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## **Tax Expenditure Reporting and Its Use in Fiscal Management**

A Guide for Developing Economies

Fiscal Affairs Department

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## **A Guide for Developing Economies**

**Prepared by Christopher Heady and Mario Mansour**

I N T E R N A T I O N A L M O N E T A R Y F U N D

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Tax Expenditure Reporting and Its Use in Fiscal Management:  
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# TAX EXPENDITURE REPORTING AND ITS USE IN FISCAL MANAGEMENT: A GUIDE FOR DEVELOPING ECONOMIES

## Introduction

Tax expenditures are alternative policy means by which governments deliver financial support to individuals and companies. In Denmark, for example, the government makes direct payments to households with children, which appear on the expenditure side of the budget. In the United States, reducing the income tax paid by families with children provides similar assistance. In this case, however, the assistance to families with children does not appear on the expenditure side of the budget; it is reflected in reduced tax revenue on the revenue side.

Many governments also provide incentives for businesses to invest in their countries. As with assistance to families, this can be achieved in two ways: by directly paying for some of a business's investment or by reducing the taxes of businesses that make investments. The cost of the first method would appear on the expenditure side of the budget under a category such as "industrial policy"; the second would be reflected in lower tax revenue.

In these examples, the assistance to families or the incentives for businesses mean there is less money to fund other government priorities, whether delivered through direct payments (outlay expenditures) or reduced tax revenue (tax expenditures). Governments should devote the same amount of attention to controlling tax expenditures as to controlling outlay expenditures. Frequently, however, governments look much more carefully at outlay than at tax expenditures, and often they collect little or no information on the cost of tax expenditures.

Tax expenditures must be managed as carefully as outlay expenditures if governments want to make efficient use of their limited financial resources. This means that the cost of tax expenditures must be identified, measured and reported in a way that enables comparison of their monetary value with that of outlay expenditures.

This note was prepared by Christopher Heady (School of Economics, University of Kent; c.j.heady@kent.ac.uk) and Mario Mansour (Fiscal Affairs Department, International Monetary Fund; mmansour@imf.org).

This note aims to inform governments on how to account for tax expenditures and use that information in fiscal management. The emphasis is on developing and emerging market economies, where the use of such accounts is in its infancy because of data constraints, insufficient human and financial resources, and weak fiscal institutions.<sup>1</sup> Most developing economies, moreover, do not have tax policy units in their Ministry of Finance to provide analytical support to the government and legislature that integrates all revenue policy aspects.<sup>2</sup> As a result, the tax policy framework can be fragmented: line ministries compete in the provision of sectoral tax incentives, but do not report on their cost.

The note is organized as follows. The second section outlines the role that tax expenditure measurement and reporting can play in fiscal management. The third section provides a step-by-step approach on how tax expenditure accounts can be built, with emphasis on data, methods and models, and institutional requirements. The section is concerned primarily with the direct cost of tax expenditures—that is, the revenue forgone because of them. It does not deal with their indirect costs, which could include economic efficiency losses and additional tax administration resources, and it does not address assessment of the benefits of tax expenditures.<sup>3</sup> The fourth summarizes the current status of tax expenditure reporting in developing economies, with some reference to advanced economies. The last section concludes.

## Tax Expenditure Reporting and Its Use in Fiscal Management

Tax expenditures are generally defined as a reduction in tax liability compared with a "benchmark tax

<sup>1</sup>Although the emphasis is on developing and emerging market economies, it is worth noting that not all advanced economies publish tax expenditure reports. Regarding transparency in fiscal management, this how-to note is relevant to all countries; developing and emerging market economies, however, have fewer resources and less capacity to produce tax expenditure reports.

<sup>2</sup>See Grote (2017).

<sup>3</sup>A cost-benefit analysis in the case of tax expenditures that target investment can be found in IMF (2015).

system.”<sup>4</sup> They may take different forms, can be temporary or permanent, and can be included in tax laws or other laws, such as free and economic zone laws, investment codes, and so on. Tax expenditures include the following:

- Exemptions: exclusion from the tax base
- Allowances: amounts deducted from the tax base before applying the tax rate(s)
- Credits: amounts deducted from tax liability
- Rate relief: a reduced tax rate
- Tax deferral: a delay in paying the tax liability

The difficulty with this definition is that it does not define the benchmark tax system. Broadly speaking (more on this later), this benchmark can be considered a tax system that is solidly grounded in the key tax policymaking principles of neutrality, efficiency, and equity. But since countries differ in their views of and the weights they attach to these principles, they typically define their benchmark tax systems differently. This, in turn, raises difficulties in comparing tax expenditure estimates across countries, as assumptions about the benchmark will affect which tax measures are identified as tax expenditures.

One key advantage of tax expenditure reporting is better transparency in fiscal management. It is a way of making it clear that tax expenditures are just as important for the overall financial position of the government as outlay expenditures. Without such transparency, line ministries may use tax reductions rather than outlay expenditures to implement policies in their interest, because this practice is less subject to political scrutiny, and countries may prefer taxes over direct spending to show a low tax-to-GDP ratio relative to their peers. Tax expenditure accounting is therefore essential for good governance and informed decision making.

To ensure that fiscal transparency is fully realised, the following “good practices” are required as a minimum:<sup>5</sup>

- The production of tax expenditure cost estimates should be required by law and presented to Parliament either with the annual budget or early in the budget cycle to inform policymaking.

<sup>4</sup>See, for instance, OECD (1996), Heady (2011), and country examples in Brixi (2004) and Inter-American Development Bank (2010). This definition derives from the practice of tax expenditure accounting, rather than theory, and goes back more than 50 years, when it started in Germany.

<sup>5</sup>These are consistent with the levels of practice in the IMF Fiscal Transparency Code (see IMF 2018).

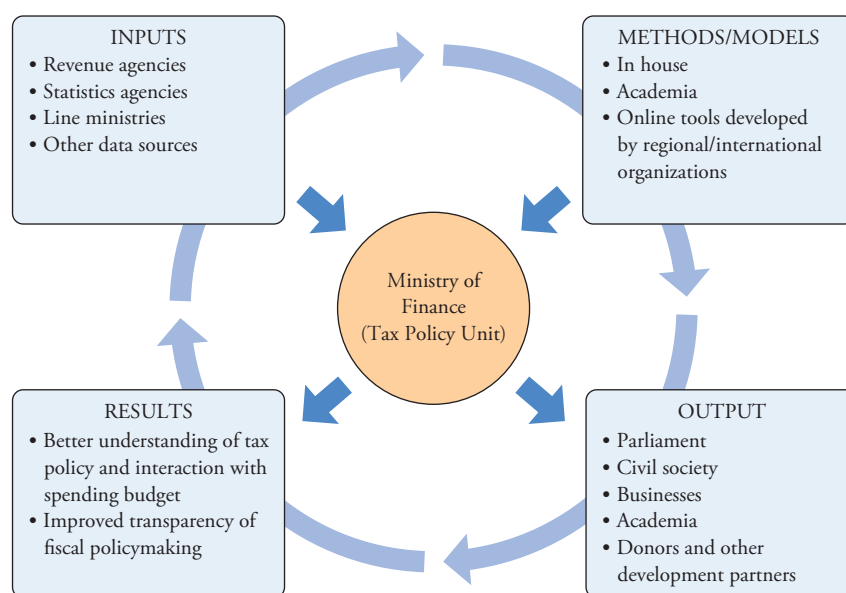
- The presentation of tax expenditure estimates should be done in accordance with the laws that authorize the expenditure (for example, income tax law, value-added tax (VAT) law, free-economic-zone law) and by the line ministry responsible or the ministry in charge of implementing the law (for example, Ministry of Finance for tax laws, Ministry of Economy for investment laws).

Another key advantage is the evaluation of fiscal policy options for government intervention in the economy. It is customary to think of the budget as various tax revenues that,<sup>6</sup> in aggregate, finance a set of spending programs. Policy choices for spending weigh the cost and benefit of various direct spending options—for example, education, health, public infrastructure, and so on. On the revenue side, the tax mix is often thought of as influencing equity and efficiency—hence economic growth and how its results are shared across the population. It is much less customary, however, to evaluate the cost benefit of tax policies by comparing them with direct spending policies. Burman and Shaup (2011) argue that this comparison is equally important, since spending through the tax system implies reporting lower revenue, and hence smaller government.<sup>7</sup> The analysis of tax expenditures allows for such comparison.

Figure 1 shows the process, output, and results of analyzing tax expenditures as one dimension of fiscal management. At the core of the process is the Ministry of Finance, which has the primary responsibility for fiscal management. In collaboration with agencies and line ministries, it builds a data framework and models for the estimation of the cost of tax expenditures. The output, which is likely a tax expenditure report, is used by stakeholders to inform their understanding of, contribution to, and influence on the tax policy debate. The process is self-reinforcing and forms a virtuous circle in fiscal management in the sense that, over time, the analytical work required to report on tax expenditures improves both the quality of the estimates and their contribution to fiscal policymaking.

## How to Report on Tax Expenditures

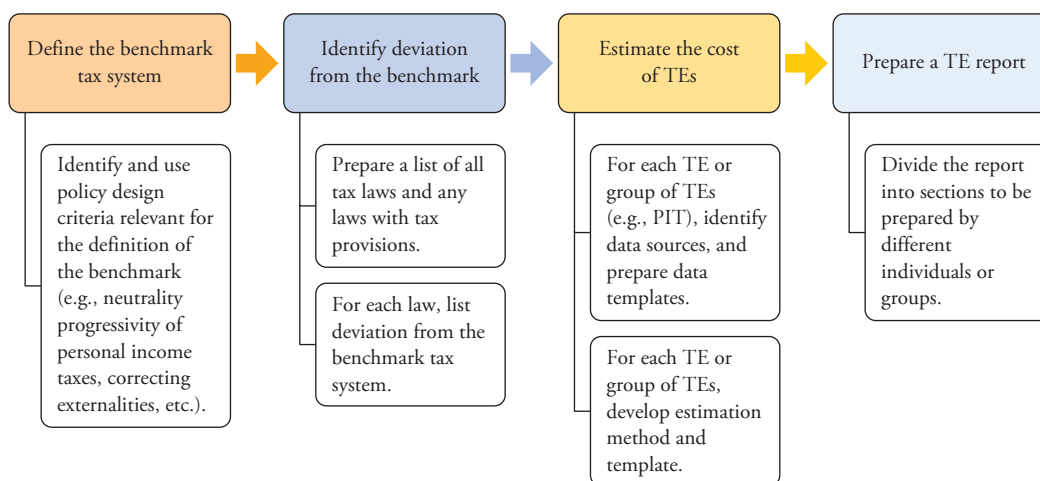
Estimation of the cost of tax expenditures involves three steps, which can be organized in various stages

**Figure 1. Tax Expenditures Analysis and Fiscal Management: A Virtuous Process**

Source: Authors.

(Figure 2):<sup>8</sup> (1) defining the benchmark tax system; (2) identifying tax expenditures by comparing current policy to the benchmark; (3) building and applying data sets, methods, and models to estimate the cost of tax expenditures; and (4) organizing the findings in a public report to communicate to stakeholders. This section

describes how each of these steps can be completed, discussing various options to overcome difficulties and constraints. The section ends with presentation of the institutional requirements for successful implementation and use of tax expenditure accounting.

**Figure 2. Steps in the Preparation of Tax Expenditure Reports**

Source: Authors.

Note: PIT = personal income tax; TE = tax expenditure.

<sup>8</sup>The fourth stage in this process, which is the format and content of the tax expenditure report, is discussed in section V. It is not necessary that countries publish an extensive tax expenditure report as part of initial reporting on the cost estimates of tax expenditures.

## Define the Benchmark Tax System

The benchmark tax system serves as a basis for identifying tax expenditures. It is desirable to define a simple benchmark tax system, grounded in the principles of neutrality, efficiency, and equity. Such a benchmark system implies that—despite possible tension among these principles—the system should be limited to the key features of the main taxes. The benchmark should include (subject to country-specific attributes) the general personal and business income tax rates, a simple consumption tax (such as a single-rate VAT), excise taxes consistent with the objectives of addressing externalities, tariffs, and other more minor taxes.

Benchmark tax systems typically include such aspects as the actual rate structure of taxes and the concept of income or spending that is used in the actual law. However, some countries or researchers use a different type of benchmark that corresponds to a theoretical system, such as a comprehensive income tax.<sup>9</sup> The numbers in that case can be markedly different from those for a benchmark closer to the actual tax system.

The benchmark tax system should be chosen to exclude tax provisions that favor (or disfavor) particular groups of people (such as homeowners) or business activities (such as profits from exports). This kind of benchmark ensures that the cost of such provisions is calculated and included in decisions on budgetary priorities. Ideally, the benchmark should also exclude tax features designed to promote particular actions by taxpayers, even if such actions are in the public interest. For example, many countries provide tax relief to encourage saving for retirement, but this should not be included in the benchmark. Inclusion of such tax relief would prevent its cost from being reported to the legislature—which is necessary to evaluate whether it provides good value for money.

An illustrative list of tax expenditures for the income tax system could include the following: interest deductions for housing loans, tax-free savings accounts, tax deductions for childcare expenses, reduced tax rates for small and medium enterprises, tax benefits for charitable donations, tax benefits for energy-saving measures, and tax advantages for employer-funded benefits. Similarly, tax expenditures for value-added tax could

include VAT rates below the standard rate, including zero rates (other than on exports); VAT exemptions for goods and services destined for final consumption; sectoral exemptions (for example, agriculture); and size-related exemptions, such as for small businesses.<sup>10</sup>

Tax provisions like these are not necessarily undesirable. For example, tax relief for childcare expenses has been shown to be justified in some countries as a policy to increase the labor force participation of parents. Similarly, a deduction for saving can be effective to support retirement saving. More generally, most specific tax provisions will yield some kind of social benefit. Nevertheless, the cost of such provisions should be estimated and reported, so that their value can be assessed and compared with government programs delivered by outlay expenditures (or compared with other kinds of tax relief, such as through a general rate cut).

Using a benchmark that is close to the actual tax system defeats the purpose of producing tax expenditure estimates. For example, a country might decide to include reduced rates of VAT in its benchmark, usually justified by a wish to help those with low incomes,<sup>11</sup> who spend a higher proportion of their incomes on basic goods and services. An obvious alternative to these reduced rates is cash transfers for people with low incomes. These transfers would be clearly identified in the outlay expenditure budget, but the reduced VAT would not be included in the tax expenditure estimates if they are part of the benchmark. This situation makes it difficult for the government and the legislature to properly compare the relative advantages and disadvantages of these alternative methods of helping the poor, and it limits the policy tools and options available to achieve society's objectives.

These considerations suggest that the benchmark should be constructed according to the following characteristics:

**Personal income tax (PIT):** For a comprehensive income tax<sup>12</sup> at progressive rates or a single flat rate,

<sup>10</sup>Note that when businesses in the middle of supply chains are exempt from VAT it can mean higher total VAT revenue liability further along the supply chain. A negative tax expenditure can result, because VAT on purchases of exempt items cannot generally end up as an input tax credit.

<sup>11</sup>This is not a persuasive argument: high-income households end up reaping most of the benefits of such policies, because they consume more (in absolute terms) than low-income households.

<sup>12</sup>In practice, no country has a true comprehensive income tax, in that some incomes are exempt or taxed at lower rates than the normal schedule. The guidance here takes a pragmatic approach and

the benchmark should be based on the prevailing system of income tax with the existing statutory tax schedule, but without tax relief, other than the basic allowance (or the zero-tax income bracket). Under such PIT, any deduction from income (other than genuine business expenses, if the person has income from a business activity), tax credits, and lower rates on certain income (for example, capital gains, interest, dividends) are arguably tax expenditures.

Income taxes can also be schedular or dual. In such cases, there is no single PIT rate structure; each income source or group of income sources has its own rate and base rules—for example, wage income and all other forms of capital income under the Nordic dual income tax systems. In this case, it is reasonable to have a benchmark tax system that separates the tax on wages from the tax on capital income. The benchmark for the wage tax can mirror that of a standard PIT (as above), and the benchmark for capital income taxes can be a flat rate on all forms of income from capital.

Small (unincorporated) businesses are sometimes treated differently, with a simplified tax on income expressed as a notional return to turnover, or a tax on turnover. In this case, it is reasonable to consider a lighter tax burden on income (relative to the standard PIT), as a tax expenditure, but estimating income subject to tax could present problems if reporting requirements are truncated.

**Corporate income tax (CIT):** Under a standard CIT, the benchmark should be based on the prevailing tax on profits with a single rate of tax (that is, the general rate) and no tax relief, other than for usual business expenses. However, if a higher corporate tax rate (or rates) applies on some sectors because of location-specific rent (for example, oil and gas production), this should be disregarded when identifying the highest rate for defining the benchmark applied to sectors without location-specific rent. Certain business expenses pose challenges in defining the benchmark. For example, should depreciation allowances be based on economic depreciation or accelerated (tax) depreciation, which provides a timing advantage? Should financing costs, such as interest expenses, be allowed without limit, or should limits on interest deductibility be accounted for as a “negative tax expendi-

ture”?<sup>13</sup> There is probably no right or wrong answer, but it is important to be consistent, irrespective of the expenses incurred. A reasonable and informative decision would be to consider all timing issues as tax expenditures (that is, not part of the benchmark) and all tax avoidance or base erosion measures as part of the benchmark.

If corporations are taxed in less standard ways—for example, through a cash-flow tax or if the CIT has an allowance for corporate equity, the issues above are handled differently. For instance, total expensing of capital input would be part of the benchmark under a cash-flow tax, and not a tax expenditure providing a timing advantage. The deduction for equity under an allowance for corporate equity would also be part of the benchmark, and not a tax expenditure for equity financing.

**VAT-style consumption tax:** One of the simplest taxes from a design perspective, the VAT should have as a benchmark the broadest measure of final consumption (public and private) at a single tax rate. Thus, there should be no exemptions in the benchmark system. Low rates should also be excluded from the benchmark, except for the zero rate on exports, which is intended to neutralize the effect of the VAT on exports—it is the mechanism by which VATs are designed to be destination-based. In systems with VAT rates higher than the standard rate, which are used as substitutes for excise taxes, there should be no negative tax expenditure. However, other forms of negative tax expenditures, such as revenue arising from exemptions or taxation of inputs, should be considered.

Some countries consider low VAT rates part of the benchmark on social objectives grounds—believing that the low rates benefit low-income individuals and lessen the regressivity (relative to revenue) of the VAT. Still, the cost of such policies must be properly reported; otherwise, the tax expenditure accounting exercise becomes meaningless.

Developing economies frequently use VAT exemptions for capital and intermediate inputs, as an alternative policy to providing input tax credit or refunds. These should not be considered tax expenditures, to the extent that they do not produce tax cascading along the value chain. For instance, an exemption

defines the benchmark relative to what a PIT most closely resembles, or what it is intended to do as a policy objective.

<sup>13</sup>Most high-income countries, and increasingly other countries, are introducing rules to limit interest expenses and other costs, such as management and service fees, particularly when such costs accrue to nonresident parties related to the payers.



for an imported machine used directly by a mining company (which is also the importer of the machine) should not be counted as a tax expenditure.

**Excise taxes:** These taxes are somewhat more difficult to include in a benchmark; their purpose is to change the relative price of a single good or service, which means that a single-rate benchmark is not appropriate. In addition to their revenue objective, excise duties are typically designed to address negative externalities or discourage particular behavior, such as the consumption of alcohol or the release of carbon dioxide into the atmosphere.<sup>14</sup> From this perspective, the benchmark tax for each relevant group of products or services could reflect the externality (if it can be measured with reasonable accuracy) or the prevailing rate.<sup>15</sup> For example, the benchmark for excise duty on various alcoholic drinks should be proportional to their alcohol content; similarly, the benchmark excise on vehicle fuels should be proportional to the carbon dioxide released by their use. If the prevailing tax rates are used as a benchmark, tax expenditures for these excised products arise when one particular type of product (for example, a locally produced alcoholic drink) is taxed at a lower rate than other products with the same alcohol content.

In some areas of excise policy, however, it will be very difficult to define a benchmark system and, therefore, to estimate the cost of tax expenditures. For example, take the case of excises on soft drinks, which have been rising in recent years. These are typically motivated by their high sugar content, and the excise aims to discourage consumption for health reasons. However, sugar is added to a very large number of other consumption goods, both liquids and solids. It may not be useful to define a benchmark system as one that imposes an excise on these products. In this case, it seems more practical to define the benchmark system as one that imposes an excise only on sugar-sweetened drinks. The tax expenditure can then be narrowly defined—for instance, as the value of sugar-sweetened drinks that are not subject to the excise. A similar

approach can apply to excises on food items with a certain fat content.

**Import tariffs:** Tariffs are typically used as trade policy tools and are often applied at different rates depending on the level of processing of imported goods (that is, final consumption, intermediate, or capital) and the country of origin. A uniform tariff on all imported goods may therefore not be an appropriate benchmark. Rather, the benchmark system could set the same tariff for a group of similar goods (for instance, final consumption goods), with the benchmark rate the standard tariff rate in the group. Tax expenditures arise if some importers are charged lower (possibly zero) tariffs for similar goods (for example, goods imported by international aid agencies or major public works contractors) or higher tariffs, in which case there is a negative tax expenditure. Alternatively, the benchmark could reflect the country of origin only, in which case a tax expenditure would be deviation from the general rate applicable to the country irrespective of the nature of the goods.

Given that tariffs are also revenue tools, especially in developing economies, bilateral or multilateral agreements (for example, free trade agreements) could be considered part of the benchmark system. In that case, a tax expenditure arises only if a lower tariff rate applies to the same category of imports from the same origin. For instance, if Country A applies a tariff of 10 percent on food imports from all countries except Country B, for which a zero tariff applies under a bilateral free trade agreement between A and B, the tax expenditure will arise in relation to deviation from the 10 percent tariff with all countries except B. This complicates the estimation process significantly.

**Social security contributions:** These levies are often used to finance specific spending programs, such as pension, health, and employment insurance. The benchmark depends on how contributions are taxed and which spending they finance. For instance, under a defined-benefit EET (exempt contribution, exempt accumulated investment income, taxed pension income at retirement) pension system, the benchmark should be the prevailing rate structure, and any deviation should be a tax expenditure—for example, exempting certain groups from making social security contributions. The treatment of the timing aspect, however, is less clear-cut. Countries can choose to report the expenditure relative to taxing contributions and accumulated investment income at retirement, which complicates the methodology and may not be mean-

<sup>14</sup>This additional objective of excise duty is especially relevant in countries with a broad-based consumption tax. In such cases, the primary objective of raising revenue efficiently should rest with the consumption tax; excise taxes are added to certain items to expand the policy objectives beyond revenue.

<sup>15</sup>There are strong reasons to use as a benchmark the rate that reflects the externality, especially given the damages caused by the consumption of certain items, such as energy (see Coady and others 2015).

**Table 1. Preparing an Inventory of Tax Expenditures**

Dimension	Description and Guidance								
Title and Description	Assign a meaningful title and a short description of how the measure functions (key design features).								
Legal Reference	Indicate the date the measure was introduced, main provisions, and the corresponding law.								
Type of Tax	Indicate the taxes the measure affects—for example, personal income tax, corporate income tax, value-added tax, excise tax, customs tariff.								
Type of Measure	Attribute one of the following categories to the tax expenditure (other categories could be developed based on national circumstances): preferential tax rate, surtax, legislated exemption, discretionary exemption, rebate or refund of tax, zero-rate under value-added tax, tax credit.								
Objectives	Indicate the objectives pursued by the tax expenditure as officially stated by the government when the tax expenditure was introduced and subsequently amended.								
Beneficiaries	Describe beneficiaries—for example, families with minor children; seniors; businesses grouped according to sector, size, or other attributes.								
Reason This Measure Is Not Part of the Benchmark Tax System	Indicate the manner(s) in which the tax expenditure departs from the benchmark tax system. For example, “this measure may permit the depreciation of a capital asset faster than its useful life.”								
Data Sources	Indicate data sources used in estimating the cost and projections—for example, “corporation income tax return.”								
Estimation Method	Provide a short description of the method used to calculate the cost estimates for the tax expenditure.								
Cost Estimates (if more than one tax base is affected, report on each in a separate row)	<table><tr><th>Year <math>t</math></th><th>Year <math>t + 1</math></th><th>Year <math>t + 2</math></th><th>Year <math>t + 3</math></th></tr><tr><td></td><td></td><td></td><td></td></tr></table>	Year $t$	Year $t + 1$	Year $t + 2$	Year $t + 3$				
Year $t$	Year $t + 1$	Year $t + 2$	Year $t + 3$						

Source: Authors.

ingful from an economy-wide perspective if we assume a perpetual tax system. An easier, and informative, benchmark would be to ignore the timing issue.

**Property taxes:** For recurrent taxes on real property ownership, the benchmark system should be based on the prevailing system without exception. For instance, the actual system can be based either on the current market value of the property or its rental value or it can be a simplified area-based system. Although different rates may apply in the actual system, a uniform standard rate would yield the most natural benchmark. Tax expenditures will then reflect specific tax deductions, special lower rates, or exemptions of certain types of properties or for certain taxpayers.

When the policy of a recurrent property tax is set by subcentral levels of governments, it is natural to exclude it from central government tax expenditures. This is frequently the case in high-income federations such as Australia, Canada, and the United States. In developing economies, the recurrent real property tax policy is often set (and collected) by the central government, but the revenues are allocated to local governments; in this case, tax expenditures should cover the property tax and be reported centrally.

The choice of benchmark is critical for the size of overall tax expenditures that will be reported. These can sometimes be very substantial. For example, the United States estimates the tax expenditures on its income taxes alone at approximately 6 percent of GDP

(OECD 2010, 138). However, the critical role of the choice of benchmark implies that such an aggregate number is not the main value of a tax expenditure. Rather, it is the transparency regarding the cost of each tax provision that makes a tax expenditure estimate useful by enabling a sound cost-benefit assessment. Still, large estimated tax expenditures are not necessarily a bad thing.

### Prepare an Inventory of Tax Expenditures

Once the benchmark system has been defined, the next step is to identify deviations from it and to list them according to various dimensions (Table 1). Several of these dimensions can be tailored to countries' circumstances and capacities or constraints. At a minimum, a country should be able to identify the first four dimensions: title and brief description, legal reference, type of tax, and type of measure.

Once an inventory has been completed, it is useful to analyze some general characteristics of tax expenditures, even without actual cost estimates. The list of tax expenditures and their qualitative aspects can be highly valuable. A comparative analysis of the tax expenditure landscape, relative to other countries or the trend over time, can yield important lessons about how the country uses its tax system to achieve policy objectives. This analysis is also relevant for the institutional framework of tax expenditures, which will be discussed later. Some

examples of issues to address in this analysis include the following:

- **Number of tax expenditures:** This could indicate the intensity of reliance on the tax system to achieve policy objectives. For example, in developing economies temporary exemptions for business profits (that is, tax holidays) are commonly used as a key policy tool to encourage domestic investment and attract foreign direct investment. However, the conditions for benefiting from such exemptions can vary according to the economic sector, geographic location, domestic value added, domestic employment, and legal form of business entities, to name a few. These conditions make the number of tax expenditures relatively high, even though the policy tool is common. Moreover, they may be provided in various legal texts, further increasing the number of tax expenditures.
- **Legal framework:** Tax expenditures could be enacted in various nontax laws rather than residing entirely in a country's key tax laws. This is particularly relevant in developing economies, where fragmented policymaking often is revealed through the legal texts that authorize tax expenditures—for example, free-zone, investment law, labor, mining and petroleum, and forestry laws, among others. In this case, it often indicates complexities, and possibly a source of incoherence in setting and achieving economic policy objectives through the tax system.
- **Classification of tax expenditures by major tax types:** For example, the extensive use of deductions in personal income tax systems could offset the objective of progressive tax rates. And the extensive use of VAT exemptions could indicate a high cost-benefit ratio in the delivery of assistance to poor households.

### Estimate the Cost of Tax Expenditures

The estimation of the cost of tax expenditures requires several steps: choosing the methodology, identifying and collecting data, and the estimation of revenue forgone. The right approach depends on a country's constraints on data availability, information technology, and human resource competency. In practice, there are various approaches, ranging from stand-alone estimation of each tax expenditure to microsimulation models based on administrative data to macroeconomic approaches based on national accounts data.

### Methodology

Developing economies are strongly encouraged to use the so-called revenue-forgone approach in estimating tax expenditures. This approach quantifies the direct revenue loss associated with the provision under consideration, relative to the benchmark system, which has no such provision. Almost all countries that publish tax expenditures use this method.<sup>16</sup> Two aspects of this methodology are important for the interpretation and use of tax expenditures for tax policymaking.

**No dynamic tax effects:** The revenue-forgone method assumes no change in behavior following the removal of a tax expenditure. This might be a deliberate choice, since the dynamic revenue effects of outlay expenditures are also not included in the government budget—so the strict accounting comparison is appropriate. It is important, however, to understand that a tax expenditure estimate can differ from the additional tax revenue from removing a specific tax provision if it causes a behavioral response. For example, if a reduced VAT rate on an item is removed, people will buy less of it (or will perhaps buy other goods), which implies lower tax revenues. Even though these behavioral effects are not part of tax expenditure accounting, they should be included in a broader analysis of the cost and benefits of tax expenditures, including for the purpose of comparative analysis with direct spending.

**Constant compliance behavior:** The cost estimate of a tax expenditure should be based on the amount of income or consumption actually taxed, rather than on the total value of incomes or consumption on which taxes *should* be paid. The difference between these two tax bases is noncompliance. In other words, tax expenditure estimates assume that compliance remains constant at its level in the current system (not in an ideal system with full compliance). In practice, of course, the removal of a tax expenditure can change compliance. For instance, removal of a tax expenditure could motivate taxpayers to be more aggressive in their

<sup>16</sup>Under the alternative revenue gain method, a tax expenditure is estimated taking into account behavioral changes and the revenue effects on other taxes. While this provides a better approximation of the revenue effect of repealing a certain tax provision, it differs from a pure tax expenditure estimate. For instance, when determining expenditures of ordinary government spending, dynamic behavioral effects on tax revenues are typically ignored in the cost estimate. Estimating dynamic effects requires an understanding of taxpayers' behavior, including tax evasion and the elasticity of demand and supply of the goods and services/incomes associated with the tax provision, as well as the effects on the revenues raised in other markets that might be affected by the removal of the tax expenditure.

tax avoidance strategies, which would in turn reduce collections elsewhere in the tax system or increase the cost of other tax expenditures.<sup>17</sup> Yet removal of one or several tax expenditures could strengthen the enforcement of tax policy, even where compliance is low. For example, reducing the number of VAT rates reduces opportunities for the misclassification of goods. For these, and other, reasons countries must consider the compliance and enforcement implications of removing tax expenditures as part of broader cost-benefit assessment. Appropriate action is essential to ensure that tax compliance is constant or better when tax expenditures are removed.<sup>18</sup>

**Interdependence:** The removal of one tax expenditure may alter the revenue forgone from other tax expenditures. For example, removing a CIT tax expenditure would be expected to increase profits, and therefore the room available to use larger amounts of other tax expenditures—for example, accelerated depreciation. This is not a change in real behavior or compliance; it simply reflects certain mechanical interdependencies between tax expenditures.

These properties of the revenue-forgone method are essential to appropriate interpretation of the numbers in a tax expenditure review. Alternative methods have occasionally been used by countries, but often as part of a more comprehensive cost-benefit analysis of tax expenditures that requires additional information and analysis, typically of a much more advanced nature. Absent such sophisticated methods and models, a tax expenditure analysis based on the revenue-forgone method provides very valuable information in the overall assessment of the desirability of certain tax provisions.

### *Data Requirements and Sources*

The availability of data is critical to the production of tax expenditure estimates. The collection of appropriate data can be difficult for several reasons, particularly in developing economies. Taxpayer data may not be available in a usable electronic format, or there may be legal barriers to the sharing of data between the

tax and customs administrations (and possibly other government agencies) and the Ministry of Finance. The lack of taxpayer data should not, however, be taken as a reason for not producing any tax expenditure estimates. Instead, countries should use all the available data from alternative sources, including macro data from the national accounts or survey data from other sources, to produce the best estimates possible. At the same time, countries should build capacity to increase the quantity and quality of data over time.

Data required can be organized for each tax expenditure separately, or as part of a micro or macro dataset. In the first case, the cost estimate of each tax expenditure is performed individually, using simple formulas reflecting information on the tax base and tax rate(s). For example, if a taxpayer benefits from a deduction in taxable income equal to 100 units of currency and the marginal tax rate that otherwise would have been applied is 20 percent, the cost of the tax deduction is 20 units of currency. If the taxpayer is subject to a progressive tax schedule, the calculation is more complex. For example, the removal of deductions could increase taxpayers' taxable income so much that it moves them to a higher marginal tax rate. That would make it necessary to calculate how much of the removed deduction is now subject to the original tax rate and how much is subject to a higher rate. For individual cases such calculations must be aggregated to derive the overall revenue forgone from the deduction, which requires a representative sample of individuals along the income distribution and possibly along other dimensions (for example, dependent children, age).

This brings up the advantage of using a microsimulation model (see further below), based on detailed information on the profile of taxpayers, so that aggregation is automatically part of the calculation. The data requirements, however, might be beyond what is currently available in developing economies. Yet, even if tax return data are limited to a selected group of the largest companies,<sup>19</sup> it can still be very valuable to obtain a first approximation of the revenue forgone from certain provisions. For example, data

<sup>17</sup>Since this change in compliance behavior is also a response to a change in policy, it is difficult to disentangle it from the dynamic effects noted above.

<sup>18</sup>In this regard, it is useful for countries to estimate compliance and policy gaps—as in the IMF's VAT Revenue Administration Gap Analysis Program methodology—as a complement to the cost estimates of tax expenditures (see Hutton 2017; and Keen 2013). Under this methodology, the policy gap is derived assuming full compliance.

<sup>19</sup>A similar approach can be followed for individuals. In some countries where PIT operates largely as final withholding on wage income, the public sector is well represented but the private sector is not—because, among other things, compliance is low among the self-employed. In this case, countries might want to rely on a representative sample of private sector employees, and other data sources, to estimate the cost of tax expenditures.



regarding the value of tax relief to businesses may be held in regional offices and may not be available in electronic form. In such cases, it may be necessary to base an estimate of the total of such relief on data that is readily available and to use the judgment of experienced tax officials and data on business registrations to extrapolate the estimate to cover relief granted to all businesses.

An alternative to microdata is to use macrodata—for example, based on sectoral data from the national accounts. This may be the best alternative in countries with neither administrative taxpayer data nor reliable survey data. Moreover, these sources can be used for tax expenditures for indirect taxes, such as VAT. VAT tax expenditures can be based on either of two data sources (or a combination):<sup>20</sup> (1) data from the national accounts on final consumption, which can be compiled from surveys of household income and expenditures and adapted to reflect taxable final consumption, or data from supply-use tables, which detail capital and intermediate consumption; and (2) data from VAT tax returns.

### *Micro- and Macrosimulation Models*

Many countries use (computer-based) models (micro or macro) to estimate the cost of tax expenditures, based on representative samples. These models (which can be designed in Microsoft Excel for greater simplicity and accessibility) include as much detail as possible of the tax system and how it applies to taxpayers in various circumstances. They can be designed to include the complications that arise from progressive tax rates, tax provisions based on detailed household characteristics such as joint or individual filing, the presence of dependent children, age, housing situation, and so on. These models provide a convenient way to aggregate the cost of a single tax expenditure across individuals or companies. The sample can also be replaced with the entire population of taxpayers, if data and technology allow it.

These models provide significant advantages for the analysis of the distributional effects of tax expenditures. Given the richness of the data they use, they can produce detailed summaries of the costs of tax expenditures by group of beneficiaries—for example, small

versus large firms, households with versus without children, and so on. More sophisticated models can also take into account the interaction between different kinds of tax relief, and even the possibility of taxpayer choice between alternative types of tax relief, depending on their detailed circumstances.

### **Design the Institutional Setting**

The institutional arrangements for reporting on tax expenditures must be designed to ensure the integrity of the estimates. The key objective is to improve transparency in fiscal management and provide relevant analysis to inform the legislature and other decision makers. While institutional settings may vary across countries, there is a very strong case for ensuring five minimum requirements.

First, individual ministries should not be able to manipulate the definitions of tax expenditures and/or the data and methodology used for estimating their costs. When individual ministries hide or underestimate the value of tax expenditures, the aim of scrutinizing tax expenditures in the same way as outlay expenditures is greatly undermined. To prevent this from occurring, the preparation of tax expenditure reports should be the sole responsibility of the Ministry of Finance, which has the greatest interest in ensuring accurate reporting. A tax policy unit in the Ministry of Finance would be a logical choice to take ownership of this task. Alternatives could include independent agencies, of both the Ministry of Finance and the tax administration—for example, independent fiscal councils.

Second, revenue collection agencies must be effective data providers and must have the necessary power to request additional information from taxpayers on their activities benefiting from tax expenditures. These agencies are the sole guardian of microdata, captured from tax returns, which are essential for the calculation and analysis of tax expenditures. It may be most convenient for the tax collection agencies to undertake much of the data processing, and needed to share data. In certain situations, revenue agencies may even play a role in preparing cost estimates.

Third, other ministries may also need to be involved as data providers; they may have data on tax expenditures and those that claim them in the sectors or areas they oversee. In many countries, ministries involved in promoting investment in the country have an incentive to provide generous tax relief to encourage new invest-

<sup>20</sup>Under both (1) and (2), compliance is likely overstated, with the result that the cost of tax expenditures is overestimated. This is also likely the case when data used to estimate the cost of tax expenditures are not from the tax returns or information reported by taxpayers to the tax authorities.

ment, particularly from foreign investors. This is often observed as well in ministries that manage natural resources (oil, gas, forestry, fisheries, and so on). These ministries may grant excessive or unwise tax relief, in which case they have an interest in hiding the value of the tax expenditure they have authorized. Because of potential conflicts of interest, the Ministry of Finance must validate data from other ministries and conduct selective audits in areas where ministries are most likely to understate the tax expenditures they have authorized. It is also essential that the data organization and provision from key agencies and ministries be well documented in memoranda of understanding with the Ministry of Finance and be legally binding on ministries to ensure timely preparation of tax expenditure information.

Fourth, the national statistical office is a likely source of data, especially if it conducts surveys of firms and households that can help identify entitlement to tax relief. However, unlike the ministries, the statistical office is not likely to be motivated to falsify figures, provided it is free from political interference.

Fifth, and somewhat beyond the mechanics of estimating the cost of tax expenditures, the Ministry of Finance should have some oversight over legislation that involves the introduction (or elimination) of tax expenditures. For example, the Ministry of Finance can be designated, by law, to be the only ministry that can propose tax expenditures to the legislature. All other ministries must submit their policy proposals to the Ministry of Finance, which analyzes them based on their cost-benefit outcomes and sends them to the legislature. Somewhat weaker would be a requirement that the Ministry of Finance provide a cost-benefit assessment of any tax expenditure proposed to the legislature. Under the law the legislature would not consider a tax expenditure without such an assessment.

- Full detailed expenditure estimates must be provided to the legislature. This is to ensure that budget setting takes full account of the cost of tax expenditures and to allow it to reduce (or increase) them where desirable, impose sunset provisions, and call for further analysis. But it is also an additional way to verify estimates: members of the legislature may have information of their own that they can use to challenge the data provided, as could academics, think tanks, and journalists. A well-administered system of tax expenditures with careful oversight can play a very important role in promoting fiscal transparency. Failure to ensure the correct checks

and balances in preparing the data and cost estimates can lead to a serious loss of financial control by the government.

## Experience in Developing and Advanced Economies

This section presents key highlights from the comparative literature on tax expenditure analysis in developing economies. For reference, Box 1 shows similar experiences from advanced economies. Rather than focusing on the estimate of total tax expenditures (in local currency, in percent of total tax revenue, or in percent of GDP), this section focuses on the key characteristics of tax expenditure reporting. This is as important as the level of tax expenditures for two reasons (both discussed in the previous sections): first, the credibility of the estimates depends on institutional qualities; second a direct comparison of the value of tax expenditures across countries is problematic, given differences in benchmarks and the design of tax systems.

A recent survey of the use of tax expenditures in 26 developing and emerging market economies provides interesting insight into how they are prepared and their institutional characteristics.<sup>21</sup> The study assesses the quality of tax expenditures in a country according to several dimensions; the following patterns emerged:

**Legal requirement to produce tax expenditure reports:** Only about half of the reviewed countries have a legal requirement to produce tax expenditure reports (Bulgaria, Chile, Colombia, Dominican Republic, Ecuador, Guatemala, India, Mexico, Pakistan, South Africa, Uruguay).

**Reporting frequency:** With the exception of the Philippines, Ghana, and Mauritania, all countries report annually on tax expenditures.

**Definition of tax expenditure:** All countries surveyed define a tax expenditure, except Morocco—where a definition can be deduced from the description of the benchmark tax system. In Latin America, only Argentina, Colombia, the Dominican Republic, and Uruguay view tax expenditures as tax provisions that lead to a permanent loss of revenue; provisions in which revenue loss is temporary or due to deferral of tax liability (such as accelerated depreciation) are included in the benchmark. In Africa, only Senegal subtracts “temporary” tax expenditure estimates from

<sup>21</sup>Kassim and Mansour (2018).

### Box 1. Tax Expenditure Reporting in Advanced Economies

The Organisation for Economic Co-operation and Development (OECD 2010) reports on the approaches of 10 OECD members (not all OECD members report on their tax expenditures) to estimate the cost of tax expenditures, which show a range of practices in various dimensions. Below is a summary of practices in nine countries. (The Republic of Korea has changed its approach since the publication of that report.)

**Benchmark tax system:** Only Canada and the United States have explicit conceptual definitions of their benchmark. In the United States, the benchmark for the federal income tax (the only tax for which tax expenditures are measured) is based on the Haig-Simons definition of comprehensive income. In Canada, the benchmark for income tax is less comprehensive, including provisions to reduce or eliminate double taxation of corporate profits. Canada also describes its value-added tax benchmark as a broad-based tax. The other countries (France, Germany, Japan, Netherlands, Spain, Sweden), except the United Kingdom, use a benchmark that closely follows the basic elements of the existing tax law, in the same way as most of the developing economies. The United Kingdom is unique in that it does not provide any sort of benchmark but uses a direct definition of tax

expenditures: relief that is an alternative to, and has consequences similar to, public expenditure.

**Methodology:** All countries use the revenue-forgone method for estimating tax expenditures, sometimes with minor modifications—for example, how a corporate income tax expenditure may affect the use of loss carryforwards.

**Periodicity:** All countries produce their tax expenditure estimates at least once a year and, in some cases, include them in budget documents. In many cases, they also produce estimates for past and future years.

**Coverage:** Taxes covered in the reports are either all taxes or all central government taxes (with some countries excluding social security contributions).

Redonda and Neubig (2018) is a more recent evaluation of the quality of reporting on tax expenditures in the G20 and OECD countries, using the methodology in Kassim and Mansour (2018). The authors note that substantial progress remains possible even in this group of countries, whose fiscal institutions tend to be more transparent. For example, the authors report that 8 of the 43 countries they review did not report on their tax expenditures over the past 10 years; only 28 countries reference a legal requirement to report on tax expenditures; and only half of the countries that report on tax expenditures provide a legal reference for each item.

the value of total tax expenditures. In Europe, only Bulgaria did not estimate provisions associated with temporary revenue loss.

**Definition of the benchmark system:** A description of the benchmark tax system remains a challenge in developing economies. Half of the countries do not include a discussion of the benchmark system in their tax expenditure reports. Interestingly, these countries do include a definition of tax expenditures in their reports. Defining tax expenditures without some understanding of the benchmark tax systems can be viewed as lacking solid principles.

Chile, the Dominican Republic, and Mexico use the conceptual approach, defining the benchmark in terms of desirable characteristics of the tax system. The other countries either explicitly or implicitly define tax expenditures as deviations from general tax laws—without specifying what these are.

**Tax categories covered:** All surveyed countries report tax expenditures associated with, at least, personal and corporate income taxes and value-added tax (except India, Pakistan, and the Philippines). Several report tax expenditures related to import tariffs (Argentina, Ghana, Guatemala, Mauritius, Morocco, Nicaragua, Pakistan, Philippines, Senegal, South Africa). Argentina is the only country to report tax expenditures related to social security contributions—this is rarely estimated even among OECD countries (See OECD 2010).

**Classification of tax expenditures:** All countries classify tax expenditures according to the type of tax. Bulgaria and Morocco provide additional classification, such as policy objectives and sectors. Uruguay is the only country to report the duration of each tax expenditure—that is, where it is permanent or subject to a sunset clause.

**Estimation of tax expenditures:** All countries surveyed use the revenue-forgone method. Nicaragua also uses the revenue-gain method. A few countries add some assumptions to the revenue-forgone method to account for changes in taxpayer behavior. For example, Chile and Uruguay assume that consumers have fixed total gross spending; this means that the elimination of a VAT tax expenditure on a good will reduce spending by the full amount of the tax expenditure and, hence, VAT revenue.

**Projections of future tax expenditures:** Chile, Costa Rica, Guatemala, and India are the only countries to estimate the value of tax expenditures for future years. This approach is consistent with medium-term budget frameworks, as it allows better arbitrage between spending and revenue adjustments in the medium term.

both feasible and useful for improving transparency in fiscal management.

The note highlights the importance of the quality of reporting on tax expenditures. This goes to the heart of the credibility of such reporting in achieving its intended results. The note reviews experience in both developing and advanced economies; it concludes that substantial improvements remain possible to achieve better quality of reporting on tax expenditures.

The IMF can help countries build the institutional framework and capacity to report on tax expenditures (Box 2). Its technical assistance in tax expenditures can be tailored to countries' needs and constraints. Using a step-by-step approach, it helps countries identify an appropriate strategy and produce a report on tax expenditure in less than 24 months.

## Concluding Remarks

This note offers a simple and rigorous approach for countries to report on their tax expenditures. The capacity to produce such reporting is an evolving process. Developing economies should plan for this exercise strategically, taking into account their political and institutional capacity. The emphasis on simplicity should provide them with a result that is



## Box 2. IMF Technical Assistance in Tax Expenditures Assessment and Reporting

The IMF technical assistance program in tax expenditures assessment and reporting (TEA Program) recognizes that the practice of reporting on tax expenditures is an evolving process. As countries develop their institutional capacity, their ability to produce more accurate estimates of tax expenditures will increase. As such, TEA helps countries produce tax expenditure estimates according to three alternative strategies:

1. **Basic:** This strategy consists of (a) defining the benchmark tax system; (b) preparing an inventory of tax expenditures; (c) preparing simple cost estimates of a short list of tax expenditures; (d) preparing a short section or annex to accompany the annual budget document, analyzing the landscape of tax expenditures with basic statistics on their number, distribution across taxes, and a summary of the estimates.
2. **Intermediate:** In addition to the basic strategy, this approach includes (a) a framework for the necessary data to estimate tax expenditures; (b) simple Microsoft Excel-based methods to estimate a longer list of tax expenditures; (c) a brief report on tax expenditures, to be published with the annual budget or separately.
3. **Advanced:** In addition to the intermediate tasks, this strategy includes simple microsimulation models for key taxes (personal and corporate income taxes, value-added tax).

TEA is a step-by-step capacity-building approach to the production of tax expenditure reports. It is tailored to a country's past work on tax expenditures and includes the following activities and outputs:

**Step 1: Assessment of institutional capacity and identification of the appropriate strategy to produce tax expenditure estimates (basic, intermediate, or advanced)**—This step evaluates a country's readiness to commit, politically and technically, to the production and publication of tax expenditure reports. The assessment determines which strategy to adopt.

**Step 2: Defining the benchmark tax system**—The IMF will help the country define its benchmark tax system. A descriptive analysis of the existing

tax system, together with bilateral and multilateral agreements affecting tax and customs laws, will be undertaken in order to define the benchmark. Existing descriptive analysis prepared by the country or its development partners could facilitate this step. The identification of the benchmark tax system starts with a generic model. Conceptual adjustments are then made to reflect country-specific characteristics, which could reflect social and economic policy objectives.

**Step 3: Preparing an inventory of tax expenditures**—This inventory is derived from a comparison of the benchmark tax system in Step 2 with actual tax laws and other laws containing tax provisions. For each tax expenditure, the IMF will assist the beneficiary country in preparing a series of tables (similar to Table 1), which can be enriched and modified over time as the system of tax expenditure accounts evolves.

**Step 4: Identifying data sources and building data templates**—This step depends on a country's availability and organization of data, the framework for sharing data among government agencies and ministries, and data quality and depth. In the event a country adopts the "advanced" approach to tax expenditure reporting, strong collaboration and coordination among government agencies is required, which may need to be formalized (for instance in a protocol) to ensure sustainability.

**Step 5: Building static models for estimating the cost**—Like step 4 on data, this step depends on the selected strategy, from simple stand-alone calculations to microsimulation models. More sophisticated approaches would allow for projections of tax expenditures, in line with medium-term budget frameworks.

**Step 6: Workshops for capacity building**—IMF teams will propose workshops to help government officials, particularly those in the Ministry of Finance charged with tax policy analysis, master the project and become capable of producing tax expenditure information annually. This step determines whether the project can reach sustainability or if additional capacity development is required.

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