration, sources of information and the agency responsible for that information set. The information on the corporate income tax applied to natural resources is almost the same as that in case of normal CIT regime but there are some additional questions especially relevant for this sector and they are listed in rows 2 and 3 in the table below.

Table 5: Questions on the design of royalty and income taxes on minerals, oil and gas

Tax Regime Feature	Information Required	Information Source	Responsible Agency
1. Royalty regime	1. Standard rate of royalty 2. Is there a sliding royalty regime where the rates may be indexed to the market price of the mineral, oil or gas? 3. Is royalty linked to revenue only or linked to profits? If it is profit linked how is profit determined for this purpose?	1. Mining code; Petroleum law Tax Law 2. Circulars issued from time to time	1. Ministry of mining/petroleum
2. Corporate income tax rate, depreciation rules and incentives	1. Tax rate applied to natural resource sector? Is it different from the normal CIT rate? 2. Are the same depreciation rules applied to this sector as the normal CIT? Are exploration costs amortized or expensed? 3. What percentage/number of businesses are in small and medium category (SME)? Any special provisions for mining SMEs?	1. Tax Law (CIT code) 2. Mining code; Petroleum Tax Law 3. Regulations	1. MoF Tax Policy Unit 2. Revenue Authority 3. Ministry of mining/petroleum 4. Chambers of commerce and industries
3. Tax incentives	1. What kind of incentives are available to this sector – investment allowance, accelerated depreciation? 2. Any tax holidays? If yes, are the mines or oil wells still required to submit their profit/loss account?	1. Tax Law (CIT code) 2. Mining code; petroleum tax law 3. Investment promotion law	1. MoF Tax Policy Unit 2. Revenue Authority 3. Ministry of mining/petroleum

Tax Regime Feature	Information Required	Information Source	Responsible Agency
	3. Are there clear Transfer pricing laws and rules and the administration equipped to deal with it?		
4. VAT	1. Is there any special treatment of VAT regarding extractive industry (e.g., rates, exemptions, treatment of refunds on investment/imports, exports and domestic sales)?	1. VAT law. 2. VAT regulations. 3. Other related laws/regulations governing the VAT on extractive industry.	1. MOF tax policy unit. 2. Revenue authority. 3. Sector ministry/Commission.
5. Small and artisanal mining	1. Are there special royalty rate for this kind of mining 2. Are there special income tax provisions for this kind of mining	1. Tax Law (CIT code) 2. Mining code	1. MoF Tax Policy Unit 2. Revenue Authority 3. Ministry of mining/petroleum
Other types of taxes	What other types of taxes or non-tax fiscal instruments as applicable to extractive industry (e.g., land rent, application, registration fees and stamp duties, property taxes)	1. Tax type specific laws and regulations.	1. MoF Tax Policy Unit 2. Revenue Authority 3. Ministry of mining/petroleum

Part II: Quantitative Methodologies for Assessing the Performance of a Tax System

Revenue forecasting: Institutional setting and processes

Since forecasting of revenues is essential for the annual budgeting exercise in the public sector, all countries follow some system to arrive at the figures for projected revenues. The quality and authenticity of revenue forecast largely depends upon the following three factors:

1) The institutional set up and who prepares the forecast? In most developing countries, this is done by the tax policy unit in the Ministry of Finance (MoF). Since the data comes from tax administration, in countries with a strong revenue agency (RA), this task is gradually shifted to the RA. This clearly poses a problem of conflict where the same agency that collects taxes also determines the target. Ideally, not only the responsibility of revenue forecasting should lie with the MoF but it should be subject to an external review by an independent agency. In many OECD countries, the task of forecasting is assigned to a group comprising different institutions in addition to the executive branch[19].

2) Who is responsible for making the economic forecasts? Since the source of all tax revenues is the GDP, the projected macroeconomic performance of the economy is a crucial parameter in all the forecasting models. It could be the projected growth rate of the GDP itself, increase in consumption, or rate of growth in imports. Therefore, in order to keep the revenue forecasts independent of government bias, it is not only important to involve external institutions and experts in the actual forecasting exercise but also to have independent projections of macroeconomic parameters. Again, the role of external sources becomes important.

3) How good is the data and who maintains it? For the various revenue forecasting models, a variety of good quality data from different sources are needed such as the data on tax revenues, imports/ exports and other trade data, input-output tables, household consumption and income data. All the institutions that are involved in collection and maintenance of these data sets should have the capacity and necessary integrity to perform this task. A good department of Statistics obviously is vital. Needless to emphasize the importance of computerization of data.

In any kind of review of revenue performance and efficacy of revenue forecasting system, one has to start with questions about these three basic issues.

Forecasting models

For forecasting revenues, mainly three major types of models are used: Macroeconomic or GDP-based model, Microsimulation model and Revenue receipts model.

Macroeconomic or GDP-based modeling requires the construction of data series of tax revenues and their bases for each type of tax, such as gross domestic product (GDP), consumption or imports. Using the two data series, the underlying relationship between the tax base and the tax revenue, known as tax elasticity, is estimated. The tax elasticity measures the "natural" response of the tax revenue with respect to changes in the tax base without any discretionary changes[20]. It is essentially the ratio between the percentage change

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[19] See Buettner et al. (2009) for a discussion on the need for involving external institutions in order to enhance the quality of revenue forecasting.

[20] The same ratio when tax revenues include discretionary changes in the tax base or tax rate yields tax buoyancy. Tax elasticity is more useful as it gives the inherent relationship between the base and the revenue and then the impact of discretionary changes, such as change in effective tax rate, may be added.

in tax revenue divided by the percentage change in the tax base and gives a measure of how tax revenues would change as a result of change in tax base only even when the tax rates remain unchanged.

Tax elasticity can be computed from year to year and then an average can be taken. Alternatively, if a decent time series for 10-12 years is available, a regression analysis would yield better estimate of tax elasticity. Once the elasticity is known, the future changes in tax revenues are nothing but the future changes in the base multiplied by the elasticity. So now the future values of tax base or changes in tax base have to be forecast using the estimate of GDP growth and the price indices in the future. For example, if import revenue is to be forecast in terms of aggregate goods imported and the effective import duty rate, then aggregate goods imports need to be forecast in terms of GDP and real import prices. This model can be applied to all types of tax revenues - VAT, Excises, income taxes and trade taxes with equal ease.

Microsimulation models are based on forecasting tax revenues with the help of tax returns of individual taxpayers or transactions and then aggregating the results. The model contains a tax calculator that applies all the tax rules to the information in each tax return and then aggregates the tax liabilities across all the returns. By modifying the logic in the calculator, impact of alternative policies can be estimated.

The main advantage of micro-simulation modeling lies in its capacity to estimate the distributional effect of a given policy proposal on particular groups of people or sectors of the economy. These models are capable of providing distributional impact analysis by identifying potential winners and losers in the society from proposed policy changes. In addition, they help assess the effects of a variety of policy options. The model can be also used to forecast tax revenues if the information in each tax return can be projected into future years on the basis of assumptions about economic growth, inflation rate, exchange rate etc. These models are best suited for income taxes and trade taxes. A variation of the model can also be applied to VAT revenues if the tax returns from individual vendors are available. This model can be used only when the data base is computerized.

Revenue receipts model is a simple tool to monitor and project short-term revenues from major taxes, components of a tax, or non-tax charges. It requires primarily monthly tax collection data, which are easily available from the tax agency or the Ministry of Finance. While this model is mainly targeted at short-term forecasting and for monitoring of monthly tax receipts over a financial year, it contains similar features to a macro-model for forecasting one-year or medium-term revenues as long as no major changes are expected in the tax or economic structure over the forecast period.

One simple approach in this model is to take the annual forecast of revenue collections of a specific tax and then distribute these collections over each month of the year on the basis of the seasonal patterns in the past. A more sophisticated model forecasts each month's revenues on the basis of the corresponding month in the last year but adjusted for the expected growth rate in revenue collections due to real economic growth, inflation rate and tax rate changes. In any given month, annual tax receipts for the fiscal year can be expressed as the sum of two parts: (1) actual revenues collected up to the month for which receipts data are available; and (2) forecasted receipts for each of the remaining months of the fiscal year. To project the second part of monthly receipts, the model takes into account the actual growth of the year-to-date tax collections as compared with that of the same period in the previous fiscal year, and the projected growth of tax base proxies (e.g. GDP, private consumption, imports, etc.).

VAT revenue forecasting forms a dedicated approach in addition to the three standard models outlined earlier. In VAT specific revenue forecasting, the additional models are referred to as an aggregate or national accounts model and a disaggregate model based on data collected from Input-Output tables. The

aggregate method starts with the GDP and arrives at the value-added included in the VAT base by adjusting the GDP for imports, zero rating, exemptions, and turnover threshold. The disaggregate method requires detailed breakdown of the National Accounts and Input-Output (I-O) Tables, and also information from other sources, such as household expenditure and industrial surveys to estimate the impact of exemptions and zero rating (Le, 2007) The tax base is computed by adding up the value added of each sector in the economy.

Incidence Analysis – An integrated element of revenue forecasting

Tax policy in countries of all income levels pursues equity goals. The distribution of actual tax burden, however, may be significantly different from the one provided in the statutory tax system due to changes in economic behavior. At the same time, public spending affects equity through social subsidies and transfers. Therefore, looking at the redistribution of public resources achieved through taxation alone is not sufficient, and it is important to assess net effects of both taxes and public expenditure on equity and poverty reduction. This motivated the World Bank to adopt and apply the Commitment to Equity Assessment (CEQ)[21], which comprehensively analyzes the tax and benefit system, in several low and middle income countries.[22] A review of the methods and results of studies that analyze the incidence of taxes is provided in Fullerton and Metcalf (2002); Martinez-Vazquez (2008).[23]

Commitment to Equity Assessment

CEQ is a standard incidence analysis that takes into account direct and indirect taxes and government spending, including indirect subsidies, such as on energy and agricultural inputs, and in-kind benefits arising from free education and health care.[24] This methodology seeks to address three main questions:

- How much redistribution does a country accomplish through taxes and social spending?

- How progressive are revenue collection and social spending?

- What could be done to improve the redistribution impact and poverty reduction through changes in taxation and spending but without jeopardizing aggregate fiscal discipline?

The basic incidence analysis employed by CEQ is focused on point in time rather than lifecycle and does not include behavioral or general equilibrium modeling. Even though this methodology does not account for indirect effects, the incidence of taxes is assessed based on their assumed economic rather than statutory incidence. This entails using the following assumptions: individual income taxes and contributions, both by employee and employer, are borne by labor in the formal sector and consumption taxes, on both final goods and inputs, are fully shifted forward to consumers. In addition, for consumption taxes, this approach assumes the lower incidence associated with own-consumption and informality.

The CEQ methodology uses five income concepts—market, net market, disposable, post-fiscal, and final income—for the incidence analysis. This involves allocation of taxes, subsidies and transfers to each

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[21] A CEQ assessment is developed by the Commitment to Equity Project which is a joint venture of the Center for Inter-American Policy and Research and the Department of Economics at Tulane University and the Inter-American Dialogue.

[22] The CEQ assessments have been completed in Paraguay and Uruguay and are planned to be conducted in Armenia, Ethiopia, Indonesia, Jordan, South Africa and Sri Lanka.

[23] The review is available on-line: http://www.nber.org/papers/w8829.pdf; Martinez-Varquez (in Wodon and Moreno-Dodson, 2008).

[24] The methodology is explained in detail in the CEQ handbook which is available on-line:
http://www.commitmentoequity.org/publications_files/Methodology/CEQWPNo1%20Handbook%20Edition%20Sept%202013.pdf.

household to determine how incomes change. The CEQ assessment allows cross country comparison by providing the benchmark case and sensitivity analysis for constructing all the income concepts.

CEQ relies mainly on household surveys (HHS) to construct the income concepts. If surveys cover only consumption, this approach allows arriving at the income concepts by equating consumption and disposable income. In cases when the information on direct taxes and indirect taxes, transfers in cash and in-kind and subsidies is not available directly from household surveys, this methodology draws on other data sources, such as public accounts and the program or tax rules to impute, infer or simulate benefits received or taxes paid. When surveys do not incorporate all necessary questions, alternate surveys or secondary data sources that provide the distribution of benefits or taxes by quintile are used.

The CEQ assessment uses a range of indicators to assess the distributional effects and the progressivity and effectiveness of taxes, social spending and subsidies. These include the Gini coefficient, poverty rate applying different measures, fiscal incidence by decile, Kakwani coefficients of taxes and concentration coefficients of spending, and others.

Measuring Tax Expenditures – The Forecasting of Revenue Foregone

As tax expenditures represent forgone revenue for a government or hidden spending, it is important for governments to assess these on a regular basis, including to quantify the overall size of revenues foregone. Tax expenditure analysis has over decades become the main tool for tax policy review and annual budget design and evaluation in most of the OECD countries. It is considered as one of the key instruments to promote transparency, accountability and good governance in taxation.[25] However developing countries are still learning to use this tool, except for a few.[26]

Although the main objectives a tax system is to mobilize domestic revenue for financing public spending and to provide for a fair distribution of tax burden, it is often used to promote certain government policies in the form of tax incentives. These incentives concern a broad range of policies, including the encouragement of investment and growth, employment, poverty alleviation and others. They are essentially government spending outside the budget process and result in tax expenditures.

Tax expenditures are defined as provisions that reduce or postpone revenue for a rather narrow group of taxpayers relative to a benchmark tax (OECD, 2010). The benchmark tax comprises the rate structure, accounting conventions, deductibility of compulsory payments, provisions to facilitate tax administration, and international fiscal obligations (OECD, 2010). Tax expenditures may take a number of different forms, such as allowances, exemptions, preferential tax rates, tax deferrals, and tax credits.

Tax expenditures can be measured using one of the following methods:

Initial revenue loss. This method involves calculating the amount by which tax revenue is decreased as a result of the enacted tax expenditure. It does not take into account taxpayers' behavioral responses.

Final revenue loss. This estimation differs from the initial revenue loss approach by incorporating the change in taxpayers' behavior and the effects on revenues from other taxes ensuing from the introduced tax expenditure.

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[25] See, for example, "Options for Low Income Countries' Effective and Efficient Use of Tax Incentives for Investment" 2015.

[26] For example, India, South Africa, Uganda, Guatemala, and the Philippines.

Outlay equivalence. This method estimates the direct government expenditure that would have generated the same gain for taxpayers as the considered tax expenditure. This requires measuring the direct spending in pre-tax terms in order to arrive at the same after-tax effect on taxpayers' income. Whereas tax expenditure estimates are informative for assessing the overall management of public finances, they are not suitable for cross country comparison mainly for two reasons. First, tax benchmarks are defined differently across countries. Second, even with the same benchmark, there are significant differences in the completeness of the estimated tax expenditures. In practice, tax norms are defined differently across countries, making it difficult to make comparisons.
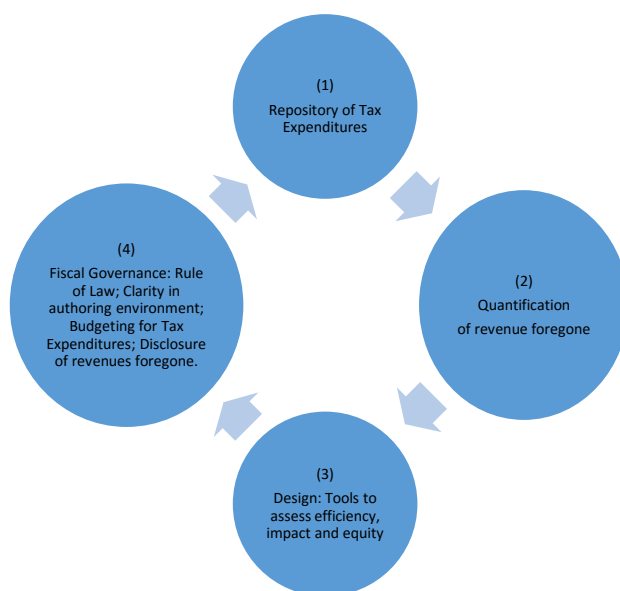
Integrated Framework on Fiscal Management of Tax Expenditures. The management of tax expenditures involves activities by the government in the four areas, as outlined in Figure 1[27]. *The initial step implies the repository to be established*: the identification of all tax expenditures in the tax codes, including eventually in other codes, such as the Mining code. A 'tax expenditure accounts' is to be established in the revenue authorities' systems, by dividing the provisions of the tax systems into a benchmark and a series of deviations from the benchmark (the situations where tax liability is reduced for a particular group of taxpayers or economic activities, in the form of rate reliefs, exemptions, allowances, credits or tax deferrals.) Once the repository is defined, *the estimation of the revenue foregone can be established as step two*. The revenue loss should cover all income- and consumption tax sources and be established using one of the three methods described above. The "initial revenue loss" is the simplest method, and, hence, the most frequently applied across countries. In *step three, various efforts to assess efficiency and equity aspects of the given tax expenditure schemes are undertaking*. This includes cost-benefit analyses of new or existing schemes, which takes into account any positive contributions of a tax expenditure (the creation of jobs; attraction of highly skilled workers from abroad; improving gender balance in work force and –employment; and direct and indirect revenue impacts, as examples), to off-set the revenue loss. Similarly, alternative means of achieving the same policy objective are being explored, such as targeted transfers or service delivery programs on the expenditure side of the government's budget. Lastly, but not least*, in step four, an institutional set-up should be established, in support of a transparent and robust management of the tax expenditure portfolio.* Best practice include the inclusion of all tax expenditures to be embedded in the main body of the tax code, and with the ultimate authority to grant tax expenditures to be based on tax code provisions and be centralized within the Cabinet (preferably with the Minister of Finance, to ensure the balance between sector policy objectives and tax policy and fiscal affordability) Other best practices implies an annual update of policy objectives and revenues foregone, in the context of revenue forecasting in support of the annual budget law; and a commitment by the government to monitor and to disclose assessments of revenue foregone on a regular basis.

The fiscal framework on tax expenditures to be applied rigorously, in particular as a diagnostic tool in the PERs. Country practices in terms of the soundness and quality of oversight and monitoring of efficiency of tax expenditures differ significantly. Some OECD countries, in particularly Canada, Korea and the USA, have established and improved fiscal management framework over decades, covering all four steps. As witnessed in a number of PERs, on the other hand, most developing countries have less successful experience to report. The repository covers only some tax sources, in particularly CIT in relation to tax incentives and Foreign Direct Investments; the revenue foregone are estimated on a one-off basis, without setting up the deviations from the benchmark; the use of assessment tools, such as cost-benefit analyses,

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[27] For a further discussion of the four components, including assessment criteria on the design and the institutional set-up, please refer to Leif Jensen, "Fiscal Management of Tax Expenditures – Entry Point for Tax Policy Dialogue" (draft), February 2016.

are only implemented partially, due to data limitations or capacity constraints in tax policy units; and finally, the integrated fiscal governance set-up is not defined, with decision-making fragmented across a number of stakeholder, and with criteria for granting tax expenditures, in particularly in relation to tax incentives within the CIT, remaining bold and blurred, leaving a great deal of discretion for the specific cases[28]. The PER team are encouraged to assessment the tax expenditures across all four steps, with a view to support a holistic assessment of any gaps and deficiencies in current arrangements in the country in question.

Figure 1. Integrated Fiscal Management Framework on Tax Expenditures

Source: Leif Jensen, 2016

Part III: Revenue Mobilization at Subnational Government Level

Introduction

The revenues at the local level could come from own taxes and fees, from fiscal transfer from the center or could be supplemented by sub-national borrowing, debt and capital finance.

In the 'ideal world', among the characteristics that might be sought in a subnational tax to meet the requirements of 'good local tax sources' are the following[29]:

- The tax base should be relatively immobile, to allow local authorities some leeway in varying rates without losing most of their tax base.
- The tax yield should be adequate to meet local needs and sufficiently buoyant overtime.
- The tax yield should be relatively stable and predictable over time.
- It should not be possible to export substantial part of the tax burden to nonresidents.
- To ensure accountability, the tax base should be visible.

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[28] Please refer to footnote 27. Please also refer to *Options for Low Income Countries' Effective and Efficient Use of Tax Incentives for Investment* (2015); and IMF (2014).

[29] John Mikesell (2007), discusses in detail the characteristics that might be sought in a subnational tax in developing economies.

- The tax should be perceived to be fair by taxpayers.
- The tax should be relatively easy to administer efficiently and effectively. The cost of administration should be a reasonable proportion of revenue collections[30].

Sub-national governments comprise both regional and municipal/county/ village level governments. Needless to emphasize, their resources and expenditure needs are quite at variance. Let alone the lowest rang of municipal/ county level government, even at the regional level, the revenue assignment in most countries with significant sub-national levels of government in the regions and states, such as India, Brazil, Pakistan, South Africa, and Russia falls short of the ideal.

How to assign tax functions across levels of central and local government

Taxes need not be assigned in full to either center or sub-national level of government[31]. In fact, sub-functions can be vertically allocated between the two jurisdictions. These sub-functions include tax legislation, tax base amendment decisions or valuation, tax rate and exemption decisions, tax administration (registration, assessment, accounts, revenue receiving), auditing, collection enforcement and taxpayer education and services.

When designing the distribution of tax sources across levels of governments, sufficient tax instruments have to be reserved for the national governments, due to redistribution objectives, tax efficiency objectives -- the optimum exploitation of revenue sources -- and the need for financing national policy objectives and national expenditure. A number of factors should be considered when deciding which revenue sources are appropriate for subnational governments. Among factors to be avoided are: mobile tax bases; redistributive taxes; unevenly distributed tax bases; taxes subject to economies of scale; and taxes subject to cyclical fluctuations.

Based on these broad principles, the following design options may become available for revenue allocation at the sub-national level[32].

1. Independent subnational taxes: Legislation, administration and revenue would be under the control of the regional government, often under broad guidelines from the central government (property tax).

2. Centrally-assisted subnational taxes (co-administration): Legislation and revenue would be directly under the control of the regional government but the administration could be shared or co-administered with the central government (e.g., tax base identification, valuation, assessment, collection and enforcement, appeals). Property tax with central valuation.

3. Surcharges (piggy-backing): Administration would be under central control while policy discretion would be given to the regional governments to set a rate on the nationally-determined tax base. Revenue would then be given back to the regions based on the rate, origin of revenues, residence of taxpayers or some formula. An example is income or sales tax with same base, but split rates – income taxes in Canada and US, VAT in Canada.

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[30] For further discussion of this issue, see Mark Gallagher (2004) and Chris Evans (2003) for the point that compliance costs must also be reasonable as emphasized.

[31] The classic tax assignment arguments are set out in Richard A. Musgrave (1983) and in Wallace Oates (1998).
A recent treatment with respect to emerging economies can be found in Jorge Martinez Vazquez et al. (2006).

[32] For a broad yet refined discussion on revenue assignments for subnational governments, please refer to M. Ambrosanio et M Bordignon (2006). Jenkins et al. (2002) has an excellent discussion of basic revenue allocation options and the rationale for separation of local government taxes from central tax systems.

4. Tax sharing: All policy and administration would be under central government control. A portion of the revenue would be given to the regional governments based either on origin, residence or some formula (e.g. China VAT, transitional economies in Europe and Central Asia).

5. Revenue sharing (transfer - grants): All policy, administration and revenue would be under central government control. Revenue could then be shared back to the regional governments through revenue sharing based on formula.

3.1 Assessing country-specific revenue regime at sub-national level

In evaluating the country specific revenue regime, the essential question concerns the separation of taxing powers and tax revenues across levels of government. The OECD Revenue Statistics identifies a system of "Attribution of tax revenues" with the following principles for distribution of revenue between the collecting and the beneficiary government:

As a general guide tax revenues are attributed to non-collecting beneficiary governments:

- when they have exercised some influence or discretion over the setting of the tax or distribution of its proceeds; or
- when under provisions of the legislation they automatically and unconditionally receive a given percentage of the tax collected or arising in their territory; or
- when they receive tax revenue under legislation leaving no discretion to the collecting government.[33]

In addition to the 'attribution of tax revenues', it may also be helpful to assess the[34] level of discretion by which subnational government may determine their tax policy. In this regard, efforts have been undertaken to subdivide taxes of subnational governments into categories of decreasing tax autonomy and then ranked by decreasing order of control that the sub-national governments (SNG) can exercise over this revenue source:

(a) SNG sets tax rate and tax base

(b) SNG sets tax rate only

(c) SNG sets tax base only

(d) SNG sets tax base for SNG and central government tax (es)

(e) Revenue sharing arrangements

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[33] A number of more specific rules may be set down as guidelines for the attribution of tax collection among collecting and beneficiary governments.
- The revenue of taxes is not distributed to any government other than that collecting it should be shown as tax revenue of the collecting government.
- The revenue of taxes which a government collects and unilaterally earmarks at its discretion for distribution to another government should be shown as tax revenue of the collecting government.
- The revenue of taxes which a government collects on behalf of another government with the beneficiary government unilaterally determining the amount of the tax or distribution of its proceeds, should be shown as tax revenue of the beneficiary governments.
- The revenue of taxes collected by one government and transferred to another with the amount of the tax or distribution of its proceeds decided upon jointly by both governments, or on the basis of the tax collected or arising in the territory of the beneficiary government is to be shown as tax revenue of the ultimate beneficiary government.
- If a central or regional government authorises or requires local collection of a particular tax, a part or all of which is automatically retained by the collecting government, the local share is shown as tax revenue of the collecting government."

[34] An assessment of the level of discretion on taxation would often be undertaken as a broader fiscal autonomy assessment, including non-tax revenues and grants, as well as expenditure autonomy. A guidance note, including questionnaire to prepare the fiscal assessment, is being prepared separately, under the Expenditure Analysis Supported by BOOST work stream.

(e.1)   revenue-split can only be changed with consent of SNG

(e.2)   revenue-split fixed in legislation, may unilaterally be changed by central government

(e.3)   revenue-split determined annually by central government as part of the budget.

(f) Central government sets rate and base of SNG tax[35].

The allocation of taxing powers varies evidently across countries, where regional and local governments' revenues may be accrued through a combination of property taxes, excises, personal (PIT) and sometimes corporate income taxes, with varying degrees of tax autonomy, and a sales tax or a VAT either in parallel with the federal PIT and VAT or by ''piggybacking'' through surcharges. If a country wants to assign expenditure responsibilities to sub-national units, a certain level of control over own tax revenue sources is important, to ensure that subnational governments are not becoming dependent upon national grants. This kind of sharing of tax systems becomes an inevitable but difficult option at the same time. In countries where expenditure powers to an increasing extent are being devolved, the assessment of the country framework should take into account, that

- The traditional model of tax assignment wherein all significant revenue sources of income and consumption taxes seems no longer robust. If subnational and local governments have to bear bulk of expenditure responsibilities, their taxing space has to increase and they cannot simply depend upon grants and transfers.
- VAT that has been a major revenue source of central governments in most developing countries may no longer remain the exclusive domain of central government and implementation of subnational VAT in some form should be considered[36].
- While the property tax has been the conventional source of financing subnational governments, the experience has shown that property tax alone may be inadequate to provide the necessary fiscal base for those governments.

Sources of sub-national taxes and fees

Keeping in view the principles of fiscal decentralization discussed above, the possible revenue instruments at the sub-national and local level are as follows.

- Asset taxes that include taxes on immovable property (land and building), machinery and equipment, motor vehicles and other vehicles taxes (aircrafts, boats, bicycles) and natural resource taxes and charges.
- User charges for specific services where the services are rival in consumption and exclusion of non-payers is possible, focusing on the benefit principle.
- Consumption taxes including excises, sales taxes and Value Added Tax.
- Income taxes on individuals (personal income tax), businesses (company income tax) and payroll taxes on employers.
- Local business tax including business permit or regulatory fees and licenses.

These taxes and fees are analyzed in the following sections.

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[35] "Taxing Powers of State and Local government" OECD Tax Policy Studies, no 1.1999. For application of the fiscal autonomy classification, including country profiles by levels and by tax sources, please refer to chapter 1 in Kim, Lotz and Bloechliger (ed) (2013).

[36] See Bird et al. (2007) for role of value added taxes and dependence of the central government finance on VAT in developing countries.

3.1.1 Assessing the property tax

The property tax has inherent benefits that meet the "good tax" argument[37]. In addition to inelasticity, property taxation offers a helpful combination of being considered a fair tax, relatively low on administrative and compliance costs, and the immovable revenue base provides for predictable and stable revenue projections. These features have made property tax the preferred tax source for sub-central governments' own tax sources, enabling local governments to establish strong links between local expenditures – benefits received from social services, infrastructure – and local tax paid. At the same time, however, property taxes are highly visible, and in many countries, is one of the only taxes which are paid directly by the taxpayers, mostly once a year and in retrospect. Property taxes are also relatively difficult to evade or avoid.

To bring these positive features into reality requires a policy design and implementation, focusing on

- A broad but simple tax base, established by the purpose/use and the value of the property. A modern, fair and buoyant property taxation requires purpose and value based assessment of tax base.
- Tax bases and rates adjusted regularly, to reflect developments in market values, including inflation.
- Administrative arrangements ensuring efficient collection and high degree of compliance. Few and targeted exemptions, and clear identification of roles and accountability across levels of governments.
- Modern administrative support, including land and property registration in central cadastres, and a strong evaluation profession.

The Tax base – determining property values

Four basic approaches to determining property value and assessing the tax base with their merits and demerits are summarized below[38].

  1.   *Rental Value System:* Many countries (India, Nigeria, Malaysia, Trinidad) use the annual rental value of properties as the tax base which is supposed to be the fair market rent. However, in practice the actual tax base may have little relationship to the market rent for a variety of reasons. This approach obviously poses a difficult valuation problem for properties that are not in the rental market, such as owner-occupied and property in industrial use. The actual assessment therefore has to rely more on expert judgment than on hard empirical evidence.

In practice, three approaches are used to determining rental value. *First,* estimated market rental values are imputed to all properties in a neighborhood using "guidance" values that are based either on available rent data from surveys, or on expert judgment, or on a combination of the two. This method can be used for flats, houses and non-residential properties where some rental evidence is available after due adjustment for the area of the premise. *Second,* determine rental value by estimating capital value of the property either from comparative sales data or by estimating the cost of acquiring the land and construction cost of the building on it and then using the capitalization rates to arrive at the rental equivalent. *Third,* a profits

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[37] For an in-depth commentary on the theory and practice of property taxes in developing and transition economies, see William McCluskey et al (ed) (2013).

[38] See Bahl (2009) and McCluskey (2012) for in-depth analysis of various aspects of property taxation including valuation of tax base, exemptions, tax rates and strengthening of property tax administration.

approach where annual rate of return is estimated for the property. Net profits are determined from the accounts of the firm, and the estimated amount of landlord's share is then taken to be the annual rental value.

The main drawback of this approach is underassessment of the base[39].

2.   *Capital Value System:* This is the main form of property tax base valuation used in OECD countries and in most of Latin America[40]. The base is the market value of the property or the amount that the land and improvements would sell for in an open market. The taxable base can then be the full market value of the property, or a discounted value using an "assessment ratio". The assessment ratio is the value of the property subject to tax expressed as a percentage of its true market value.

The capital value system gets around some of the practical issues that are mentioned above in case of the rental value system. There has been a shift toward the capital value approach as the concept of taxing property values is more intuitive than the concept of taxing rental value. This does not mean that the capital value approach is easy to implement. The main problem is that while sales of properties are reported, usually they are not accurately reported. This is due to property transfer taxes levied at high rates ranging from 6 to 13 percent (India, Jamaica). In developing countries, the use of this approach is therefore constrained due to the absence of good comparative data on the sales properties and, where data are available, the sales prices are often under declared.

Sometimes a variation of this method is used in developing countries where the actual valuation is made using the "cost approach". Land values are established by reference to recent sales of vacant land and building costs are estimated from an average cost per unit area of construction of various types of buildings. However, such models require accurate data on sales values of properties.

It may be pointed out therefore that just as in the case rental value system; properties assessed using a capital value system could also suffer from the problem of underassessment.

3.   *Land Value or site value System:* The tax base in this system is the market value of land, including improvements made to the land, such as clearing, grading, and installation of utilities (Australia, South Africa, New Zealand, Denmark, Estonia, Jamaica and Kenya). The advantage of this approach is that it encourages the most efficient use of land[41]. If the tax is levied only on the land or site value, there is an incentive to invest in improvements that will maximize the return. On the other hand, in a capital value system investment in higher valued improvements means higher capital value of the property leading to an increase in taxes. Under the land tax approach, there is no distinction between the tax treatment of vacant land and any other land. Also, a land value approach has lower administrative costs than a capital value approach because structures are not included in the tax base.

The problem with this approach is the absence of adequate, reliable data on transaction values for land transfers. Here again, the declared transaction values supplied by the registration and stamp duty office needs to be usually supplemented with expert judgment and other evidence such as bank mortgage information. Again, the result is an underassessment just as in the case of the rental or capital value system.

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[39] Mathur (1996) gives an idea of the degree of underassessment in the Indian local governments in the cities of Delhi and Madras.

[40] McCluskey, et al.(2012) report a worldwide trend of shift towards the capital value approach. See also the discussion in J. Norregaard (2013).

[41] For a comprehensive review of the merits and demerits of land value taxation, see Dye and England (2009).

Another problem with the site value approach is that the value of the tax base is smaller since improvements are not included

4.   *Area-Based System:* The area-based approach for property valuation in developing countries has caught on and is now used in many countries of Central and Eastern Europe, in China and Vietnam, where property markets are not well developed. The basic idea is that each parcel is *taxed* at a specific rate, per area unit of land and per area unit of structures. As against this, in the capital value approach, each parcel is *valued* at a specific rate, per area unit of land and per area unit of structures and a separate tax rate is then applied to the total value.

The Area-based systems range from a "pure" form where the tax is actually imposed on physical area irrespective of value, to a hybrid where physical area is used as a key input in mass appraisals of property values[42].

The pure area version is easily understood and is quite transparent. In a way, it solves the valuation problem by simply not valuing. The only thing to ensure is that all the taxable area has been accurately reported and properly classified (e.g., residential, commercial, etc.). This version of the area-based property tax is very much like a specific rate excise tax, charging a uniform, flat rate on each unit of a good or service.

But the advantages of this area-based property tax have their own cost. It does not seem fair, for instance, to tax a property based on its size (area) without considering the quality of any improvements or the access to amenities. The other problem is that this system lacks revenue buoyancy as it can show revenue growth only where there is growth in the number of buildings, or by periodic and unpopular tax rate increases

Tax Rates: Many different tax rate structures are used in developing and transitions countries. As regards the authority to set the nominal tax rate, sometimes local governments set the property tax rate, sometimes they are only permitted to choose a rate within a prescribed range, and sometimes the rate is set by a higher level government. The choice usually depends on the commitment of the higher level government to fiscal decentralization.

As regards rate setting, the best is to choose a simple rate structure that is easy to administer, minimizes cost of administration and supports compliance. A good valuation can usually take care of differences in ability to pay, so differential tax rates should not be necessary for equity reasons.

Exemptions from the tax base: The political motives for exempting properties from the tax base vary across countries, but in general, at least the following four categories seem to capture practices in most countries: The *first* are those properties that are tax free by international convention such as foreign embassies or because they provide merit good/service, e.g. schools, libraries and religious places like churches. *Second* are the exemptions given to protect low-income families or other social objectives. The *third* category could be "social engineering" exemptions and those given for political reasons. For instance, exemption for owner-occupied premises which is politically popular but generally regressive and also a big drain on local government budgets. Included under this category would also be tax holidays or broad exemptions as part of the business climate policy; or exemptions related to housing- or land development policies. Finally, the exemption given to government properties and properties occupied by nonprofit organizations. This exemption again may cause a local government considerable revenue loss[43].

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[42] Bell, et. al. (2009) have surveyed the practice of area-based property taxation and show that there is a wide variation in the actual practice.

[43] Mathur (2009) and Bahl and Lim (1992) estimate that considerable services are provided to such properties without any compensation by the beneficiaries and revenue cost could be large amounting to about 12 percent of total revenues.

Strengthening the property tax administration: It is not only important to have a good valuation system and tax rates in place but also to have a sound administrative set up to implement those. The four key components of property tax administration are: (i) identification of all properties, (ii) keeping the records and the tax roll updated, (iii) valuation and revaluation of properties, and (iv) tax collections, enforcement and appeals. All the four steps should be accomplished to fully exploit the revenue potential of the property tax in any country.

The starting point in building a robust property tax administration is to ensure that all land and improvements are on the tax roll and it is kept updated. The usual problem in developing countries is that some land and structures are not on the tax roll. The task of putting a cadastre in place is both essential and difficult for developing countries and transition economies. The completion of a full cadastre can be an expensive project, but these costs have gradually become more manageable because of the use of GIS systems.

The objectives of valuation are to assess properties in accordance with the legal norms, to revalue periodically as laid down by law and to observe some standard of equity in assessment. This means that the basis of valuation should be clearly laid down, whether it would be rental value, capital value or area based value and whether tax base would be the full market value or some fractional assessment of it. Finally, for the property tax collections to be adequate, there should be an effective collection and enforcement system in place. The revenue collections are so low in many developing and transition countries because the people will avoid paying taxes if enforcement is weak and if the penalties are small. Also, people resist paying taxes when compliance costs are high.

Taxes on Property Transfers: The other widely used tax on immovable property is the transfer tax, i.e., a tax on the sales value of properties paid at the time of transfer. This may be levied as a stamp duty on the transfer document and/or as a separate property transfer tax. Real estate transfer taxes have come to stay because it is easy to handle, most buyers and sellers desire to keep a legal record of ownership and therefore will voluntarily comply, and it is also equitable as property ownership is concentrated in the higher income groups. There are also some disadvantages to the property transfer tax. For instance, it imposes a cost on property transactions, and thereby reducing the volume of formal transactions and slowing the development of the real estate market. Also, in many countries declared values are not checked for accuracy and the property transfer tax gives property owners an incentive to understate taxable value[44]. This ultimately weakens the database that is necessary for assessment of the annual property tax.

Improving revenue productivity of property tax in developing and transition economies: Unfortunately, because of the administrative and institutional problems mentioned above, in many countries property tax is not a robust and buoyant tax source for the local governments. In many developing countries, the revenue yield is less than 1 percent of GDP and in most local governments it does not account for more than 20% of expenditures[45].

Table 6 below gives a summary of the data requirements for assessing the property tax structure and forecasting revenues using GDP based and micro simulation models.

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[44] Alm et al. (2004) have studied Indian states with different stamp duty rates and concluded that under-declaration rises with stamp duty rates. See also W. McCluskey (2013) and J. Noerregard (2013).

[45] Bahl et al. (2007) have a discussion on the low revenue collections in developing countries.

Table 6: Questions on the design of property tax and revenue forecasting in a sub-national jurisdiction

Tax Regime Feature	Information Required	Information Source	Responsible Agency
1. Tax base	1. What is being taxed: land, or building or land & building both? 2. Movable property – vehicles, yachts etc. 3. Which authority sets the base including exemptions? 4. Is property cadastre maintained? How frequently updated?	1. Property tax law 2. Circulars and decrees issued from time to time 3. The property cadastre Stamp duty act	1. Revenue administration at the regional/state level 2. Municipal/ local government
2. Exemptions and relief	1. What are excluded in addition to foreign embassies and government property? Religious institutions, schools, NGOs, hospitals? Any payment in lieu of tax exemption? 2. Exemptions or relief for equity reasons?	1. Property tax law 2. Circulars and decrees issued from time to time	1. Revenue administration at the regional/state level 2. Municipal/ local government
3. Tax rates	1. Which authority sets the rate? 2. Single rate or progressive rates? 3. Annual increase in tax rates to compensate for failure to re-value?	1. Property tax law 2. Circulars and decrees issued from time to time	1. Revenue administration at the regional/state level 2. Municipal/ local government
4. Valuation	1. What system of valuation is used? Rental value, capital value, land value, area based? 2. Are data available for the valuation system in place? 3. How frequently is the tax roll revised?	1. Property tax law 2. Circulars and decrees issued from time to time	1. Revenue administration at the regional/state level 2. Municipal/ local government
5. Revenue forecasting	1. Does the local government forecast future property taxes? 2. If yes what is the basis of that forecast? 3. Is the government using some statistical or other computer based modeling? For instance: (a) GDP based model (b) Microsimulaiton model	*Data needed if forecasting models are used:* 1. Macroeconomic data like GDP, GDP deflator 2. Time series data on property tax revenues, property value in jurisdiction 3. Relevant property tax and valuation laws 4. Total housing stock (by different classes such as luxury, standard, below standard, etc.), data on industrial/commercial property. 5. Information on the other property exemptions that might be incorporated into other laws (e.g.	

Tax Regime Feature	Information Required	Information Source	Responsible Agency
		agriculture, foreign investment, etc.).	
		6. Fiscal cadastre and Geographical information system (GIS) and global positioning system (GPS) database	
		7. In absences of fiscal cadastre, property information form which is collected on each property, e.g. land and building area, land value classes, building classes, market value, rents, location, property characteristics like style of building, nearby amenities, access to roads, etc.	
		8. Information on land and buildings in the specific country/region to estimate the coverage ratio (i.e. how many of the properties are actually recorded on the fiscal cadastre).	
		9. To measure "ability to pay" of the population, some type of income distribution, e.g. mean level of income by rural and urban areas, or by regions.	

User charges

User Charges are prices charged by state-local governments for specific services, used to pay all or part of the cost of providing those services (benefit principle)[46]. It enhances political accountability by linking government services to payment and people can see the direct linkage between the payment and the service they receive. This is distinct from financing services through general taxes with no direct link between tax payment and services rendered. For example, water and sewage charges, highway tolls, electricity tariffs, public transport fare, education fees, public hospital charges.

In the last decade there has been an increased emphasis on user charges because of their dual role in promoting efficiency in the economy and contributing to revenue resources. Consumers face true costs of consumption through marginal cost pricing or some approximation to it, thereby creating an incentive for efficient use of services and minimizing waste. At the same time, it helps finance the production costs as well as operation/ maintenance of facilities, thus becoming an instrument of revenue mobilization.

User charges in practice

User charges contribute to revenues, promote economic efficiency by rationing demand to those who value it most and can pay, provides incentive to avoid waste and gives signals for increasing capacity/service when needed, can be made equitable with provision for basic needs, and is easy to collect and administratively feasible. Funds from user fees are often earmarked to services that generate those funds[47]. Thus it is highly desirable mode of mobilizing resources at the regional and local levels of government.

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[46] Bird and Tsiopoulos (1997) provide an excellent analysis of user charges by examining provincial and local user fees in Canada. For a recent summary of user charges in public finance management, please refer to Barry H. Potter (2013).

[47] Thirsk and Bird (1994) present a comprehensive review of case for earmarking user charges with emphasis on provincial-local public sector activities.

Application of user charges is most common in education through public schools, water and sewer and drainage services, waste disposal, electricity supply, telephone services, mass transit or public transportation, low cost housing etc.

In most developing countries though the fact of the matter is that user charges are seldom employed to the extent possible or desirable. The charges that exist are seldom well designed as in practice it is not easy to design and implement a "good" user charge[48].

Table 7 below gives a summary of the data requirements for assessing the structure of user fees and forecasting user fees revenues.

Table 7: Questions on the structure of user charges in local authority (LA) and revenue forecasting

Tax Regime Feature	Information Required	Information Source	Responsible Agency
1. Tax base	1. List of services provided by the LA? 2. Which of these services are provided free of charge? What is the rationale? 3. Which services are subject to user charges?	1. Laws and regulations governing the provision of services	1. Revenue administration at the regional/state level 2. Municipal/ local government
2. Exemptions and relief	1. Which groups of consumers are exempt from user fees? 2. What is the basis of this exemption? Is it given to special groups or to poor and what is the rationale?	1. Laws and regulations governing the provision of services	1. Revenue administration at the regional/state level 2. Municipal/ local government
3. Tax rates	1. Does the local government set the rate? If not, who does it? 2. What is the basis of rate setting? How is it calculated or assigned? 3. Annual increase in tax rates to compensate for failure to re-value?	1. Laws and regulations governing the provision of services	1. Revenue administration at the regional/state level 2. Municipal/ local government
4. Revenue forecasting	*Basic question to raise: Are revenues forecasted? If yes on what basis?* Usually the base and rate is set by the local or regional government. Therefore, the forecasting exercise is reduced to forecasting the base. The base can be forecast on the basis growth of demand - For water supply: rate at which water & sewage connections have been expanding in the recent past; For highway tolls: rate of growth in registration of vehicles in jurisdiction; For electricity		

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[48] See Bird (1999) for a discussion of user charges in practice.

Tax Regime Feature	Information Required	Information Source	Responsible Agency
	tariffs: rate at which electricity connections have been expanding; Public transport fare: should correspond to increase in ridership and if data is not available then with rate of growth of population in the jurisdiction. Same principle holds in case of education fees and public hospital charges and other similar services.		

Income taxes in a subnational regime

If more subnational ''own-source'' revenue is required either to expand the size of subnational activities or to make them more self-sufficient, local income taxes are another option as supplementary or ''piggybacked'' income tax. Such a tax follows the ability to pay principle, is visible and hence satisfy the criteria of political responsibility and accountability, and is buoyant. Local income taxes are generally levied at a flat rate that is locally determined and have the same tax base as the national income tax and collected by the central government or separately by the state government depending upon the latter's administrative capability. The best known examples of local income taxes are in the Nordic countries which are also known for fiscally relative autonomous subnational governments[49].

While this is feasible, the main reason that local governments are not frequently given access to income taxes in developed countries is because it is also the main source of revenues for the central governments, and/or the PIT tax scheme in general is insufficiently applied in the developing country, due to weak tax administration capacity. As regards developing countries, even the central governments often have trouble collecting much revenues from the PIT[50], so it is less likely that it can become a major source of revenues for the regional and state governments. However, this can be explored in more advanced developing countries. In a number of transitional economies, subnational governments are assigned significant shares of income tax revenue. For example, in Russia 100 percent of PIT revenues go to subnational governments. In these countries, however, the local governments have little freedom in establishing the tax rate.

As regards corporate income tax (CIT), in some developed countries where state governments have strong administration taxing companies has been feasible (US and Canada). For developing countries, this does not seem to be an attractive and viable option.

Revenue mobilization and forecasting: Since the tax is piggybacked on regional or national income tax, the forecasting would follow the technique for income tax forecasting at the national level as discussed in Part II.

Payroll tax

This could be another reliable source of subnational finance at the state level. The advantage is that it can be buoyant and generate adequate revenues, is easy to administer particularly when imposed on large enterprises, and just like PIT can be levied on the destination principle (place of residence) rather than on origin principle (place of employment) thereby promoting political accountability. On the negative side, payroll tax is already heavily exploited both in developing and developed countries to finance social

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[49] J. Bloechliger et J. Rabesona (2009) provides an overview of tax structures in OECD countries, including the importance of income taxes in financing subnational governments in the Nordic countries.

[50] Richard Bird and Eric Zolt (2005) illustrate this point very well.

security systems and it can act as a barrier to employment as it is wholly or in part applied on employers. Also, the problem in developing countries is that just like PIT, it may not be effective at regional or local basis.

Consumption taxes at subnational levels

In theory, there are two types of consumption taxes that can be applied at subnational levels (similarly to the ones at the central/federal level): (1) Selective excises on gasoline, cigarettes, soft drink or alcoholic drinks; and (2) general sales tax or value added tax. They can be employed both at the state or regional level and municipal or local levels.

Excise taxes

Excises are both administratively feasible and economically efficient as they target goods and services that have inelastic demand with little distortionary effect and they can be potentially a significant source of revenue at the regional level[51]. It may also be argued that there is at least some benefit argument for excises on alcohol and tobacco in the sense that regional governments often are responsible for health expenditures and on vehicles and fuel to the extent that they are responsible for roads and safety.

A strong economic and administrative case can be made for regional and even local excises with respect to vehicle-related taxes[52]. The most important tax on automobiles is the fuel tax from a revenue perspective as well as administrative perspective. It is also likely to have a high income elasticity of demand and thus more progressive. Although central governments also like to exploit this source of revenue but fuel taxes can be very well levied at the regional level also. Different regions could impose different tax rates although with limited differentiation due to the mobility of the base. However, differential provincial fuel taxes can be imposed at the refinery or wholesale level.

Fuel taxes are related both to road usage and to external effects of vehicles such as accidents, pollution, and congestion. Similarly, toll roads, annual automobile registration and driver license fees are other taxes that serve the benefit tax function. For example, vehicle license fees are often based on the age and engine size of vehicle, location of vehicle and the axle-weight of the vehicle for heavier vehicles that do more damage to roads and require roads that are more costly to build. Similarly, just like insurance premiums, drivers' licenses could be related to drivers' driving records or their age.

Sales tax and value added tax

In many countries, both developing (India) and developed (USA), sales tax has been a broad based tax with reasonable revenue elasticity at the state levels. This has had its problems though, including cross border trade and erosion of tax base due to high level of tax completion where states try to outdo one another in offering concessions and giving incentives. With the international push for a VAT in place of sales tax, it gradually became more of an aberration in most developing countries as well and most countries have moved to a VAT[53]. However, it is very difficult to implement a subnational VAT in a *federal* system where states had their own sales taxes for a variety of reasons: high administrative and compliance costs, the reluctance of central governments to share VAT space as this was their main source of revenue, and because

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[51] Charles McLure (1997) argues that excises can be potentially an important source of revenues for regional governments.

[52] See Bahl et al. (1992) for a strong economic and administrative case for regional excises with regard to vehicle-related excise taxes.

[53] VAT has now spread to about 150 countries, the main reason being that it is a powerful instrument of revenue generation. See Keen et al. (2006) for discussion on this issue.

the problems arising from interstate trade are not easy to surmount in a subnational VAT[54]. Both sales tax and VAT can generate adequate and buoyant revenues and may promote local accountability. The cost of administration and compliance however may be high, more so for VAT.

Conventional wisdom for federal countries used to be that a sub-national VAT could be imposed only on origin principle to avoid the need for border control (Brazil) while a destination based consumption VAT using credit method could not be successfully implemented without border controls. Most countries with a VAT administer the tax at the central level, but revenues are shared among center and states. The distribution of revenues to sub-national jurisdictions is done through a pre-agreed formula or on consumption basis. However, the main problem is that a revenue sharing system reduces the states' revenue autonomy and accountability and such a system is often not politically acceptable to the sub-national jurisdictions. This is also against the very spirit of fiscal federalism.

The other option is the administration of national VATs within a customs union, common market or economic union (EU, SACU/SADC, Israel/Palestine, etc.). An alternative model is dual VATs (center/federal level VAT and state/provincial VATs) within federal countries (Canada and Brazil). State/provincial taxes may have same or different tax structure to central/federal tax, and administration may be more or less coordinated and in the extreme, one level of government, federal or provincial, may administer both taxes.

BOX: **The only well-functioning destination-base subnational VAT now in existence is the one in the federal country of Canada**[55]

Three different systems are in operation in that country:

(i) The Quebec Sales Tax (QST) and the federal VAT (GST) constitute a ''dual VAT'' system with essentially none of the problems usually associated with such systems. The rates of the two taxes are set quite independently by the respective governments. The tax bases are also determined independently, although they are more or less the same. Both taxes are collected by a single administration of Que´bec province so that administration has information on inter-provincial trades by registered persons from their Federal tax returns.

(ii) Three small provinces (Maritime states) impose a Harmonized Sales Tax (HST) on the same base as the federal GST. These provincial taxes are administered by the federal government and the revenues distributed to the provinces on the basis of estimated taxable consumption in each province. Interprovincial sales are dealt with in the same way as under the QST.

(iii) In remaining states, provincial sales taxes (PST) as retail sales tax are separately administered from federal GST. There is no gain from federal GST administration. Imports by registered taxpayers are not an issue but all suffer from difficulty of taxing imports (both international and internal imports) by unregistered persons. Same problem as US States, self-assessment of "use tax" required, but it is hard to enforce.

The Canadian experience shows that with good tax administration it is feasible to operate a VAT at the subnational level in a federal country on a destination basis.

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[54] In a nutshell, the issue is that if VAT is applied on origin principle, it becomes distortionary and if applied on destination principle it does not work.

[55] See Bird et al. (2006) on how the central GST and state level VATs/RSTs are coordinated in Canada.

Business taxes

Subnational business taxes are generally popular with officials and citizens alike[56]. It is essentially a production based origin principle VAT applied on income rather than consumption (destination). Also, it is assessed by the subtraction (or addition) method on the basis of annual accounts and not on a transaction or invoice-credit method. The credit chain which is an attractive element of VAT is eliminated. The Michigan Single Business Tax (SBT) and the New Hampshire Business Enterprise Tax (BET) in the US have been designed on a similar pattern. The Michigan SBT is 1.9% of compensation and retained earnings (dividends, interest and depreciation deducted) as apportioned to Michigan source and replaces both retail sales tax and corporate income tax. The New Hampshire BET is 1% of value added computed as compensation plus dividends plus interest apportioned for state source income.

Business licenses: taxing the informal sector at local government level

While both the regional and municipal level local government would like to apply taxes on businesses in their respective jurisdictions, the appropriate technique in each case may be different. As discussed above, the regional level governments can impose surcharges on income taxes or impose a subnational VAT of their own. On the other hand, municipal, county and city level governments have fewer avenues for taxation. These local level governments are smaller and closer to the people. Therefore, it is more likely that they stick to the benefit model of taxation. In addition to property taxes and user charges, such local governments might consider a system of "business licenses," applicable to businesses in their jurisdiction[57]. This might also help them bring the informal sector – micro and small – in tax net in addition to the medium and large industries.

Informal sector or micro-small sector of the economy is weakly documented by authorities as the information on this sector is concentrated in owner-manager and not with third parties such as financiers and bankers or buyers of outputs and suppliers of inputs. So this sector is not captured well by regulatory or tax agency. Therefore, two approaches may be adopted: a turnover tax on quantity or value of sales or an annual business permit/license/lump sum tax. The *turnover tax* option still requires turnover information and faces compliance problem since capacity for compliance does not exist at the level of micro and small traders.

An *annual lump sum tax* on businesses in the form of a single business permit (SBP) is still simpler to administer and comply with. SBP is a permit that allows the conduct of business or trade, including a profession or occupation within the area of a local authority (LA). Kenya started using this system from 1998[58]. It is applied to *all businesses* below the VAT threshold and is quite suited for administration by the local governments which has information about all local businesses including micro and small ones. Medium and large businesses pay it in addition to a VAT and income tax (IT) while this could be the only tax for micro and small businesses.

The lump sum tax extends from a kiosk to a mega store and is scaled to market size, sector and business size (Small, Medium and Large) using simple size criteria such as floor space, number of hotel rooms/beds,

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[56] See Giancarlo (1991); Bennet and Krebs (1988) and Richard Bird (2003) for a discussion of such taxes and an international comparison of local business taxes.

[57] See Mikesell, John L. (2011) for a discussion of other license taxes/fees such as massage parlor license, Hunting license, motor driving license. It is simply a flat rate fee, graduated by type of activity and may be related to business receipts. License is a necessary condition for operation of business but does purchase any specific government service, making it distinct from user charges.

[58] Kelly Roy and Nick Devas (2001) present the case of single business permit as applied in Kenya.

restaurant capacity, etc. The SBP fee schedule is progressive based on specific business types, different sizes and different locations and presumptive turnover/income. Effective tax rate declines with business size, hence rate is low for businesses that are also paying VAT and CIT.

Part IV: Diagnostic Framework for Tax Administration

The ability of the government to mobilize sufficient revenues hinges not only on the utilization of tax capacity and establishment of a "good" tax system but also on the effectiveness and efficiency of revenue administration. The main objective of a country's revenue agency is to maximize the collection of tax revenue within the law to meet the needs of the government to finance expenditure programs and to meet the expectations of taxpayers that demand accountability and transparency.

This requires the revenue agency to ensure that taxpayers comply with obligations to register and declare their tax liability accurately and on time. This is especially difficult task for revenue agencies in low and middle income countries where a combination of low tax administrative capacity coincides with little tax-payer understanding or education on tax compliance matters. In addition, the informal sector of the economy may be large which creates difficulties in ensuring taxpayer registration and compliance on a number of direct and indirect tax areas. In such context, a risk based approach plays an important role in managing towards revenue targets, including taxpayer compliance. At the same time, a revenue agency needs to be efficient, transparent and fair in administering tax collection so as to induce better voluntary compliance by tax payers. The efficiency of tax administration directly contributes to revenue outturns and compliance costs for taxpayers. The extent to which a revenue agency adheres to the principles of openness and accountability in conduct of its activities affects perceptions of the public and businesses of the integrity of a tax system, and hence impact on the general.

There are different diagnostic frameworks available. While they focus on the same core issues of efficiency, effectiveness and good governance of tax administrations, different frameworks require different levels of extensity and details of administrative data (e.g., OECD, IAMTAX, and TADAT as being piloted). For the context of developing countries, the framework in Gill (2000) deems suitable given the data requirements and it has been applied in a number of the World Bank lending operations. The TADAT tool is expected to play an important role in diagnostics work going forward and the tool is briefly introduced at the end of the section.

Gill (2000) applies the **Congruence Model for diagnostics**. The Model regards an organization as an *Open System*, consisting of an inter-related set of components. The organization takes *Inputs*, puts them through a Transformation Process and produces *Outputs*. Three direct inputs go into an organizational system: *Environment*; *Resources*; and *History*. From these inputs a fourth input, the *Strategy*, is derived. The inputs feed into the *Transformation Process* that is an interaction of four components: (i) Tasks, (ii) Formal Organizational Arrangements, (iii) Informal Organization or Culture and (iv) Individuals. The following sections outline the framework for analysis of a revenue agency strategy, institutional environment, and resources that ultimately derive the integrated set of diagnosis indicators.

Gill's Diagnostic Framework includes 3 sets of indicators for a **preliminary examination** to identify the symptoms of weaknesses in revenue agencies: *Indicators of the Nature and Scale of Operations*; *Indicators of Effectiveness*; *and Indicators of Efficiency*. These indicators are useful in establishing trends in recent performance of the revenue agencies and in comparing actual performance with targets as well as regional

and international benchmarks. The preliminary examination would highlight functional areas where performance deficiencies are significant and which, consequently, deserve special attention.

The congruence model for diagnostics would focus on the following key elements.

A. Mission

- What does the revenue agency (RA) regard as its core Mission? Is the Mission clearly defined and articulated?

- Does the Mission adequately take into account the constraints imposed by the Environment, History, Resources, and Transformation Processes of the RA?

- Is the Mission generally shared by the political executive, RA management and staff? Does it actually inform functioning of the RA?

B. Vision

- What is the RA's vision? Is it realistic? Is it reflected in the RA's day to day functioning and modernization plans?

C. Strategic Plan

- Does a Strategic Plan exist? Is it realistic? Are the objectives clear? Is it being implemented?

D. Key Results Areas

- Are key results areas clearly defined? Do they fit the Environment, History, Resources and Transformation Processes of the RA?

- Are there any areas that are not core activities of the RA?

- Can no-core activities be discontinued, divested, or contracted out?

E. Performance Objectives

- What are the performance objectives of the RA? Are these objectives congruent with the Environment, History, and the Resources of the RA and the KRAs?

- Do performance objectives emphasize inputs or outputs and outcomes?

F. Operational strategies to achieve performance objectives

- Are there performance indicators to measure achievement of objectives?

- Do operational strategies used by the RA optimize the use of its resources?

- Does the RA employ effective strategies to monitor tax compliance and evasion?

- Does the RA have effective strategies to upgrade its resources to meet emerging challenges?

With the diagnostics completed, diagram 1 illustrates the process of linking diagnostics with design and prioritization of tax administration reform activities. As resources are limited, and the internal culture of the revenue agency and the culture of paying taxes of taxpayers could not be changed within a short period of time, prioritization and sequencing are critical elements of a successful reform strategy.
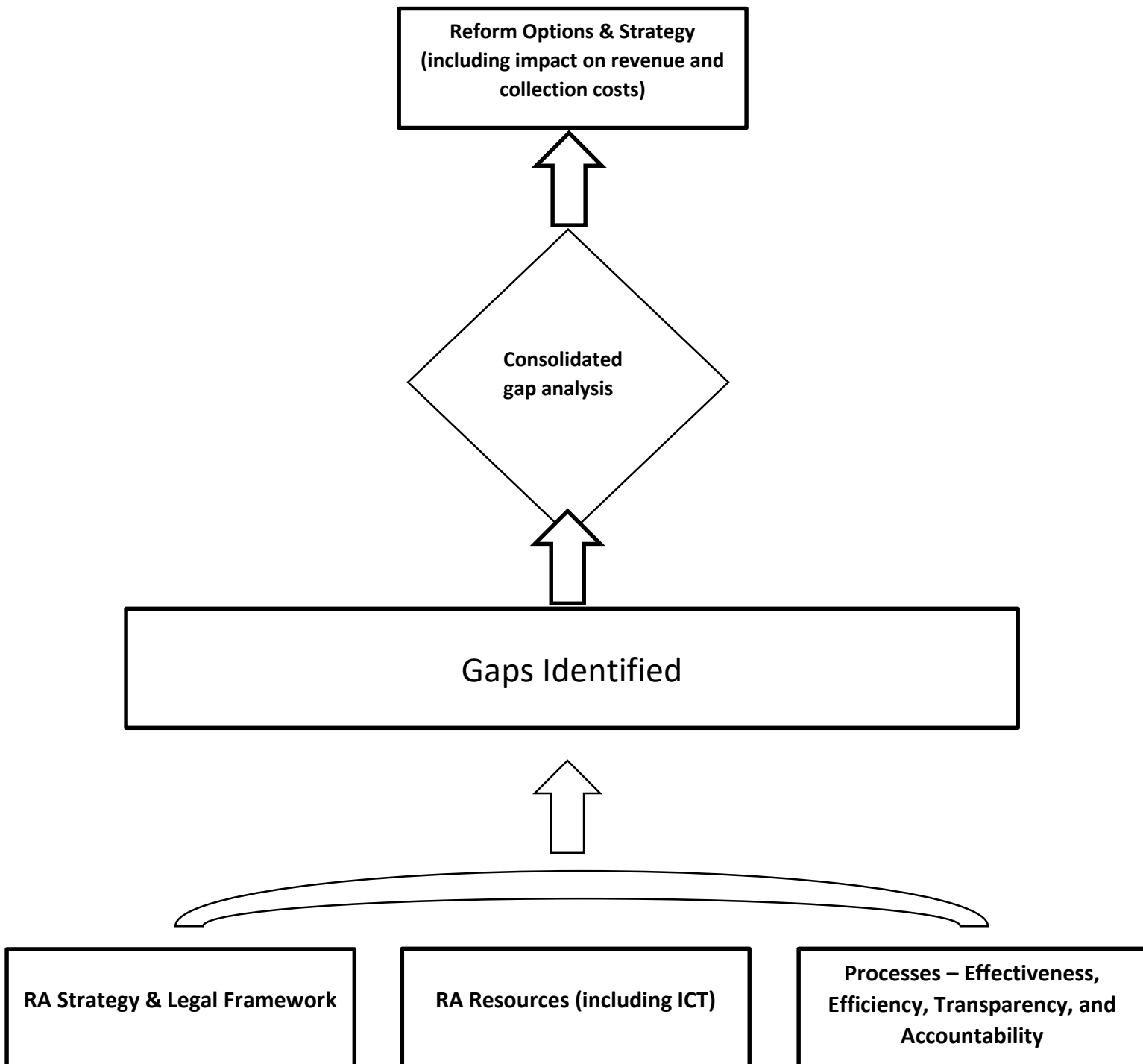
The following general considerations may help prioritize:

- Look for quick wins to strengthen the constituency for reform;

- Give priority to actions that would address the most critical problems first;

- Take up actions for which there is support at the political and management levels;

- Assign higher priority to reforms for which the benefit to cost ratio is higher.

In deciding on sequencing of reform, it is desirable that high priority activities are implemented early in the reform process. Another equally essential consideration to decide on sequencing is the revenue agency absorptive capacity, which may dictate the way the entire reform process be broken down into phases.

The Congruence Model of diagnostics has been applied in a number of revenue administration reforms. For country work, financed and led by the World Bank team (e.g., Vietnam, Bulgaria, and Tanzania).

Diagram 1: Diagnostic Framework for Tax Administration Reforms

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                    ┌─────────────────────────────┐
                    │   Reform Options & Strategy  │
                    │ (including impact on revenue │
                    │     and collection costs)    │
                    └─────────────────────────────┘
                                  ▲
                                  │
                              ◇ Consolidated
                                gap analysis
                                  ▲
                                  │
        ┌───────────────────────────────────────────────┐
        │              Gaps Identified                   │
        └───────────────────────────────────────────────┘
                                  ▲
                                  │
   ┌──────────────────┐  ┌──────────────────┐  ┌──────────────────┐
   │ RA Strategy &    │  │ RA Resources     │  │ Processes –      │
   │ Legal Framework  │  │ (including ICT)  │  │ Effectiveness,   │
   │                  │  │                  │  │ Efficiency,      │
   │                  │  │                  │  │ Transparency, and│
   │                  │  │                  │  │ Accountability   │
   └──────────────────┘  └──────────────────┘  └──────────────────┘
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V.2. Introduction to the TADAT tool – Tax Administration Diagnostics Assessment Tool[59]

The TADAT (2016) provides a Performance Assessment Report to the country on strengths and weaknesses of current performance of it's tax administration. The report is prepared using a standardized measurement framework; a framework which to a large extent is similar to the PEFA framework on public financial management.

The TADAT framework consists of the following components:

A.   Performance outcome areas

Performance of a country's tax administration systems, processes, and institutions can be assessed by reference to nine outcome areas:

- **Integrity of the registered taxpayer base:** Registration of taxpayers and maintenance of a complete and accurate taxpayer database is fundamental to effective tax administration.

- **Management of risks to the tax system:** Compliance with the tax laws improves when the tax administration is alert to compliance risks and effective in taking corrective action to mitigate the effects of the risks.

- **Support given to taxpayers to help them comply:** Usually, most taxpayers will meet their tax obligations if they are given the necessary information and support to enable them to comply voluntarily.

- **On-time filing of tax returns:** Timely filing is essential because the filing of a return is the principal means by which a taxpayer's tax liability is established and becomes due and payable.

- **On-time payment of taxes**: Non-payment and late payment of taxes affects government budgets. Collection of tax arrears is costly and time consuming.

Accuracy of information reported in tax returns: Tax systems rely heavily on complete and accurate reporting of information in tax returns. Audit and other verification activities detect discrepancies (e.g., undisclosed income) and penalize offenders, and serve to remind all taxpayers of the consequences of inaccurate reporting.

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[59] The following brief summary is based on information available on the TADAT website – www.tadat.org. For more information the application of the tool, please refer to the website.. TADAT is a collaborative effort of the IMF, the World Bank, the European Commission and aid agencies in Germany, Japan, the Netherlands, Norway, Switzerland and the United Kingdom.

Adequacy of dispute resolution processes: Independent and accessible review mechanisms safeguard a taxpayer's right to challenge a tax assessment and get a fair hearing.

Efficiency and effectiveness of operations: As governments become more performance focused, greater demands are placed on tax administrations to operate more efficiently and effectively. Citizen and business expectations of receiving quality services must also be met.

Accountability and transparency: As public institutions, tax administrations are answerable for the way they use public resources and exercise authority. Community confidence and trust is enhanced when there is open accountability for administrative actions within a framework of responsibility to the minister, government, parliament, and general community.

B. Indicators and associated measurement dimensions

A set of 26 high-level indicators critical to tax administration performance are linked to the performance outcome areas. It is these indicators that are scored and reported on. A total of 51 measurement dimensions are taken into account in arriving at the indicator scores. Each indicator has between one and four measurement dimensions.

The indicators are oriented towards assessing performance outcomes, although in some cases outputs are used as proxies for outcomes. As far as possible, TADAT avoids measuring inputs and enabling factors that contribute to outcomes (e.g., organizational structures, human resources, administrative budgets, information technology, and legislation).

Repeated assessments will provide information on the extent to which a country's tax administration is improving.

C. Scoring methodology – M1 and M2 approach similar to PEFA

The assessment of indicators follows the same approach followed in the Public Expenditure and Financial Accountability (PEFA) diagnostic tool so as to aid comparability where both tools are used.

Annex 1: Features of a Good Tax System

Equity: Tax system should be "fair." It has two components: horizontal and vertical equity. *Horizontal Equity* means "People whose circumstances are the same, should pay equal taxes (tax equals equally)". This principle demands broad coverage by a tax base and is the source of much of the detail and complexity of a tax law that is required to define a comprehensive tax base and deal with all the exceptional circumstances/cases.

Vertical Equity demands that higher tax burden be placed on individuals with a greater capacity to pay in order to "improve" the income distribution in society. Society-wide social judgments depend upon and arise out of the political process.

Efficiency: It refers to the negative aspects of taxation. For instance, a tax distorts market prices of goods and services, labor (wages), and savings (interest rate) and thereby introducing distortions in the market. It changes the behavior of consumers and producers; interferes with their choice of consumption, work and savings; and imposes an efficiency cost on the economy. A tax is efficient if efficiency loss is small. The efficiency cost of a tax depends on the price elasticity of demand and supply of the good/service taxed and the tax rate.

Taxes such as an income tax or a franchise fee do not change consumer behavior and are least distortionary. A high income tax, however, will result in lower investment. An ideal neutral tax would be a poll (head) tax, but it is regressive; again a general sales tax (value added tax) would be non-distortionary but regressive.

Tax systems should be designed to collect a given amount of revenues with the minimum of efficiency cost to the economy.

Revenue Adequacy: It is an important consideration from the point of view of the public sector. Revenue collections should be adequate to cover government expenditures. Tax revenues depend on tax rates, tax base or volume of sales and elasticity of demand and supply, and the tax effort.

Stability: It is linked to revenue adequacy and is a prerequisite for creating a suitable investment climate. Stability of tax revenues is necessary to maintain continuity of fiscal policies and a stable tax system which is important to the investors. A tax system must be elastic, that is, tax revenues should increase with growth of GDP. To ensure this, appropriate tax rates and tax handles should be used by including the growing sectors of economy in the tax base.

Simplicity and transparency: A simple Tax system is easily understood by taxpayers and reduces the cost of compliance and administration. The lack of complexity and discriminatory taxes makes the system transparent and easy to comply with. However, over simplification is not desirable otherwise some sectors of economy, especially the self-employed, will remain out of the tax net.

Low Collection Cost: High cost of collection reduces net tax revenues available to government. But some costs may have to be legitimately incurred in bringing the hard-to-tax sectors within the purview of taxation. Expenditures are also justified for taxpayer education as it ultimately reduces cost of compliance.

Neutrality: A tax incentive must not distort investment decisions across sectors by favoring particular sectors and in the process promoting low return investments over higher return investments.

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