TaxDev

TaxDev Manual

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An introduction to tax policy appraisal:

A guide to assessing the effectiveness and potential impacts of alternative tax policy options

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Preface

The manual has been prepared by the Centre for Tax Analysis in Developing Countries (TaxDev), a collaboration between the Institute for Fiscal Studies (IFS) and the Overseas Development Institute (ODI).

TaxDev aims to contribute to more effective tax policymaking in low- and middle-income countries through applied research and policy analysis, and a focus on improving the evidence base in collaboration with partner governments.

Contents

List of boxes

List of figures

List of tables

Executive summary

This manual provides a simple framework for tax policy practitioners to use in assessing tax policy options. Drawing on the practices of the UK Treasury and Office for Budget Responsibility (OBR), and the experience of the Centre for Tax Analysis in Developing Countries (TaxDev), this approach is intended to guide policy officials through the *ex ante* appraisal of proposed tax policy changes, particularly in low- and middle-income country contexts. It is intended to support evidence-based analysis of the strengths, weaknesses and impacts of a proposed policy, which can be used to inform policy decisions. This approach has been applied with the support of TaxDev by tax policy analysts in the Ministries of Finance in Ethiopia, Ghana and Uganda to gather evidence and draft briefings for senior management and ministers.

The manual is an introductory guide and is not a comprehensive 'how-to' for every element of the process (e.g. policy modelling approaches). For further guidance on the estimation of revenue impacts, a more in-depth policy costing manual (Phillips, Tyskerud and Warwick, 2021) is available; further reading has been provided at the end for other parts of the process.

The approach to policy appraisal set out in this manual follows a step-by-step process with examples and suggested resources for further learning. The framework is accompanied by a policy appraisal template in Annex I that can be used to guide tax policy practitioners in applying the framework to their own policy examples. Annex II also provides an example template for comparison of options and impact scenarios arranged in a costing table. There are ten steps in the process covered in this guide, as outlined below.

Policy appraisal process

1   *Definition*. Clear statement of the features of the proposed policy change compared with the current situation (e.g. changes to the rate or base of a tax).

2   *Rationale*. Justification for the proposed policy change based on economic reasoning, in response to a policy 'problem'.

3   *Evidence*. Data or qualitative information that support the rationale, and any relevant case studies, benchmarks or evidence on the likely channels of impact.

4   *Estimated cost*. Quantitative estimation of the revenue cost/yield from the proposed change, including any assumptions and uncertainties.

5   *Groups affected*. Consideration of which individuals, groups, sectors, etc., the proposed change is aimed at, or could affect directly or indirectly, and how.

6   *Wider impacts*. Other effects over and above those considered so far, including potential unintended effects.

7   *Legal and administrative issues*. Legislative amendment process required and factors affecting efficiency of policy implementation.

8   *Alternatives*. Consideration of why the proposed policy change would be more effective than alternative tax or other policy options.

9   *Assumptions and uncertainties*. Clear statement of the assumptions required for the appraisal, and uncertainties surrounding them.

10 *Monitoring and evaluation*. How the results of the proposed policy change would be measured against intended objectives.

1. Objectives of policy appraisal

Policy appraisal is a process that allows policymakers to think critically about the objectives and impacts of a proposed policy change and to compare alternative policy options. In this manual, the term 'appraisal' is used to describe *ex ante* assessment (i.e. before the policy is introduced). An assessment of the effectiveness of a policy that has already been implemented – an *ex post* assessment – is referred to as 'evaluation'. *Ex ante* policy appraisal is important to ensure that a new policy can be expected to meet its objectives, and do so in a more cost-effective or well-targeted way than alternative policies. This helps to ensure that the policy is well designed to meet its stated objectives, and considers and mitigates risks and possible harmful effects.

A policy appraisal framework therefore aims to:

1. provide consistency when assessing policy options – a clear set of considerations and defined procedure for policy appraisal helps analysts organise and plan their thinking for all policies;
2. embed economic reasoning and evidence in the policymaking process, including detailed consideration of a range of impacts and alternative scenarios;
3. enhance transparency surrounding the objectives of the policy to internal (and potentially external) stakeholders, facilitating active policy debate.

The use of a standard presentation format, including a summary and recommendations, is also helpful for drafting briefings for different audiences, such as managers, ministers and potentially external stakeholders. Many countries, including the UK, produce a short policy appraisal or impact assessment for every tax policy change. This process recognises the importance of subjecting policy changes to critical assessment before recommending to decision-makers or implementing the policy. A standard presentation format is useful for structuring work and presenting findings and is a worthy goal for policies being submitted to decision-makers for consideration and/or being implemented. However, it is also

the case that the appraisal process can be iterative. Thus, depending on when tax policy appraisal is being used in the policymaking process described below, elements of the appraisal framework used in this manual might be used separately by analysts and policymakers as they move from an initial policy challenge to a potential solution, rather than always as a comprehensive appraisal package.

1.1 The policymaking process

The formulation of new tax policies may arise from a need to raise additional revenue or from other policy objectives that could be addressed by changes in the tax system, such as adjusting the relative prices of goods and services or redistribution of incomes between population groups. Changes may also arise from a need to address a problem identified with the existing tax system that is not working well. Alternatively, policy analysts may be required to consider the relative merits of a tax policy change proposed by another part of the government, a regional body or a third party, or a proposal that arises from political commitments or incentives.

The process of tax policymaking, from an initial idea to the collection of taxes, varies from country to country, but typically includes several stages, as illustrated in Figure 1.1.

Figure 1.1. Illustrative tax policy process

Source: Wales and Lees (2020).

Throughout the process, the use of evidence and analysis is critical to informing decisions; also important is consultation with a range of stakeholders to improve the design of the policy, as well as to ensure it gains acceptance and is aligned with wider government policy objectives. Based on the New Zealand model, the process can be described in several stages, including:[1]

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[1]   Based on the descriptions in Wales and Lees (2020) and Tax Working Group (2018).

- **concept** – identifying the issue and scope of the problem, obtaining approval to undertake project planning;
- **plan** – identifying and predicting the time and resources required for the project;
- **research** – identifying options, researching and analysing the issue, undertaking cost and impact analysis, obtaining approval to consult externally;
- **develop** – consulting, finalising policy proposal options, costs and impacts, obtaining ministerial and cabinet approval for the proposed policy change, developing draft legislation;
- **legislate** – parliamentary process and external communication about ensuing legislation;
- **implementation** – completion of the process and operation of the new policy;
- **evaluation** – measuring the impact of the policy and effectiveness against its intended objectives, including providing learning that will inform future policy design.

Consultation can take place in the early stages (to inform understanding of the 'problem' to be addressed) and in the identification of options, as well as in the development of the policy, and at the end, prior to enactment or implementation. Once a detailed policy is developed and prepared for submission to ministers or the legislature, consultation with a range of stakeholders is useful, both to identify potential areas of resistance by those affected and to assess any practical implementation challenges. Information from consultation may help shape the details of the legal drafting or administrative procedures, or help prepare public messaging and/or communication of the policy impacts to decision-makers.

The process through which possible tax policies are designed, developed, scrutinised, legislated and reviewed is a relatively under-examined factor in improving the effectiveness of tax systems (Wales and Lees, 2020). Indeed, Tanzi and Zee (2000) argue that 'in developing countries, tax policy is often the art of the possible rather than the pursuit of the optimal'. More attention is usually given to debating the nature of the tax proposals themselves, yet the policymaking process, which includes the evidence and information that shapes proposals, is also critical to the success of policies. The appraisal process therefore provides a guiding structure for the gathering of such evidence to inform the tax policy process outlined above.

1.2 The role of policy appraisal

Within the wider tax policy process outlined above, policy appraisal can help to inform decision-making at key points. The evidence used for appraisal is also informed by parts of the wider process, such as consultation and evaluation of previous similar policies. While the evidence gathered within the policy appraisal structure that we set out below can inform each stage of this policymaking process, the majority of the work to compile such appraisals will, in practice, occur at the research stage of the steps outlined above.

Sometimes appraisals will consider a very specific proposal, while others may be more exploratory in nature, with a less well-defined objective and the aim of supporting the initial formulation of policy options. The appraisal process may therefore differ according to the circumstances, but broadly includes the following elements:

- sourcing the supporting evidence that demonstrates the relative strengths and weaknesses of a policy change in relation to its objectives;
- comparing the policy with similar policies in the country's past and present tax system and with other countries' (e.g. neighbouring) comparable or contrasting tax systems;
- estimating the revenue impact (cost or yield) of the measure;
- considering wider economic effects on, for example, jobs or investment;
- analysing distributional impacts, such as how the policy would affect incomes and equity across income groups or other groupings, such as gender, geography and sector; and
- considering whether alternative policy instruments, such as direct provision, spending, information or regulation, could achieve the same goal in a less costly or more effective way.

The appraisal framework that we introduce in this manual contains a comprehensive set of considerations that should be addressed before passing and implementing a tax policy change. While it is prudent to cover all of these steps – and the template introduced in Annex I packages all of these together for consideration by a policymaker – it is important to note that in practice this process can be an iterative one depending on the stage of the policymaking process. For instance, before conducting in-depth policy appraisals, policymakers may often start with a central rationale in mind, before drawing up a list of policy options.

Drawing up this initial list of options will require some degree of evidence gathering (i.e. some minimal appraisal of policy options). In some cases, a rough policy costing might be undertaken for a long list of options first, before more detailed costings and appraisals are carried out for a more streamlined list of options. Thus, the framework introduced in this manual should not be thought of as rigid and useful only for policies at the final stage of consideration; rather, it should be used as a structure and a practical guide for setting out the strengths, weaknesses and evidenced likely impacts of tax policy changes prior to policy decisions and implementation.

Once researched, the presentation of a policy appraisal – in terms of length, style and key messages – will also depend on the target audience. Sometimes it may be used for a relatively technical audience, such as section heads in a tax policy unit, thus requiring more depth. At other times, it may need to be written for a broader range of stakeholders as part of a consultation process, or written very succinctly with focused key messages aimed at ministers to inform decisions. The depth of certain sections might also vary based on the target audience. Some considerations may be given more weight by certain stakeholders, such as the administrative implications by the revenue authority. By contrast, what is submitted to the minister, for example, might focus less on the details of supporting evidence and more on what the evidence shows about the impacts that are important to decision-making.

In each case, the elements of the appraisal process will be similar, but the information and evidence used to compile the sections will vary according to the stage of the broader tax policy process it is taking place at (e.g. development of initial ideas or final recommendations), and the length and depth will need to be tailored to the audience.

2. Appraisal framework

This chapter introduces a framework for appraising tax policy options before they are implemented, drawing on the practices of the UK Treasury and Office for Budget Responsibility (OBR)[2] and the experience of the Centre for Tax Analysis in Developing Countries (TaxDev). For each step in the process, we explain why it is important and what to do, using examples to demonstrate both the usefulness of the step and the methods that can be used. A template with instructions for applying this framework is provided in Annex I.

The framework consists of ten steps, starting from clearly defining the policy all the way through to setting out plans for post-implementation monitoring and evaluation. The policy appraisal template provided gives a tangible structure to this process, with the goal being that one of these should be completed for each policy proposal prior to enactment or implementation.

2.1 Define the policy change

To appraise the relative merits of a proposed policy, it is important to first define as precisely as possible the policy change being considered. This will clarify the nature of the change in rates, tax bands, and other tax system parameters that are being appraised.

If the proposal relates to a change in existing policy, it is important to state both the current and proposed policy so that the nature and scale of the proposed change is as clear as possible. It is also relevant to note whether the existing and/or proposed policy departs from the standard (or benchmark) tax treatment, for example whether it relates to a change in the standard rate of tax, or a special rate that applies only to certain groups or activities.

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[2]   See, for example, HM Treasury (2020a, 2020b), including online policy costings by the OBR (see https://obr.uk/forecasts-in-depth/policy-costings/).

There are several aspects of the proposed policy change that need to be considered, both for the existing (pre-reform) system and the proposed (post-reform) system, as follows.

- What is the base for the tax (i.e. the value or activity subject to taxation)?
- What is the rate of the tax?
- When and by whom is the tax paid?
- Are there any allowances, such as a threshold below which the activity is not taxable? Or are there any special groups or instances taxed at different rates?
- When would the tax policy change take place? Is the change linked to a public announcement or commitment by the government?
- Which law(s) governs the policy?
- Who administers the tax (e.g. national/federal revenue authority, regional state or local government, line ministry, etc.)?

It will not always be necessary to include all of this information – judgement will be required as to what is important in the context of each proposed policy.

As noted previously though, there may not always be a precise policy proposal when starting the appraisal process. In this instance, it may be useful to use this first step to record the range of options being considered (while still being as precise as possible). The focus should then be on elaborating step 2, which is to define the policy 'problem' and objectives of reform. Once there is a thorough understanding of the problem, it should be possible to formulate appropriate options that will address the problem. The next steps can then be undertaken in a more concise way, using the analysis to narrow down the options to one or more that will be appraised in more detail (and to revise those recorded in step 1 if necessary). In this way, the appraisal process may be iterative, with the refinement and development of more specific policy reform options at each iteration, as more evidence is gathered and more detailed analysis undertaken. Ultimately though, a 'full' appraisal should be undertaken for tax policies being enacted, and this full appraisal should begin with a precise definition of the policy change.

Box 2.1. Defining the policy change

Indirect tax example: removal of value added tax on financial services

In this example, the current policy is to levy value added tax (VAT) at a rate of 17.5% on the fees charged by banks for a range of services (which we assume are defined clearly in the VAT law). The new proposal is to make such fee-based services exempt from VAT, so that VAT would no longer be charged on them. However, it is also important to note that under the existing (pre-reform) system, banks are able to claim a credit (or potentially a refund) for any VAT incurred on the inputs required to produce the financial services.[3] Under the proposed exemption, banks would no longer be able to claim back the VAT paid on their input purchases.

Direct tax example: reduction in the rate of corporate income tax

In this example, the standard rate of corporate income tax (CIT) is 25%. The proposed policy change is a reduction in this standard rate from 25% to 20%. The tax base is the value of taxable income (e.g. determined by the gross income or turnover from sales and other sources of income, minus deductions for allowable expenses) that is subject to the standard rate.[4] The tax base and allowances are unaffected by the change, but the rate is reduced.

2.2 Rationale and objectives

The second step in presenting and appraising a proposed policy reform is to set out the purpose of the policy change using sound economic reasoning – that is, to provide the policy rationale. In particular, two critical questions should be addressed.

1. What is the problem that this change seeks to address, either with the current policy framework and/or with wider socio-economic conditions?
2. By what mechanism(s) will the policy change address this problem?[5]

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[3]   For example, the revenue authority may have required, in practice, that this be calculated as an apportioned share of the banks' input costs, if the exact inputs to those services are difficult to observe.

[4]   This is typically defined in detail in the Corporate Income Tax Act and associated regulations.

[5]   The evidence to support these mechanisms is provided in step 3 (see Section 2.3).

The potential justifications for a policy change are numerous, and it is necessary to set these out clearly in order to provide transparency and to inform decisions. Setting out the justifications also helps policymakers to think through the channels of impact that the policy may have on taxpayer behaviour, as well as the other socio-economic effects (both desirable and undesirable) that need to be considered later in the appraisal process. Defining the rationale for the policy is also linked closely to consideration of whether alternative policies might meet the objectives more effectively, which is explored in more detail in Section 2.8.

Governments may have many reasons for introducing a new tax policy or changing an existing one. Some examples include:

- mobilising additional revenue to finance public spending or reduce deficits;
- altering aggregate levels of demand in the economy to smooth economic 'cycles' (e.g. a temporary reduction in rates of taxation, such as a temporary cut in VAT, to provide a stimulus during an adverse economic shock or downturn);
- redistribution of wealth or income through, for instance, progressive income taxation or targeted indirect tax changes;
- addressing market failures such as 'externalities', which occur when 'consuming or producing a good or service produces benefits or costs for others that are not directly involved in the consumption or production' (HM Treasury, 2020a);
- adjusting relative prices to change taxpayer behaviour – in general (externalities aside), taxes tend to distort behaviour in undesirable ways, so a new tax policy change might be motivated on the grounds of removing or reducing such existing distortions;
- removing an existing feature of the tax system that favours a particular type of economic activity or group; or
- streamlining tax collection and improving the efficiency of tax administration, or reducing tax avoidance and evasion.

Box 2.2. Example policy rationales

Indirect tax example: removal of VAT on financial services

The main rationale for this policy is to reduce the cost of banking services to households and businesses that are not registered for VAT (and who are therefore unable to claim back the VAT charged on their input purchases of fee-based financial services).

It may be expected that the reduced cost of financial services could increase the use of formal banking services by households and by informal and small businesses, increasing the money that flows through the financial system and is available for investment, and contributing to wider formalisation. The policy also aims to remove an economic distortion that was created by the current VAT policy, in which banks had an incentive to use other ways of charging for services to households and informal and small businesses (such as interest rate differentials), which were already exempt from VAT, even if a fee-based approach would otherwise be preferred (note the incentive goes in the other direction for services for larger VAT-registered businesses, who can reclaim any VAT charged).

However, the removal of this distortion would create new distortions, with the tax system encouraging households and informal and small businesses to make more use of fee-based financial services relative to those goods and services that are still subject to VAT.

Direct tax example: reduction in the rate of CIT

The government is likely to have several objectives when introducing a major change to CIT policy. For this example, however, let us assume that it is intended to boost foreign direct investment (FDI), which may also boost employment and earnings. A reduced rate of CIT can incentivise investment by enabling businesses to retain a greater share of the income generated from the investment, which they can either pay out as dividends to shareholders or invest back into the business. In other words, a lower CIT rate increases the marginal and average returns on investment, encouraging firms to invest more. The return on FDI will depend on other factors as well, such as market size or costs for locally purchased inputs (including skilled labour and electricity supply) and institutional factors, but at the margin the CIT rate will be a factor. This must be weighed up against any loss of government revenue by policymakers (which is likely to partially determine these other drivers of FDI as well).

2.3 Supporting evidence

It is important to examine whether the rationale for policy is supported by the evidence – both theoretical and empirical. This stage of the appraisal process therefore involves reviewing a range of evidence to assess whether it suggests that the proposed policy will meet its objectives. This supporting evidence needs to be documented, and it is particularly important to make clear whether there are any

uncertainties and/or when the evidence suggests that the policy would not meet its objectives.

The type and source of evidence will vary on a case-by-case basis. Depending on the policy, one might look for evidence concerning the following, for example.

- **The nature and scale of the problem identified, which the policy change will aim to address.** Is the problem identified actually a problem that requires a tax policy change? Depending on the problem identified, the issues one might want to examine include: current and past revenue collections, costs of collection, tax efficiency or tax gaps (unmet potential), evidence of non-compliance, evidence of income inequity or other inequities, investment performance or other economic indicators.

- **The mechanisms through which the proposed policy is expected to have an impact on the problem**. Evidence could support the existence of an economic effect, the direction of the effect and/or the magnitude of the effect. Examples might include behavioural effects, such as the responsiveness of consumption to a change in price (measured by the price elasticity of demand), or the impact of a tax on investment via the marginal effective tax rate changing rates of return.

- **Lessons from the success (or failure) of similar past policies, or examples from elsewhere**.[6] If the policy has been tried before and was evaluated, what were the lessons? Were there any estimates generated from the results that can be applied for this policy, such as elasticity estimates that describe the behavioural response to tax changes? Were there indirect or unexpected consequences or knock-on effects that should be considered in the appraisal? If a policy has been used elsewhere, it may not be appropriate to every context. So, benchmarking of other countries should be used with caution and consideration of the economic structure, political context and other characteristics of the circumstances that led to the success or failure of the policy, and how applicable these may be elsewhere.

- **Illustrative examples**. These may be based on evidence or may simply be illustrations of how the policy would work or affect taxpayers. A clear example or set of scenarios can show the problem (and solution) in a simple and

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[6] *Ex post* policy evaluation is a distinct process from policy appraisal that carries a range of particular challenges that we do not attempt to discuss in this manual. A good starting point for policy evaluation is HM Treasury's Magenta Book (HM Treasury, 2020c).

relatable manner, especially when thinking through operational aspects. This can be useful for consultations and communication to a wider audience.

Background or supporting material could be sourced from data or evidence from the specific context of the policy or from elsewhere. If context-specific evidence is not available, then evidence should be sourced from contexts that are as similar as possible. Depending on the research question or aspect that requires evidence, sources of relevant material could include the following.

- Data and statistics from national or international sources, such as
    - taxpayer declarations and revenue collections;
    - audit and compliance indicators, administrative performance indicators, diagnostic assessments (e.g. TADAT[7]);
    - national statistics on public finances, household income and expenditure, labour force surveys, enterprise surveys, indicators or proxies of tax bases (e.g. land and property registers, price indices, GDP, employment, etc.);
    - Trade data on items and the value of imports and/or exports;
- Academic or other literature, such as research studies (journals, reports, etc.), evaluations or policy papers, which can provide evidence of
    - impacts of past policies or examples from other countries;
    - benchmark estimates of mechanisms of impact (e.g. elasticities);
    - discussion of theory and principles to support the rationale.
- Consultation with stakeholders, to understand the problems with the existing system and how changes might affect different groups. This should also include scoping of the potential challenges or benefits for tax administration. Feedback from consultations can be fed into the appraisal at any stage and may inform several sections in the appraisal template.

Box 2.3. Example evidence

Indirect tax example: removal of VAT on financial services

Evidence to support the need for this measure could include an examination of the cost of banking services to households and businesses, by size or income group, and VAT

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[7] The Tax Administration Diagnostic Assessment Tool (TADAT) has been developed by the International Monetary Fund (IMF) and its partners.

registration status. It could include examining current receipts from this tax, the nature of the fee-based financial services that are subject to tax, the use of these services by households and businesses, how the prices of these services are set, and whether there is evidence of banks substituting for fees by using other implicit charges. In making a case for removal to support the affordability of services to consumers, any evidence of pass-through of VAT relief to bank charges would be highly relevant, from experience in the past (e.g. when VAT on fee-based services was introduced) or in other countries.

Direct tax example: reduction in the rate of CIT

It would make sense to first consider the country's current CIT rate and revenues relative to other countries. This includes: benchmarking the statutory tax rate against those in the region (with which the country may be in competition) or the origin of inward investors (e.g. OECD); estimating and comparing effective tax rate (ETRs), which also account for differences in allowances, deductions and exemptions that mean businesses do not pay the statutory rate; and analysis of how CIT revenue collections (e.g. as a percentage of GDP and gross operating surplus) relate to statutory and effective tax rates.

Since the rationale for this measure is mainly targeted at incentivising investment, it would be useful to examine evidence on the relationship between CIT rates and FDI, and between FDI and employment and earnings. This includes academic studies utilising cross-country data, as well as survey or consultation evidence of investor intentions and the relative importance of taxation in decisions concerning foreign investment and location.

2.4 Policy costing

We refer to the process of estimating the revenue impact of a proposed policy reform as policy costing, but this can describe both a decrease in government revenues (cost) and an increase (yield). The cost of a policy change is often of high importance and may even be the main rationale for reform, particularly in cases of reforms with a positive revenue yield.

The process of costing a tax policy change can be a significant undertaking in itself, and may require a separate process, tools or models. An accompanying manual and templates have thus also been prepared to explore this process in more detail (see Phillips, Tyskerud and Warwick, 2021).

This section of the policy appraisal template contains:

- an estimated costing of the policy change;
- a table to present high- and low-cost variants or scenarios of the estimated cost, using alternative assumptions;
- a brief outline of the methodology and main assumptions used to generate the costing (further detail can be provided in a policy costing template, if needed).

Each costing is likely to require a different method depending on the features of the existing policy (if not a new policy), the nature of the proposed reform and the data available for estimation. Costings are estimates and will not always be precise or fully accurate, but a useful costing is indicative of the likely effects in terms of the direction (positive or negative) and magnitude of the revenue gained or lost.

While the method may differ each time, there are some elements that are likely to be common to most costings, as follows.

- Baseline or 'counterfactual' tax revenues: the expected revenues if the proposed policy change does not occur.
- The 'static' costing: the revenue impact of the proposed policy change if taxpayer behaviour does not change as a result of the policy change. This means that underlying tax bases (e.g. the amount of income or expenditure that is subject to taxation) do not change unless the proposed policy change involves changing rules on what is subject to tax (e.g. the definition of what counts as taxable income). A static costing should also include the revenue impact of mechanistic changes in other tax bases as a result of the proposed change; for instance, a change in customs duty mechanically affects the tax base for VAT on imports and therefore VAT revenues as well.
- The 'behavioural' costing: the revenue impact of the proposed policy change allowing for the biggest and most important changes in the behaviour of taxpayers directly affected by the proposed change. Such behavioural effects might include changes in the amount a taxpayer works if income or payroll taxes are changed, and in the quantity of a good purchased if VAT or excise duties are changed, affecting consumer prices.
    - Sourcing credible estimates for the scale of potential behavioural responses is an important part of this step. As discussed further below, such estimates may come from previous policy evaluations in similar contexts or relevant academic literature.

- A costing accounting for broader economic effects: the revenue impact of the proposed policy change, accounting for the potential effects of the proposed change on the macroeconomy, specifically from
  - short-term demand-side effects, or
  - longer-term supply-side effects.

  Sensitivity testing: given the uncertainties around any of the aforementioned types of costings, it can be useful to provide a range of estimates, based on alternative assumptions, such as the elasticities, underlying growth in tax bases, or other factors that may affect results.

The starting point is to identify and quantify the tax base to which the proposed policy change will apply. This could be expressed as a monetary value (in the case of an *ad valorem* tax, and most direct taxes) or quantity of units (in the case of a specific excise tax), such as the examples illustrated in Table 2.1. If the tax base is not directly known, but revenues and associated tax rates are, it can be possible to 'back out' the tax base.[8]

The analyst then needs to forecast or project forward the relevant tax base(s) for each of the years for which a policy costing is required. Where possible, this should make use of official tax revenue forecasts or the same assumptions used in generating them. However, where such an approach is not feasible, simpler assumptions (e.g. about GDP growth and the buoyancy of the tax base in question relative to GDP) can also be used.

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[8]   This is true for simple linear tax rates such as VAT, but not for taxes with progressive structures, such as income tax.

Table 2.1. Simple framework for policy costing

Tax type	Base	Tax change	Costing (static)
Excise on fuel	Total quantity (litres) consumed	Increase from US$0.05 to US$0.07 per litre	Gain = US$0.02 × litres sold
VAT	Gross value added (GVA) adjusted for allowances/exemptions	Rate increase from 15% to 17%	Gain = 2% of base (adjusted GVA)
CIT	Corporate profits (turnover minus deductions/allowances)	Rate reduction from 20% to 15%	Loss = 5% of corporate profits

Once relevant tax bases have been forecasted or projected forward, existing and proposed tax policies (e.g. tax rates) can be applied to these tax bases to obtain revenue forecasts both *with* and *without* the proposed reform. The estimated revenue change will then be based on the difference between the forecast revenue with and without the proposed reform.

A static costing for each tax mechanically affected by a proposed reform to tax rates and/or bases can be calculated as

$$Yield/Cost = \left(RATE_{reform} * BASE_{reform}\right) - \left(RATE_{no\text{-}reform} * BASE_{no\text{-}reform}\right).$$

Changes in tax rates are intuitive. Definitional or mechanical changes in tax bases take place when a proposed reform affects the definition of income or expenditure that is taxable, for example, by changing tax allowances, bands, exemptions and deductions. Changes in tax bases that result from changed behaviour (e.g. changes in income or expenditure as people change how much they work or consume in response to a tax reform) are not accounted for in a static costing though.

In addition to these steps, to produce a behaviour costing it is necessary to:

▪ choose which behavioural margins to include in the costing;
▪ identify sources for estimates of the degree of responsiveness on each of these margins, and choose an appropriate estimate of responsiveness (or range of estimates if one wishes to examine a range of scenarios) – it will be necessary to refer to the academic literature and to estimates of previous responses using historic data from one's own country;
▪ use the policy change and the estimate of responsiveness to estimate how the relevant tax base will change as a result of behavioural response to the policy, and recalculate the cost/yield with updated tax bases.

In addition to affecting the behaviour of individuals and businesses that are directly affected, policies may have second-round effects on the wider macroeconomy. It is important to note that in most instances, these effects will be relatively small compared with the direct impact of a measure and may not be worth quantifying. In the UK, as well as Australia, Canada, New Zealand and the United States, it is very rare for the policy costing process to go further than considering behavioural effects for directly affected groups. However, in some cases, the effects may be more material and important to consider. Such effects include the following.

▪ Demand effects, whereby a tax change that increases or reduces the amount of money held privately increases or reduces the level of the demand in the economy. Fiscal multipliers can measure these effects.
▪ Supply-side effects, whereby a tax change leads to changes in the level of potential GDP or the structure of GDP, affecting tax revenues. Different supply-side effects need to be estimated using different methods. For instance, an estimate of the second-round effects of a cut in corporate tax cuts may rely on an elasticity of investment with respect to the CIT rate, and an estimate of the impact of investment on potential GDP.

Once a final estimate of the yield/cost is obtained, it is important to consider when exactly that yield/cost will come into effect and be accounted for. Some countries record tax receipts on an accrual basis, while others do so on a cash basis. This matters because there may be a delay between the enactment of the measure and the first affected tax collections, especially for taxes paid significantly in arrears.

Box 2.4. Costing the policy change

Indirect tax example: removal of VAT on financial services

The static estimate of the cost of this measure would be the forecast of net VAT collections on fee-based financial services (because the proposed exemption would mean the loss of these revenues). This estimate can be produced by first projecting forwards the current revenue collections from VAT on financial services over, say, the next three years, using either the growth rate implied by official forecasts or, where those are unavailable, an assumed growth rate (e.g. 1.1 times GDP growth).[9] Two further assumptions must then also be made. The first assumption concerns the share of bank fees paid by businesses that can reclaim any VAT paid. This is important because unlike for fees charged to households and small and informal businesses, no VAT is actually collected on these fees to VAT-registered businesses – any VAT initially charged is then claimed back. It is only on fees charged to households and small and informal businesses that VAT would actually be lost by an exemption. The second assumption is about the amount of input VAT that banks would no longer be able to reclaim once fee-based services are exempted from VAT. Banks' VAT returns may enable this to be estimated (rather than assumed) if existing input VAT reclaims all relate to fee-based services

The behavioural responses to be considered in this example depend on whether banks pass on the change in VAT to their customers. If the final price of fee-based services is reduced, then households and small and informal businesses may respond by increasing their demand for fee-based financial services. The amount by which they increase demand is represented by the own-price elasticity of demand, which may need to be estimated or assumed and is therefore a key uncertainty. However, the price of fee-based financial services faced by large and formal businesses may increase, as the banks would no longer be able to reclaim the input VAT paid on inputs into the production of fee-based services. Such businesses may therefore decrease their demand for fee-based financial services.

If banks instead keep final prices fixed for consumers and small business customers, these demand effects may not take place, but banks' higher profits may lead them to pay higher

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[9]   In this example, 1.1 is the tax buoyancy factor, which measures how much faster or slower a tax base grows than GDP.

dividends to their shareholders (so as well as higher revenues from taxes on profits, there could be higher revenues from taxes on dividends).

Key uncertainties include: the underlying growth of the tax base in the absence of reform; the proportion of sales to customers able to reclaim VAT, and the proportion of input VAT that banks would no longer be able to reclaim; the pass-through of VAT changes to prices; and the elasticity of demand of different types of users of fee-based services.

Direct tax example: reduction in the rate of CIT

In this case, the tax base would be taxable corporate profits, which as above could be projected forward using either official revenue forecasts or simple buoyancy assumptions.

It may not be possible to calculate the total tax base using overall CIT revenues, however. In some countries, businesses are subject to different tax rates based on their sector and/or their location. Some assumptions or estimates of the proportion of the tax base that is subject to the standard rate, and the proportion subject to reduced rates, would therefore be necessary (and it may be possible to estimate this from administrative data on business sector, size, location, etc).

Relevant behavioural effects for consideration include profit shifting and other changes in avoidance and evasion activity, changes in dividend payments (and hence in taxes on dividend payments) and changes in investment. The latter would involve changes to many other economic variables (e.g. productivity, output, wages, prices), which may not be feasible without full consideration of the macroeconomic effects of the reform.

Key uncertainties include: the underlying growth of the tax base in the absence of reform; the proportion of tax revenues that comes from the standard rate of CIT; and the size of the relevant behavioural elasticities included in the behavioural costing.

2.5 Groups affected

In addition to considering the impact on revenue yield (or loss), it is important to consider which groups in the population would be affected by the policy change. This ensures that policy decisions are made based on information that is as complete as possible, and helps policymakers to design policies in a way that mitigates risk of harm or maximises intended benefits. Groups to be considered

might be differentiated in several ways, which may depend on policy priorities but could include:

- individual groupings, such as gender, age or ethnicity;
- household groupings, such as income or geography (e.g. rural/urban);
- businesses groupings, such as size or sector; and
- broader definitions of economic agents, such as national (or federal) government and local government, exporters, non-governmental organisations, or development partners.

Ideally, evidence used in this section would be informed by empirical results using analysis or models, such as microsimulation models or administrative data. However, this might not be possible in all cases. In such instances, this section will be more qualitative, based on available information from studies, consultation or other research, and will provide a descriptive narrative. Any assumptions made for this purpose should be described and any sources referenced.

If simulation models using survey data for the country in question are already in use by government (or the research community, if it can be engaged), or could be developed with the resources available, these may allow analysts to assess the likely aggregate impact on key outcomes, such as poverty, inequality, gender, etc.

Box 2.5. Groups affected

Indirect tax example: removal of VAT on financial services

In this example, groups directly affected will include households and businesses that use formal banking services, and the banks themselves. Further analysis, informed by the evidence base gathered in the former sections, may provide additional detail by using, for example, households or individuals by income grouping, businesses by size or sector, etc. Depending on current expenditure patterns by grouping, it may be possible to estimate or discuss the likely impact of this change on each group and to indicate which group may be most positively or negatively affected.

Direct tax example: reduction in the rate of CIT

The winners (and losers) from a reduction in CIT are likely to be hard to identify with confidence *ex ante* (and indeed *ex post*). Corporations currently taxed at the statutory rate

will benefit from increased after-tax profits, which could be used in different ways. In the short term, they could be distributed to shareholders, be retained by the business and/or be invested in new capital. In the longer term, any increase in FDI or domestic investment might increase productivity, and hence pre-tax profits, as well as employment and wages.

It is likely to be difficult to analyse who would be affected most by lower government revenues, unless the reduction in CIT is directly linked to other policies. In general, the complexity of the short- and long-term incidence of CIT changes means that a careful evaluation of the existing literature, alongside the context of the country in question, would be necessary, and any indicative effects would carry significant uncertainty.

2.6 Wider and potential unintended impacts

After considering evidence to support the rationale for the policy, the scale of revenue impacts, which groups may be affected, any analysis or evidence on the nature and magnitude of any other relevant impacts (e.g. socio-economic, environmental, etc.) can be considered here. It is particularly important to include any unintended effects that could result from a proposed reform.

Depending on the type and scale of a proposed reform, the set of possible other effects could be large, and it will be necessary to focus on those effects considered most important or of higher magnitude. The relative importance of different effects may be guided by the country's national priorities, such as those articulated in national development strategies, planning documents or environmental, social protection and other relevant policy strategies. Examples, if not already considered in previous steps of the appraisal, might include:

- investment, either domestic and/or foreign inward investment;
- employment and wages;
- economic growth, for example, if the policy change might be large enough to affect aggregate demand or supply, private-sector development, trade or economic diversification;
- inflation and monetary sector impacts (e.g. liquidity, interest rates, borrowing);
- environmental costs and/or benefits (e.g. carbon emissions, local pollution, climate change adaptation and mitigation, waste management, extraction of natural resources);

- informality or formalisation (e.g. financial sector inclusion, business registration);
- other development objectives (e.g. health, education, social protection).

As in previous sections, ideally these other effects will be informed by relevant academic or policy evaluation evidence from similar contexts. If data, models and other resources allow, quantitative analysis could be undertaken for the key outcomes. Otherwise, assumptions may be required, informed by qualitative evidence or benchmarks from elsewhere. Analysts could draw from the literature, consultations with key stakeholders or evidence from other contexts where similar policy changes have been enacted. Alternatively, in the absence of more concrete evidence, an approach driven by theory or reasonable assumptions can also be valuable.

It will also be important at the outset to consider identifying, managing and mitigating the risks that may affect the successful delivery of the policy, such as the risk of avoidance and evasion, or public resistance. Fraud and error risks can sometimes bear a high cost. Some policy changes, especially those that introduce a tax credit or refund, may be targeted by organised fraud efforts. It is important in the policymaking process to identify risks of fraud and error and to consider how these may be minimised, through additional enforcement measures or legislative counter measures, for example.

Box 2.6. Wider impacts

Indirect tax example: removal of VAT on financial services

If the VAT removal has the desired effect of reducing the cost of financial services to consumers and businesses, it could have a wider benefit of expanding financial inclusion, reducing informality and increasing business access to capital for growth. If the benefit is not passed on to users and is instead captured by banks in the form of additional profits, then these wider benefits may not occur. There could be a benefit to the shareholders of banks, or perhaps banking sector investment or increased wages. Potential unintended effects include the impact of the increase on the effective price of fee-based financial services for VAT-registered businesses, which may include less use of formal financial services by these businesses.

Direct tax example: reduction in the rate of CIT

If the rate cut succeeds in stimulating foreign investment, there could be a host of wider benefits, including but not limited to: job creation, knowledge transfer and higher wages; technology adoption and sector development; and increased exports and economic growth. The extent to which FDI 'leaks' overseas – through profit-shifting or importing foreign labour, for instance – may temper these effects. A lower CIT rate might also reduce tax evasion and avoidance by way of reducing the return to such activities.

The main unintended consequences of the policy are likely to come through its impact on government revenues. For instance, if lower CIT revenues necessitate reductions in spending elsewhere, it might be that higher private investment is offset by lower public investment, and the net impact on investment might even be negative. Otherwise, the reduction in revenues implies a deterioration in the government's fiscal position, which might be associated with higher inflation and interest repayments on public debt, for instance. In addition, a lower CIT rate increases incentives for incorporation, potentially distorting business choices over their ownership form (depending on tax rates for unincorporated businesses).

2.7 Legal and administrative considerations

This section of the appraisal framework considers the process for enacting the policy, taking into account whether it requires new legislation or amendments to existing tax law or regulations, as well as considering the administrative procedures required to implement the change.

The effectiveness of a policy change in meeting its intended objectives is dependent on how well it can be implemented in practice. This will depend on several factors, including how well the policy is defined in law, whether it has clear and simple procedures, the convenience of the procedures to the taxpayer, as well as the powers and capacity of the tax administration to support voluntary compliance and, if necessary, enforcement.

Any change in policy is likely to require a legislative amendment either to the primary tax law or the underpinning regulations. This will inform the process that will be required to bring the policy into practice and will determine which

institutions or people (such as the Cabinet, members of parliament and legal drafters) need to be involved, and when. In some cases, the amendment can be made through a change to the schedule of a tax law, which may not require parliamentary approval. In other cases, the amendment of primary legislation may take much longer and will be subject to greater scrutiny by members of parliament.

This step in the appraisal process is therefore intended to map out the legal framework that is relevant to the proposed policy reform and to identify where amendments will be required in the primary law or regulations. There may be implications for several sections of the law, so it is important to consider all the relevant parts of the legal framework, including definition of the taxpayer, base, rates or administrative arrangements (such as timing of taxpayer reporting or enforcement measures). Other information that can be included here may include the relevant stakeholders to be consulted as part of the legislative process and the approximate timing that would be required for the policy to be passed into law and implemented.

Tax policy changes, once enacted in law, are also likely to require some sort of change to procedures of the tax administration, which may involve adjusting IT systems for reporting revenue and collecting taxpayer data, administrative procedures (e.g. standard operating procedures, SOPs) for assessment of tax liability, data collection and maintenance, audit, investigation and managing compliance. The operational costs for revenue administrations may sometimes be large and will need to be estimated in advance as part of the appraisal in order to assess the overall costs and benefits and, if necessary, to budget additional funds to cover the operational cost.

In other cases, the change may result in improved productivity of tax administration through simplified procedures or more effective use of resources available. In some cases, this may be possible to quantify in terms of reduced cost of collection, improved rates of compliance (e.g. percentage of taxpayers filing, timely filing and timely payment), taxpayer registration, enhanced audit yield, or other efficiency-related metrics. Strengthening compliance may also have wider impacts that could be considered in Section 2.6, such as the impact on the informal sector.

Policy changes may also require adjustments to the processes that taxpayers must follow in order to comply, as well as appropriate communications and sensitisation of taxpayers around the implications of the change. This could incur additional

costs to the taxpayer, as mentioned above, while some policy changes may bring about efficiency gains in terms of the reduced compliance burden.

Box 2.7. Administration and legal considerations

Indirect tax example: removal of VAT on financial services

Effecting the removal of a tax is likely to require legislative change, depending on the specific assignment of taxing and waiving rights to the legislature, minister or other parties. In some cases, it may be possible to make changes to a schedule of rates or exempt supplies without parliamentary approval, if provision for this is included in the primary legislation. Part of the advice to decision-makers will need to specify this process and the institutions or people that need to be involved at each stage in its passage through to enactment.

Once enacted, administrative issues for this measure might not require a major change to the reporting and data management, because the policy does not affect the statutory rate for VAT. However, procedures around the reporting of exempt supplies may need to be updated to include financial services, which may include updating VAT declaration forms and/or IT systems. This measure may, in fact, make administration simpler, because fewer resources will be needed following the change to ensure compliance with VAT on these services. Whilst removal of VAT may remove the burden on administration from enforcement of the VAT on financial services, it is important to ensure that the relief is not abused, for example, by companies attempting to classify taxable activities as exempt fee-based financial services.

Direct tax example: reduction in the rate of CIT

Changing the rate of CIT is likely to require legislative amendment to primary tax law, unless there is provision for the rate schedule to be amended by the Executive. To implement the change, procedures may not need to change, but taxpayer systems, forms and guidance will need to be updated to reflect the new rate. Some may argue (or there may be evidence to suggest) that a reduced rate could improve compliance, which could have some positive effect on administrative efficiency.

2.8 Alternatives

As discussed earlier when considering the rationale for reform, an important part of policy appraisal is justifying the choice of a particular proposed instrument or reform (in this case, a tax instrument or reform) for its effectiveness in achieving an intended purpose, compared with alternative policy levers. In this section, analysts can provide details of other policy options that have been considered for achieving the same objective. If, at the outset of the appraisal process, the proposed reform is not fully defined (as discussed in Section 2.1), then the alternative options may instead be presented at the outset and compared side-by-side.

When comparing options, consider whether an alternative policy option or approach could:

▪ better address the problem that the proposed policy is targeting;
▪ lead to fewer undesirable outcomes;
▪ achieve the same impact at a lower cost.

If the proposed policy is preferred, then it is important to explain why these alternative policies were considered to be less effective or less desirable for this purpose.

Alternative tax policy options could consider a different rate, threshold, allowances or administrative mechanism, or changes to an entirely different tax, for example. But as well as alternative tax policy changes, other government policy instruments should be considered. It is crucial to explore whether there is a valid role for the tax system in addressing the identified problem. This may be most relevant if the rationale for the change is not directly and solely to raise additional revenue.

The table in Annex III provides some examples of policy 'problems' or market failures, and choices of policy levers that could be considered. For example, the tax system can have an important role in 'internalising' externalities, such as environmental taxation. In contrast, specific tax policies are unlikely to have a major role in addressing the provision of public goods; instead, it is often more effective and transparent to utilise overall government revenues to fund direct public provision. Similarly, there is usually a limited role for tax policy in addressing issues of imperfect information or asymmetric information.

Box 2.8. Alternatives

Indirect tax example: removal of VAT on financial services

Given the aim of reducing the cost of banking services for households and small and informal businesses, in order to increase the use of formal banking services, other policies could include regulatory changes or subsidies for the provision of services to particular groups or parts of the country (e.g. in low-income neighbourhoods).

Direct tax example: reduction in the rate of CIT

There is a range of alternative policies that might stimulate FDI. For example, reductions in the CIT rate could be targeted at particular sectors where firms or investment are deemed to be more internationally mobile. This could minimise the extent to which the tax rate cut accrues to profitable business and investment that would have taken place without the reform. The trade-off is that such targeted tax incentives, which favour particular activities, can distort investment choices and risk lobbying for similar incentives by other sectors. Reforms to the CIT base, such as enhanced capital allowances, accelerated depreciation and investment tax credits, would be another option, potentially better targeted at marginal investments. Beyond CIT, changes to other taxes could also be explored, including taxes on trade or on skilled labour.

For stimulating FDI though, changes to tax policy are just one policy option in a broad suite of options. For instance, public investment in transport and energy infrastructure may be another way of stimulating FDI by decreasing costs of production for investors and linking markets together. Such public investment likely has broader social benefits too but might be less precisely targeted at FDI than certain tax policies, and it might take longer for the impact on FDI to be realised. Tax policy changes are also likely to be administratively and legislatively simpler to implement.

2.9 Assumptions and uncertainties

The process of appraising proposed policy reforms is difficult and is necessarily subject to a great deal of uncertainty. The less is understood about the likely impacts of the policy (as evidenced in the previous section), the greater the uncertainty will be in any estimates of revenue and other impacts associated with the proposed policy reform.

In this section, therefore, it is important to provide details of any key assumptions that underpin the appraisal and uncertainties about these assumptions. For instance, forecasts for underlying economic growth – and its implications for tax revenue projections – are likely to be subject to margins of error. In some cases, assumptions might be required to estimate the size of the affected tax base, and these could be another key uncertainty.

To take account of uncertainties in the quantitative estimates presented for the policy impact, sensitivity testing of the key assumptions can be useful. This involves adjusting each assumption up or down to present a range of results from any quantitative impact analysis (e.g. revenue, or other impacts) that has been undertaken. The purpose of this is twofold. Firstly, an understanding of which assumption(s) causes most sensitivity can provide focus for where most effort should be expended to ensure that the best available evidence is used. Secondly, sensitivity analysis can form the basis of reasonable scenarios for the minimum and maximum range of impacts. This can help policymakers plan for alternative outcomes. These alternative scenarios will have implications for the overall revenue forecasts for the budget and therefore the amount available in the national budget for public spending. Estimates of likely impacts that capture uncertainty can therefore be included in revenue forecasts. These will help ministries and agencies make alternative spending plans that fit the range of likely scenarios and avoid emergency demands or supplementary budget requests.

Results can be presented as a set of scenarios, with each set of assumptions adjusted to suit that scenario; for example, how the revenue estimates are affected by a best-case or worst-case scenario for economic growth. If there is limited evidence to underpin elasticity assumptions, for example, one could test what the elasticity would need to be for the policy change to lead to a fall in net revenue rather than an increase, and could consider how realistic that scenario might be.

Box 2.9. Assumptions and uncertainties

Indirect tax example: removal of VAT on financial services

The key assumptions in the success of this measure are subject to uncertainty, and include the degree of pass-through of the VAT relief to users and the own-price elasticity of demand for financial services (which determines whether a cost reduction encourages consumption).

If banks retain the benefit as additional profit (or dividends or higher wages), then the advantage to users will be lost, although there may be some compensating tax receipts from CIT or tax on dividends or wages. A range of scenarios can be used to test the sensitivity of the results to changes in the key assumptions.

Direct tax example: reduction in the rate of CIT

Appraisal of this policy requires assumptions on the scale of change in FDI flows and various other taxpayer behaviours (such as profit-shifting, domestic investment and incorporation), and the resulting impact on the wider economy. There are large uncertainties surrounding these assumptions, and the impact of varying the precise assumptions could be explored using sensitivity analysis where quantitative analysis is carried out. Otherwise, parts of the appraisal that draw on existing evidence should highlight the quality and depth of existing evidence, its relevance for the current context and any likely differences that may arise given local conditions.

2.10   Monitoring and evaluation

The final section sets out plans for the monitoring and evaluation of the proposed policy reform after it comes into effect.

Analysis of a proposed reform does not end if/when it is introduced into law or implemented. Instead, ongoing tracking and measurement of impacts following implementation are required in order to assess whether a policy is meeting its intended aims and/or having unintended consequences. This will help inform policymakers about whether reforms should remain in place, be reversed or be adjusted to improve performance. Learning from monitoring and evaluation also helps inform future policy design and future policy appraisals.

Setting out a plan for monitoring and evaluation prior to implementation helps ensure necessary data are being collected and resources made available to undertake this work. The data and analysis required will differ between proposed reforms, but will likely cover issues including revenues and costs, as well as the factors that formed part of the rationale for reform or were otherwise identified during the appraisal process.

It is beyond the scope of this manual to explain the methods used in *ex post* policy evaluation. However, it will be important to consider the following issues.

▪ **Against which (ideally measurable) criteria or indicators will the policy be evaluated?** These could include, for instance, revenue collections, number of recipients (if providing a relief), new investment, jobs created, etc.

▪ **What data and information will be available to measure the impact?** These could include taxpayer data, modelling and research, or evidence provided in consultation with implementers, taxpayers and groups affected.

▪ **Who will be responsible for monitoring and analysing the indicators?** This could be the revenue administration (if mostly taxpayer data), ministry of finance, other line ministries (e.g. investment authority), external evaluators and researchers, or a combination.

▪ **When will the review(s) be undertaken?** Monitoring may be on a monthly, quarterly or annual basis, as required for reporting, whereas evaluation may be after one year or a longer period, depending on when the impact of the measure is expected to take effect.

To aid with monitoring and evaluation, it may also be worthwhile to set out clearly in a risk register the risks that may affect successful implementation. This could include an assessment of: (a) the likelihood of the risk occurring; (b) the magnitude of impact if the risk materialises; (c) mitigating measures that can be taken to reduce either the likelihood or the impact; and (d) the residual risk (likelihood times impact) that remains after mitigation measures are taken. If these cannot be quantified with any accuracy, it can be helpful to assess each in terms of high, medium or low risk.

Box 2.10. Monitoring and evaluation

Indirect tax example: removal of VAT on financial services

To determine whether the policy achieved its stated objective, a starting point could be to track the final price of fee-based financial services pre- and post-reform. This would be an important first step for understanding the extent to which the tax reduction was passed on to consumers in practice. Following this, the take-up of banking by different types of business (e.g. formal and informal) and households (e.g. rural and urban) could similarly be compared pre- and post-reform, if data could be sourced to provide such evidence. Household or business surveys might provide such information. Finally, a natural impact to

try to estimate as part of the monitoring and evaluation process is the actual value of revenue foregone as a result of the VAT exemption.

However, it is likely to be extremely difficult to estimate all of these impacts precisely. A major challenge is the difficulty of constructing counterfactual scenarios (particularly in light of possible behavioural responses). In this specific example, revenue impact estimates are made more complex by supply chain effects (reduced reclaim of input VAT adds another layer of complexity for evaluation) and the fact that, once exempt, data are likely no longer collected on affected transactions. Nonetheless, it will still be useful to compare disaggregated revenue outturns (e.g. at firm or sector level) pre- and post-reform, in comparison with pre-reform forecasts.

Direct tax example: reduction in the rate of CIT

The evaluation of the effectiveness of this policy may need to be undertaken after a longer period to allow for the time lag between the policy coming into effect and any changes in business investment decision-making and implementation. There may be several other factors influencing investment decisions and it would therefore be difficult to attribute aggregate changes in observed FDI to the policy itself. If some firms or sectors were not affected by the policy (e.g. because they pay a CIT rate different to the standard rate), then comparing trends in investment/FDI in these unaffected firms/sectors to the 'treated' firms/sectors could shed some light on the causal impact of the policy. Such analysis could utilise administrative tax data (e.g. on corporations' use of capital allowances, payrolls, etc.) and/or enterprise surveys or industry reports.

Annual or more frequent monitoring of the revenue impact of this measure would also be useful to establish the extent to which the risk of revenue loss was realised. Again, any inference on the causal revenue effect of the policy would need to be extremely cautious – particularly for such a policy that is likely to have widespread behavioural and economic effects and knock-on impacts on many other tax revenues. It could also be useful to monitor other performance indicators, such as the effective tax rate, tax receipts as a percentage of GDP, or other efficiency and compliance measures.

Annex I: policy appraisal template

[Insert title of tax policy change]

Key points
[This section can be used to provide a summary of the most important information from the full appraisal. What to include will depend on the proposal being appraised, and the rationale and objectives of the proposal. But in most instances, one will want to include information on a policy proposal's cost/yield, whether the policy is deemed likely to meet its objective, and other major impacts, including potential unintended or negative impacts.]
1. Description of change
[Provide a precise description of the policy change. When was the change announced and when will it come into effect? Which law(s) governs the policy? What is the current policy in place and what is being changed? Where possible, if multiple changes are being made to the same tax, separate policy evaluations should be undertaken for each change.]
2. Rationale and objective
[Set out the policy problem and why the change is needed, paying particular attention to ensure the rationale is coherent and grounded in sound economic reasoning. What is the problem with the current policy that this change seeks to address?]
3. Supporting evidence
[Provide supporting evidence for the idea that this policy change will achieve the objective set out above. Ideally, such evidence would be based on similar policy changes undertaken in similar contexts.]
4. Cost of policy
[N.B. A separate policy costing template should be filled in, providing detail on the calculated cost of the policy change under consideration.] *Final costing* [In the costing table below, enter the estimated revenue cost/yield for the policy change over the forecast period. The top row is for the main forecast; below this are optional rows in case 'high-cost' and 'low-cost' variants of the policy costing have also been produced.] *Key assumptions* [Briefly outline the method used for calculating the final costing for this policy, paying particular attention to whether any behavioural responses or broader economic impacts have been accounted for.]

Key uncertainties

[Briefly list the main uncertainties that materially affect the direction and/or magnitude of the policy costing, and why these are uncertain. More information can be provided in a separate policy costing document.]

5. Affected groups

[Provide details of which groups of the population are most likely to be affected by the proposed policy change. Ideally, this would be based on empirical analysis – using a microsimulation model, for instance. In the absence of available data and/or methods, a more assumption-driven and narrative-based approach will be required.]

6. Wider and unintended impacts

[Set out here any other economic impacts that might be expected beyond the intended objective(s) of the policy change, paying particular attention to any unintended or negative impacts the proposed reform may have. Ideally, the magnitude of possible economic impacts that could be expected would draw on relevant academic literature or previous policy evaluation exercises. In the absence of such evidence, a more assumption-driven and narrative-based approach will be required.]

7. Legal and administrative issues

[Provide details of the primary or secondary legislation to which this measure refers, if already in place, and the nature of the legislative process that may be necessary to amend it. Include administrative factors that may affect the design, simplicity, efficacy, collection cost or compliance cost or other factor in the successful administration of the measure that should be considered at the planning stage.]

8. Alternative policies

[Provide details of alternative policies that might be considered in the pursuit of the objectives set out above. Why were these alternative policies considered to be less suitable than the policy chosen here?]

9. Assumptions and uncertainties

[Provide details of any assumptions made in the formulation and appraisal of the proposed policy reform, as well as any uncertainties relating to these assumptions.]

10. Monitoring and evaluation

[Provide details of the monitoring and evaluation processes in place for this policy change. Who is responsible for this oversight? On what grounds will the policy change be evaluated? When will a review of the policy be undertaken?]

Annex II: costing table

Policy costing: [insert title of tax policy change]					
	2022	**2023**	**2024**	**2025**	**Long-term**
Central estimate					
'High-cost' variant (optional)					
'Low-cost' variant (optional)					

Note: + = net yield from policy; − = net cost of policy.

Annex III: policy problems and options

Problem/ market failure	Description/features	Policy levers most effective	Possible role for tax measures
Externality	Negative externality: wider costs to society are not reflected in private market, resulting in over-supply or over-consumption (e.g. smoking, carbon emissions) Positive externality: wider benefit to society is greater than private return, resulting in under-supply or under-consumption (e.g. healthcare, investment in research and development)	Economic instruments that 'internalise' the externality in market transactions creating incentives or disincentives (e.g. tax/subsidy, tradeable permits, quotas) Alternatives or complementary policies: (i) regulation (e.g. prohibition/ prescription); (ii) awareness-raising	Excise tax or other tax on harmful activity (e.g. carbon tax), or tax relief for good activity (e.g. research & development)
Information asymmetry	One party to a transaction has an advantage of being better informed than the other. Buyers are unaware of the quality of the goods/services they are purchasing and could therefore under-consume and private markets may under-supply, for example, quality used cars, professionals (e.g. medical, legal, accountancy, etc.), education	Regulation and legislation to require disclosure of information or market-based quality 'signals' (e.g. qualification certificates, used-car service history, professional trade body accreditation of members, school performance 'league' tables)	Not generally able to address the problem and thus likely to be a blunt policy lever, but can help change behaviour

Imperfect information	Individual choices may be suboptimal where they are not well informed about the real costs and benefits (e.g. costs of smoking, or need to wear seat belts)	Awareness campaigns, information, education and targeted messages, ensuring information comes from a credible source and reaches the audience at an appropriate time (e.g. warnings on cigarette packs at point of sale)	Limited role, although complex and unclear tax rules and laws can create information problems
Imperfect competition	Markets with monopoly or oligopoly can lead to inefficiency, collusion, under-provision and over-pricing, affecting consumers in terms of affordability and/or quality, etc.	Direct provision (public ownership) (e.g. postal services); regulation (e.g. of pricing, removing barriers to entry, combating anti-competitive practices)	Tax credits, subsidies or loans could alleviate the effect of monopoly pricing on consumers of new technologies where monopoly is justified in order to motivate research
Public goods	Goods that typically exhibit some degree of being 'non-rival' and 'non-excludable', making them typically under-provided by the private sector – because it is difficult to exclude anyone who has not paid for it, i.e. the 'free rider' problem (e.g. national defence, street lighting)	Direct (public) provision; legislation assigning property rights or regulation of activities (e.g. broadcasting, patents)	General taxation has key role in providing financing for provision of public goods Other measures can provide incentives for voluntary provision (e.g. tax incentives for charitable donations)

Source: Based on Ledbury et al. (2006).

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