Working paper

Tax expenditure reporting in Rwanda and Uganda

Challenges, practical guidance and lessons learnt

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Abstract

Tax expenditures (TEs) are used widely around the world. Their role in the fiscal systems of low- and middle-income countries has recently attracted increased scrutiny.[1] At the heart of this scrutiny lies a desire to understand the extent of revenue foregone due to TEs, often in countries that have not undertaken such an exercise before. While a policy-maker preparing a TE report for the first time will likely find ample guidance on the broad principles (either with dedicated technical assistance or through 'how-to' literature), there are myriad practical, often country-specific hurdles to overcome when preparing estimates. This paper discusses the key steps and challenges in preparing a TE report. It draws where relevant from the authors' experiences of supporting TE reporting in Rwanda and Uganda, two countries that have only recently begun the practice of regular TE reporting and have had fairly contrasting experiences.

1 Specifically, the existence of estimates of revenue foregone (as a percentage of GDP) and reports of rationale and intended beneficiaries are listed as indicators under Commitment 2 of the Addis Tax Initiative (ATI).

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Acronyms

BTS	benchmark tax system
CIF	cost, insurance and freight
CIT	corporate income tax
CPC	customs procedure code
GDP	gross domestic product
HS	Harmonized System
LMICs	low- and middle-income countries
OECD	Organisation for Economic Co-operation and Development
PAYE	pay as you earn
PEFA	Public Expenditure and Financial Accountability
PFM	public financial management
PIT	personal income tax
TaxDev	Centre for Tax Analysis in Developing Countries
SUT	supply-and-use table
TA	technical assistance
TE	tax expenditure
VAT	value-added tax

Executive summary

This working paper draws lessons from ODI's experiences of supporting tax expenditure (TE) reporting through the Centre for Tax Analysis in Developing Countries (TaxDev) programme in Rwanda and Uganda. Both countries have only recently begun the regular practice of reporting on revenue foregone from TEs. More broadly, there has recently been an increase in attention to the use of TEs globally and many low- and middle-income countries are taking the first steps towards publishing estimates of their fiscal cost. With this in mind, the present work attempts to provide guidelines on overcoming some common challenges that government analysts and policy-makers and their partners might face when compiling a TE report.

The discussion is not intended to be overly prescriptive in tone; we recognise that what appears to be best practice surrounding TE reporting in one country may not necessarily work in another. Some of the brief examples we refer to show that this applies to countries at all income levels. Nonetheless, we do attempt to distil the discussion into short, succinct 'lessons'. These we hope will provide useful guidance for those who may be undertaking TE reporting for the first time or are seeking to improve on their own reporting standards.

Specifically, we focus on the following four key areas.

1. **Defining** tax expenditures and the benchmark tax system

Arguably the most challenging part of producing a TE report happens before any estimation has begun; defining a benchmark tax system (BTS) against which to measure deviations is a practice that is carried out quite inconsistently across countries. We first discuss the conceptual differences between benchmarks defined according to the (i) legal and (ii) normative approaches. Next, we explore in more depth a number of criteria that might serve as a useful guide for policy-makers when thinking about which elements to include or exclude from the benchmark and, in cases where discretion is employed, justifying why a provision is or is not costed. Ultimately, we stress that there is significant transparency value in reporting on a wider range of TEs.

Lesson #1: To underpin a robust definition of the BTS, it is important to adopt (carefully) – and make public – a national definition of what constitutes a TE.

Lesson #2: Valid arguments may exist for including a 'deviation from the norm' in the BTS, while arguments for dealing with 'grey areas' may be weak. But identifying and applying criteria consistently and documenting them help inform decision-making and are important for transparency.

Lesson #3: Separation of 'structural reliefs' and 'tax expenditures' can help to overcome confusion about grey areas and broaden transparency by reporting revenue foregone from all provisions that represent deviations from the norm. However the benchmark is defined, local ownership is key.

2. **Estimating** revenue foregone

The estimation of revenue foregone is far from straightforward and the types of data and modelling techniques employed will differ from country to country. We explore how analysts should best identify the data required for costing revenue foregone and how even relatively poor or aggregated data can be used to produce findings. For each of the major tax types – namely income taxes, value-added tax and customs and excise duties – we discuss some specific challenges and outline appropriate modelling techniques for some common types of TE. Finally, a number of practical challenges in the estimation process are discussed, with some guidance on how these might be best overcome.

Lesson #4: Estimating revenue foregone is heavily dependent on data availability and quality. Administrative data is often a core requirement, but other sources, such as supply-and-use tables and survey data, can provide important complementary information. When aiming to build evidence for policy-making, TEs estimated at the provision level can be more informative.

Lesson #5: There is no one-size-fits-all approach to modelling revenue foregone under different tax types. Often the 'best' methods are those that utilise the available data and resources to their full potential.

Lesson #6: Starting simple and making improvements to modelling over time, at a pace that increases as institutional knowledge is built up through repetitions, can enhance the overall sustainability of the TE reporting process.

3. **Report writing and communication** of revenue foregone estimates

The content and level of detail of TE reports can vary across countries. While this often reflects the underlying motivation for producing the report, a number of norms are emerging regarding the contents of a TE report that provide the most transparency. Reporting on dimensions beyond the estimate of revenue foregone by including details on, for example, the legal basis for provisions, who the intended and actual beneficiaries are and so on, can provide a more holistic view of TEs. We also cover issues related to how TE reports are communicated and discuss some common misconceptions.

Lesson #7: Communication becomes the key bridge between the technical exercise and the TE report's objectives around greater transparency and informing policy. In this process, preventing certain misconceptions is paramount.

4. After the TE report: towards better **governance** of tax expenditures

The publication of a TE report not only represents an important gain in transparency of public expenditure, but also can serve as a springboard for further work that seeks to understand the costs and benefits of TEs and enhance their governance more broadly. In contexts where governments are pressed for revenue to fund development needs, a set of processes that attempts to rationalise the existence of current reliefs and subjects to scrutiny any new proposed reliefs can bring further gains in the transparency and governance surrounding their use.

Lesson #8: Estimating revenue foregone is merely the first step to understanding the ultimate economic impacts of TEs. A TE report tells little of the net benefits brought about by tax reliefs and how these compare to alternative policy choices.

1 Introduction

In the wake of the economic devastation caused by Covid-19 and expectations of stagnating revenues over the medium term (IMF, 2021), and amid more recent calls to respond to rising energy and food prices, many governments of low- and middle-income countries (LMICs) face increasing pressure to find sustainable – and even *new* – ways to raise revenue. Even before the pandemic, the increases in tax-to-GDP ratios seen in the early part of the 21st century in many countries had begun to slow.[2] In the search for revenue, attention has quickly turned to the use of so-called 'tax expenditures', which have, historically, in many LMICs represented a fairly opaque channel through which governments can support or provide relief to taxpayers, or even exempt them from their liabilities. Recent estimates suggest that, on average, the revenue foregone from TEs in low-income and middle-income countries represents around 26% and 20%, respectively, of tax revenue collected (von Haldenwang et al., 2021). However, only a handful of such countries produce on a frequent basis estimates of revenue foregone. As the revenue foregone from TEs can sometimes be viewed as 'low-hanging fruit' in the quest for improvements to tax collection, there is increasing pressure for LMICs to undertake reporting in order to account for – and begin to rationalise – the existence of TEs.[3]

For countries wishing to (i) embark on a process of rationalisation and ultimate reform of TEs, or (ii) improve transparency around TEs, or (iii) both, an integral part is the production of a TE report. This process is far from straightforward, however. A number of articles provide guidance on the broad principles (such as Heady and Mansour, 2019). But there is a lack of guidance on practical issues that policy-makers may face when compiling such a report for the first time.[4] This paper aims to fill that gap by drawing from experiences in supporting the process of TE reporting in Rwanda and Uganda, two low-income countries that have, in recent years, made public their first TE reports. We focus, broadly, on four key areas, namely:

- **defining** tax expenditures and the benchmark tax system
- **estimating** revenue foregone

2 See Oppel et al. (2022) for a review of trends in tax collection over the past four decades, or McNabb et al. (2021) for recent evidence on countries' tax efforts.

3 Not all tax expenditures are 'low-hanging fruit'; indeed, many might be politically difficult to reform or remove.

4 One recent paper that attempts to provide such guidance is Geourjon et al. (2019).

- **report writing and communication** of revenue foregone estimates
- after the TE report: towards better **governance** of tax expenditures.

For each of these areas, we discuss the key concerns and challenges that the author of a TE report might face, before offering practical guidance on how these can best be navigated. We also highlight the role of technical assistance (TA) in the process of TE reporting and highlight areas where this can assist, but also hinder, the process. Where relevant, we draw from our experiences of supporting the process of TE reporting in Rwanda and Uganda, while also discussing relevant principles and suggestions that may be generally applicable to other countries. It is important to highlight from the outset that there is huge variation in the ways that governments report on TEs. A range of different definitions, benchmark systems, data, modelling techniques, methods of communication and governance structures lead to varying outcomes globally. While we thus attempt to, where possible, avoid normative judgements on these processes, we do provide some guidance in the form of 'lessons'. We do not attempt to cover every aspect of the process in depth, but instead focus on some important areas where careful forethought can help to avoid pitfalls.

The paper proceeds as follows. Section 2 tackles the fundamental issues of defining TEs and the benchmark tax system. Section 3 covers issues related to data and modelling. Section 4 discusses different approaches to the communication of TE estimates – an area which has been almost entirely ignored in existing studies. Section 5 explores what happens after the publication of a TE report. Section 6 concludes.

2 Defining tax expenditures and the benchmark tax system

2.1 Definitions of tax expenditure

Perhaps the first key step before embarking on compiling a TE report is to adopt a national definition of what constitutes a TE. Plenty of examples and guidance exist in this regard and most available definitions are fairly similar in spirit, although some include additional details that have implications for later steps in the TE reporting exercise. TEs were initially defined by Stanley S. Surrey (the Assistant Secretary of the US Treasury),[5] who described them as follows:

> …provisions, often called tax incentives or tax subsidies, are departures from the normal tax structure and are designed to favor a particular industry, activity, or class of persons. They take many forms, such as permanent exclusions from income, deductions, deferrals of tax liabilities, credits against tax, or special rates. Whatever their form, these departures from the normative tax structure represent government spending for favored activities or groups, effected through the tax system rather than through direct grants, loans, or other forms of government assistance.
>
> (Surrey and McDaniel, 1985)

A review of the definitions of TEs in 10 Latin American countries (CIAT, 2011) found that all made reference to 'revenue loss generated' and 'deviations from a general provision'. Six of these suggested that TEs exist to 'pursue an economic or social policy objective' and three suggested that TEs 'increase the economic capacity of the taxpayer'. Similarly, OECD (2010) points to the simple rule of thumb that a TE leads to revenue loss for a government, but a reduction in tax liability for the taxpayer. Kassim and Mansour (2018), in surveying TE reports in 26 developing countries, found that only

5 The term was first introduced by Stanley S. Surrey in the 'Annual Report of the Secretary of the Treasury on the State of the Finances for the Fiscal Year Ended June 30, 1968'. He further refined the concept in various publications, including that mentioned above.

two did not include any definition of what constituted a TE, while the remainder all contained fairly common elements, along similar lines to those described in the Latin American sample.

The choice of which elements to include in a national definition of TEs has important implications for the next step in the process, namely the definition of a benchmark tax system (BTS). The definition of TEs can provide a useful anchor when decisions are being taken over whether a provision represents a TE or not – however, it must be carefully thought out. A definition that is too vague leaves a lot of room for interpretation, while one that attempts to account for every different type of TE – or scenario from which a TE could arise – risks becoming too complex to understand by interested stakeholders.

Lesson #1: To underpin a robust definition of the BTS, it is important to adopt (carefully) – and make public – a national definition of what constitutes a TE.

2.2 Defining the benchmark tax system

Arguably the most crucial task in the process of reporting on TEs – which actually happens before the report is written – is to agree on the 'benchmark' or 'reference' tax system against which deviations (the TE) can be measured and subsequently costed. How the benchmark is defined determines the scope of provisions to be costed. It is generally accepted that a benchmark system *should* be defined. However, the choice over *how* this is done is less clear-cut: CIAT (2011), for example, noted that this process is one of the 'most complex' parts of compiling a TE report, and our experience of supporting TE reporting in Rwanda and Uganda was no different.

Broadly speaking, the choice comes down to one of two methods:

- a '**normative**' approach
- a '**legal**' approach.[6]

The normative approach involves comparing a country's tax system to some 'ideal', which is usually rooted in ideas around what constitutes an 'optimal' tax system (CIAT, 2011). Thus, it requires the policy-maker to define first what – for a specific country – an optimal tax system would look like before identifying the places in which the national system deviates from this. For example, a normative benchmark excise duty rate on alcohol might be set at the rate where the external costs of consuming a litre of alcohol are fully internalised. In theory, most economists would agree that this makes a lot of sense, but in practice, estimating precise country-specific

6 The exact nomenclature assigned to each approach differs from country to country and across the literature. Geourjon et al. (2019), for example, named the legal approach the 'positive' approach.

costs of the externalities associated with alcohol consumption is notoriously difficult and so this approach is not commonly followed.

Countries most often define their BTS according to the legal ('positive') approach, which is grounded in national tax legislation. This is often due to practical reasons, such as ease of measurement. Even when the BTS is grounded in a country's tax legislation, there is almost always an element of subjectivity or discretion involved, which takes into account, for instance, a country's social and economic values and priorities (Kassim and Mansour, 2018) or 'national tax policy choices' (Geourjon et al., 2019).[7] It is important to stress that, as with the definition of TE, there is no 'correct' way to define the benchmark; while all countries face similar challenges in undertaking this exercise, discrepancies can emerge regarding how similar issues are approached. For example, Kassim and Mansour (2018) highlight how income tax allowances for people with disabilities and single parents form part of the BTS in Spain, but are treated as TE in France. Similarly, Hallerberg (2014) notes that in Germany, value-added tax (VAT) reductions for some foodstuffs are not considered as a TE. Thus, it is easy to see how discretion on the part of policy-makers can heavily influence the content of a TE report – and this is not unique to LMICs.

WIthout such discretion, a system could be considered as 'black-and-white' (and also broadest in scope) if it identifies as a TE *any and all* deviations from the 'normal' tax structure as defined in the national tax legislation. By 'normal' tax structure, we are referring to three elements: the tax unit, the taxable base[8] and the tax rate.[9] To illustrate this, Table 1 summarises the elements for each of the five major tax heads covered in this paper.

7 OECD (2010: 16) notes that 'considerable judgemental leeway' is provided for in any definition of a benchmark system. These cases often emerge as a result of political decision-making that is rooted in criteria such as vertical or horizontal equity or efficiency, etc.

8 The tax base might, of course, benefit from certain allowances and deductions, as allowable under the 'normal' functioning of most tax systems (e.g. input VAT credits, or deduction of interest expense under corporate income tax). Similarly, exports are typically zero-rated in VAT systems and are not treated as tax expenditure. This zero-rating is a standard feature of VAT systems under the principle that VAT is applied on what is consumed within the country (i.e. the base is defined as domestic consumption).

9 It is also common to define the 'normal' tax system along a fourth dimension – the accounting period (Surrey and McDaniel, 1979). However, beyond the specific case of tax deferrals (where provisions allow the tax to be deferred to a later accounting period), tax expenditures defined along this dimension are uncommon.

Table 1 **The three elements of the benchmark system, by tax type**

Tax head	(I) Tax unit	(II) Tax base	(III) Tax rate
CIT	Firm	(Taxable) profit*	Statutory CIT rate
PIT	Individual (or household, if joint filing)	(Taxable) employment or self-employment income*	PIT schedule
VAT	Final consumer	Final consumption (applied on a destination basis)	VAT rate
Excise duty	Final consumer	Consumption	Schedule of duty rates
Customs duty	Importer	CIF value	Tariff code

Source: Authors' elaboration.
Note: * Denotes that taxable income may already include some allowances or deductions, which some countries may classify as TE, in which case the benchmark base could simply be profit or employment income, for example. CIT – corporate income tax; CIF – cost, insurance and freight; PIT – personal income tax.

Using this approach, any variation that alters tax liability applied to the base, rate or unit for a specific taxpayer or group of taxpayers would represent a TE: for example, shrinking the tax base by exempting certain activities (or items of income), or offering a reduced tax rate to certain tax units (such as firms operating in a defined sector).

Since any definition of the BTS often includes country-specific choices, significant 'grey areas' can emerge. These can trigger debate when agreeing on the set of TEs to be costed and may be subject to challenge by interested stakeholders. During the initial exercise to compile a repository of TEs in Uganda, after initially adopting a 'black-and-white' legal approach, stakeholders actively engaged in debate about some provisions that did not appear to be well-defined by the legal approach. Based on the TE reports published internationally, most countries apply a degree of subjectivity or discretion beyond the 'black-and-white' approach in their choices of which deviations are excluded or not from the BTS. Yet there exists little practical guidance for policy-makers to inform such decisions.[10]

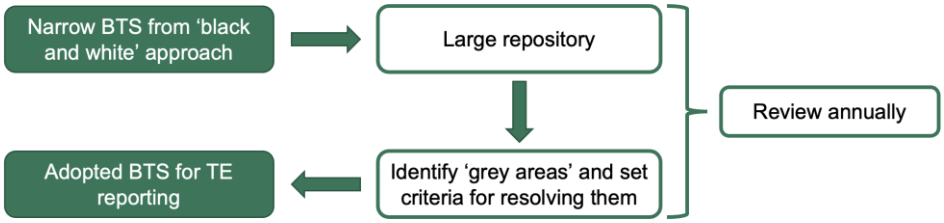
A useful first exercise might therefore be to start with a 'black-and-white' repository of TEs – i.e. identify 'any and all' deviations from a narrowly defined benchmark. Next would be to tackle the 'grey areas' by assigning a justification for the choice of its inclusion or exclusion from the BTS. This can help to provide transparency surrounding the rationale applied, which may support policy-makers when subject to scrutiny and can provide a basis for refinements should external scrutiny provide a compelling case for change. It also therefore

10 Geourjon et al. (2019) is a notable exception.

serves as a guide to document previous choices that can be revisited later and to inform the basis for monitoring and evaluation of TEs.[11]

While grey areas often end up being treated subjectively, it is important to apply a consistent approach to similar types of TEs by adopting a set of criteria to aid decision-making and inform the justification for each. Figure 1 illustrates how this process might be applied in practice.

Figure 1 A suggested approach to defining the benchmark tax system and dealing with 'grey areas'



Based on our experience of common issues arising from discussion of grey areas, we have identified below a set of (non-exhaustive) criteria that might be applied to this decision-making process. In the interest of transparency, it is worth emphasising the general principle that a government would consider as TE any provision that has equivalence to national budget expenditure or a similar policy objective to existing public spending.

2.2.1 International and regional law

There are certain deviations from the 'normal' tax regime that are typically accepted as a part of the benchmark: for example, international agreements such as the Kyoto Convention, Vienna Conventions, Chicago Convention, Florence Agreement and Nairobi Protocol.[12] Geourjon et al. (2019) note that often such agreements can take precedence over national legislation and, as such, national policy-makers would not have the requisite jurisdiction or authority to tax these activities even if they desired to do so. Therefore, any deviations from the norm that are accounted for under international agreements are often considered as part of the BTS.[13] Similarly, many countries are part of regional trade blocs, which provide for tariff-free movement of goods between member states. Thus, if applying the same principle of national versus international

11 This approach was followed in Uganda and Rwanda, where a 'black-and-white' BTS was initially constructed as part of a TA mission, before extensive discussions with government addressed the so-called 'grey areas'.

12 Also exemptions related to: diplomatic missions; educational, scientific and cultural materials; or aviation fuel and aircraft equipment.

13 It is sometimes the case that reliefs under these provisions are costed in the name of transparency, but with an acknowledgement that it is unlikely that the revenue foregone could ever be collected.

jurisdiction, all imports from partner states would be considered as part of the BTS for customs duty. (For example, both Rwanda and Uganda are members of the East African Community (EAC) and thus any tariff-free imports from partner states are considered part of the BTS.)

One reason for including such provisions in the benchmark is that they cannot be addressed unilaterally, and if the objective of the report is to enhance transparency on the discretionary choices a country can change, this can give weight to including them in the benchmark, as is being done in Rwanda and Uganda. Nonetheless, some countries find it helpful for informing broader regional policy to document the deviations (and, where feasible, the revenue foregone).

A related issue is the taxation of foreign aid projects, whereby such activities are commonly exempted from both direct and indirect taxation. While many countries have, historically, treated such reliefs as part of the BTS, there is a growing debate around the practice of exempting aid projects from taxation, which has resulted in the development of (non-binding) guidelines (see United Nations, 2021). Several OECD countries have provided public details of their tax approaches to foreign aid, some of which are now under review, or they have reduced or removed requests for exemptions, such as Norway and the Netherlands.[14]

There may be value, therefore, in accounting for the revenue foregone of official development assistance projects not only for transparency but also potentially to inform future debate on the norms and guidelines for these practices.[15]

2.2.2 Administrative efficacy

Certain provisions that exclude activities from the tax system or provide various forms of relief might exist as part of the tax structure, either (i) to ensure that a certain tax can function, or (ii) because taxing a certain activity is not feasible or cost-effective. The former case could include, for example, the VAT annual sales registration threshold, below which firms are not required to register for VAT. While in some sense it is a ‘relief’ from VAT for small firms, it can be considered a typical feature of a VAT system because it reduces an otherwise unreasonable administrative compliance burden on small businesses and on the tax administration itself. Such a provision might not be considered a TE and thus part of the BTS (see discussion in Section 2.3 on ‘structural reliefs’ in the UK). In the latter case, some activities may be exempted due to specific difficulties that arise in attempting to tax them. For example, financial services that

14 See Steel et al. (2018), Caldeira et al. (2019) and OECD (2022).

15 For example, in Uganda’s TE report, the taxation of aid activities is not explicitly identified or defined as a TE, but some of the related revenue foregone is estimated in parallel and included as an annex to the report.

have no observable value added are exempted from VAT, and agriculture activities are sometimes simpler to exclude from the tax system due to a multiplicity of challenges, including high levels of informality, physical remoteness, seasonality and distributional concerns about taxing food, all of which contribute to a high collection cost.[16]

2.2.3 Cultural or social norms

There may be cases where countries provide tax relief to certain activities or groups of taxpayers due to cultural or social norms that have become embedded in the tax system over many years and may be expected to form part of the BTS. These will likely differ from country to country and as such it is difficult to provide generalisations in this area. Some examples include provisions that fulfil socioeconomic objectives, such as indirect tax exemptions for basic foods (recall the example above from Germany (Hallerberg, 2014)). However, these kinds of arguments risk opening the BTS to a wide degree of discretion and may exclude important areas of expenditure from the TE report. Even if tax reliefs are so widely accepted that it would be politically very challenging to remove them, some countries still find them important to document for purposes of transparency, and for evaluating their cost-effectiveness compared to alternative policy instruments that could achieve the same objective, such as direct provision, transfers, subsidies or regulation, among others.[17]

2.2.4 Public entities

A pertinent question exists over whether to treat government activities that are excluded from the tax system as tax 'expenditure'. On the one hand, taxes owed by government are owed to government and are often treated as an internal transfer, with the net liability amounting to zero. There is, then, a significant transparency case for including such provisions as TEs. The choice over how to report on revenue foregone from government activity is likely to differ from country to country. In Rwanda, for example, the main estimates of revenue foregone from TEs exclude government, and the decision is given due attention in the report. In Uganda, however, revenue foregone from provisions enjoyed by government entities are considered as TEs.

Lesson #2: Valid arguments may exist for including a 'deviation from the norm' in the BTS, while arguments for dealing with 'grey areas' may be weak. But identifying and applying criteria consistently and documenting them help inform decision-making and are important for transparency.

16 See, for example, the discussion of common exemptions in Ebrill et al. (2001).

17 One potential pitfall to overcome is that often the ex ante objectives of TEs are not well documented or understood. It might be that they have existed for many years in a country's tax legislation and have never been subject to adequate scrutiny.

2.3 A ‘middle-ground’ approach to defining the BTS?

Notwithstanding the preceding discussion, there may be a case for a ‘middle-ground’ approach to defining the BTS and TE repository. This would move beyond the ‘black-and-white’ approach (in which revenue foregone from all deviations from national tax laws would be documented and costed), to a more nuanced approach, according to whether the reliefs are considered as:

a. structural reliefs

b. tax expenditures

c. exhibiting features of both the above.

This approach (and nomenclature) is adopted in the UK.[18] In this context, a ‘structural relief’ applies to a provision that could ‘reasonably be regarded (or partly regarded) as an integral part of the tax structure’ (HMRC, 2018) or is required in order to ‘define the scope of the tax’ (HMRC, 2021.). An example of a ‘structural relief’ in the UK is the tax-free allowance on personal income tax. This exists as a part of the progressive rate structure in the UK, but it is not considered as a TE. HMRC (2021) notes that there are numerous areas where a provision exhibits features of both a structural relief and a TE (case (c) above). An example would be a deductible capital allowance under corporate income tax (CIT): the part of the allowance that accounts for economic (or commercial) depreciation could reasonably be considered as a part of the tax system, while any accelerated depreciation allowance over and above the standard rate of economic depreciation might be considered as a TE. However, it can be difficult to know the true rate of economic depreciation for many items, so it may not be possible to decompose revenue foregone from capital allowances into structural and non-structural parts. By classifying such a provision according to case (c) above, it is possible still to account for revenue foregone, in the acknowledgement that the part of that estimate which is truly ‘tax expenditure’ is not estimable.

Reporting on reliefs in such a manner allows for a greater level of transparency (by reporting on all identifiable provisions, whether considered structural or not), but allows for discretion on the part of policy-makers on those provisions that are identified as TE. Documenting and, where possible, costing structural reliefs also provides valuable evidence to inform potential policy adjustments, if required, or comparison with alternative policy instruments.

Whichever approach is followed, it is important for the definition to be developed collectively, involving the different branches of government, to ensure that there is a sense of ownership of both the

18 The approach is also followed in Canada.
See www.canada.ca/en/department-finance/services/publications/federal-tax-expenditures/2021/part-2.html.

benchmark and the resulting TE report; this is important for achieving the wider aims of the report and future reforms in contributing to transparency, accountability and better TE governance. The role of TA can greatly aid – but also hinder – the process of defining the BTS in this way. Experts with relevant experience in other jurisdictions can help to guide national policy-makers (by, for instance, drawing from examples in other jurisdictions). Yet it is of crucial importance that the final decisions rest with national policy-makers, who often have superior knowledge of country-specific circumstances and priorities.

As discussed above, there are benefits to transparency, and to informing decisions now and in future, of publishing both the BTS and the associated repository of TEs as part of the TE report, including details of when subjective decision-making occurs over the aforementioned 'grey areas'. In this way, the BTS remains a 'living' concept, which needs to be reviewed periodically to reflect the addition of any new provisions that may have been enacted as part of tax policy amendments. Inevitably, attitudes and priorities change over time, and so it might be that a provision considered part of a BTS today might not be one in five years' time. There is no weakness in taking this approach; rather, it conveys that decision-makers are actively thinking about the tax system and how it supports national priorities.

In principle, keeping the benchmark as narrow as possible (and thus, simultaneously, broadening the scope of the repository of TEs) broadens the transparency value of the exercise. Nonetheless, publishing estimates of TEs can spark significant pressure for their removal, depending on how such estimates are communicated (including the justifications provided in the final TE report). This pressure can lead to some hesitation in publishing TE reports and can sometimes be at the root of push-backs experienced during the initial exercise to follow a narrow BTS definition. This is discussed further in Section 4, which considers how effective communication of the results can help to mitigate some of these risks and support a more open and inclusive approach to the BTS definition.

Lesson #3: Separation of 'structural reliefs' and 'tax expenditures' can help to overcome confusion about grey areas and broaden transparency by reporting revenue foregone from all provisions that represent deviations from the norm. However the benchmark is defined, local ownership is key.

3 Estimating revenue foregone

This section discusses some of the practicalities around the estimation of the cost of TEs, once the repository of TEs has been identified. While there are alternative methods of estimating the costs, we focus on the 'revenue foregone' method, which is the most common.[19] Specifically, we consider issues related to: (i) data requirements; (ii) modelling approaches; and (iii) practical challenges in managing the process. With regard to data, we explore how policy-makers can best identify the types of data required and how they can make the most of 'poor' data. We then focus on some techniques that can be used to calculate revenue foregone. Fairly complex microsimulation modelling approaches can be employed (particularly to account for revenue foregone under VAT), but the best option for policy-makers will depend on the experience in the area and the data available. We therefore also provide some reflections on the practical challenges involved in the process of estimation itself and how it can be managed within the available institutional capacity.

3.1 Data

Once an inventory or repository of TEs has been identified, the next step is to check what data is available for each tax type that can be used for estimating revenue foregone. The final decision about which TEs are estimated and to what level of detail may depend on several factors, including not only the availability but also the level of disaggregation of data. If necessary, costing could be prioritised according to the (expected) approximate highest-value TEs first, and/or any specific policy priorities that could require costing for purposes of transparency or evaluation and review.

In Rwanda, for example, the published estimates of revenue foregone initially included VAT, CIT, personal income tax (PIT) and pay as you earn (PAYE), plus customs and excise duty duty on imports, before later expanding to include other customs levies and reviewing the availability of data for newer domestic excise duty TEs. In Uganda, however, revenue foregone under VAT, CIT, PIT and

19 For example, Kassim and Mansour (2018) noted that its use was almost universal in their study of 26 developing country TE reports. The other notable methods – revenue gain and outlay equivalence – are more complex to estimate and thus are not usually employed, especially in contexts where the process of estimating TE is relatively nascent. See Polackova Brixi et al. (2004) for a discussion of the different methods.

excise duty levied on both domestic and imported goods has been estimated since the first iteration of the TE report, as all of the requisite data is captured electronically.

An initial review of data should establish whether the requisite information (i) exists and (ii) is accessible to staff preparing a TE report.[20] Answering 'no' to either of these questions should not preclude provisions from being included in the TE report. Acknowledging that revenue foregone under a given provision *should* be tracked but cannot be due to data constraints is important and can support better TE governance in future.

Typically, TE reporting relies on taxpayer declaration data from the tax administration. That is, for each tax type under consideration, details of how the revenue is generated in practice according to the key features of the tax discussed in Section 2 (the tax unit, rate and base). For example, the value of the tax base reported in any given period will ideally be disaggregated by sector, activity, type of taxpayer and any other available classifications relevant to the intended beneficiaries of the tax measure, along with the amounts of tax paid (if any) for that activity.

In addition, national accounts data (such as input-output tables or supply-and-use tables (SUTs)),[21] national survey data, trade data and customs union gazettes, among others, are very useful sources of complementary information. These alternative sources can help validate administrative data and can also be used directly for modelling.[22] For example, Rwanda's VAT modelling is centred around its SUT, while Uganda's uses the SUT as complementary information to validate administrative data.

It may be the case that a model for estimating revenue foregone under one or more taxes has already been developed (such as by a previous TA mission) before any TE reporting is carried out, and this will guide the format of data required (this has been the case in Rwanda for VAT estimation, among others). When this first step is reviewed each year, technical staff can also consider whether additional data has become available or is now of sufficient quality to improve the estimations.[23]

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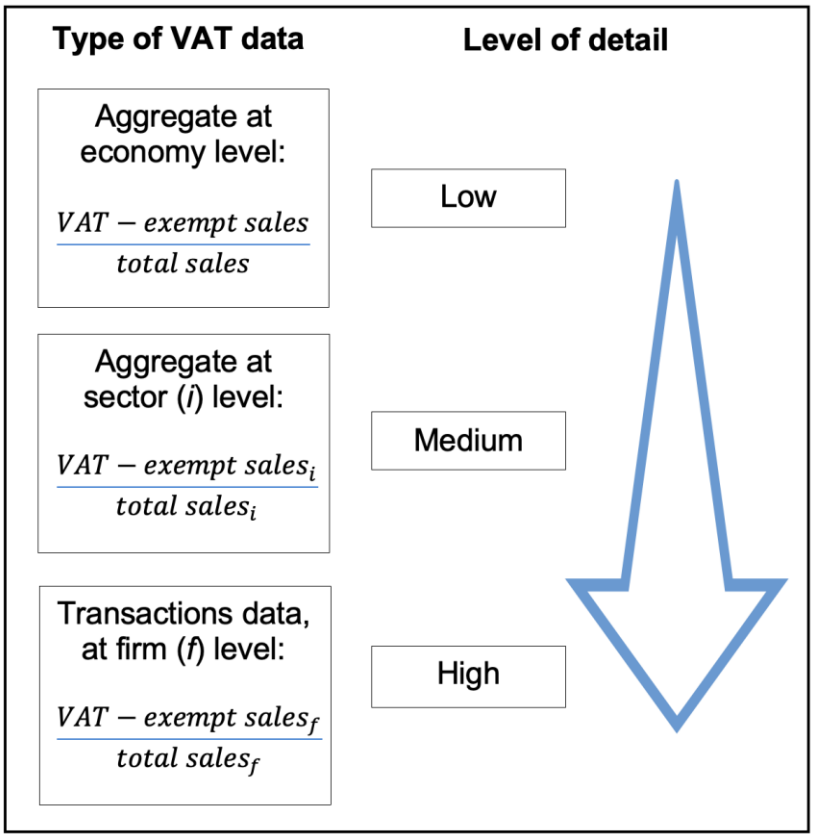
20 In what follows, we assume that the requisite data is captured digitally. It may be the case in some countries that administrative tax records are not fully digitised. In such cases, it will likely be difficult to produce a comprehensive TE report; however, it may still be possible to produce meaningful estimates of revenue foregone on a narrower set of provisions.

21 Detailed matrices of all goods and services produced in an economy and the various inputs used to produce them. These tables are particularly useful for analysis of value added across different sectors.

22 For example, the EAC Gazettes set out the applicable rates (and benchmark rates) for goods subject to a stay of application or duty remission. This is vital information for understanding how to calculate revenue foregone.

23 In Rwanda's customs TE model, for example, digitised data on stays of application and Duty Remission Scheme lists were integrated in order to help disaggregate the objectives of tax expenditure.

Figure 2 Type of VAT data available and resulting level of detail for estimation



The level of disaggregation in the data can significantly affect its usefulness for estimating revenue foregone. Take, for example, the case of Figure 2 – VAT-exempt sales. Data may be presented in several formats, as summarised in Figure 2, in which increasing granularity (decreasing aggregation) brings more detailed and richer data for use in estimations.

For the purpose of a TE costing exercise with full coverage, it is not necessary to have the most detailed data to produce estimates. But for informing policy decisions, the depth and accuracy of data can make a significant difference. A report that can assign an estimate of revenue foregone at the individual TE *provision* level (for example, VAT-exempt supplies of basic foods) is potentially more informative than one presenting revenue foregone at the level of each *tax type* (such as total VAT-exempt supplies). For this latter purpose, having even provision-level reporting on some of the (expected) largest TEs can be more helpful than an aggregate number covering all provisions.

In both Rwanda and Uganda, the availability of detailed administrative data at the firm and transaction levels made it feasible to estimate revenue foregone for each provision.

Lesson #4: Estimating revenue foregone is heavily dependent on data availability and quality. Administrative data is often a

core requirement, but other sources, such as supply-and-use tables and survey data, can provide important complementary information. When aiming to build evidence for policy-making, TEs estimated at the provision level can be more informative.

3.2 Modelling (estimation of revenue foregone)

In this section, we review some common challenges faced when modelling revenue foregone under certain tax types. These examples are certainly not intended to constitute an exhaustive list, but rather focus on a few specific areas where challenges can arise in almost any context.

3.2.1 Customs/import duty

Countries often begin with reporting TEs under customs (imports), as disaggregated data is more commonly available and in a consistent digital format, such as that found in ASYCUDA[24] systems. The calculation of revenue foregone is based on the difference between the amount that would have been paid under the standard tariff rate and what was actually paid after the waiver was applied. Items imported under exemptions or reduced rates are typically identified in the data by the customs procedure code (CPC), which is assigned by customs agents during processing after the required qualifying evidence or documentation is provided by the importer. The commodity (HS) code[25] will provide further detail on the nature of the item. The value used as the base for tax calculation is usually the cost, insurance and freight (CIF) value.

Table 2 provides a simple example. Some countries may have in-built reports in ASYCUDA or the equivalent system to calculate and sum the value of revenue foregone from all duty waivers and reduced rates, while others may need to develop customised reports or extract the relevant declaration-level data to do the costing. Ideally, the data should be disaggregated to the most detailed level of CPC and/or HS code to match it to the appropriate standard tariff and to provide a revenue foregone estimate at the individual provision level.

24 The Automated System for Customs Data (ASYCUDA) developed by UNCTAD. At the time of writing, ASYCUDA systems were running or being implemented in around 100 countries and territories.
25 Defined using the Harmonized System (HS) codes, a set of codes developed by the World Customs Organization (WCO).

Table 2 Illustrative tax expenditure calculation of customs duty waiver using customs declaration data

CPC	CPC description	HS Code	CIF value	Standard tariff	Duty at standard rate	Duty paid	Rate applied	Revenue foregone
4300-A12	Goods entered for home use under duty exemption for agricultural machinery	843290	5000	10%	500	0	Exempt	500

CPC: Customs Procedure Code; HS: Harmonized System; CIF: Cost, Insurance, Freight.

There are several issues which were encountered in Rwanda and Uganda that may be relevant to other countries undertaking a similar exercise:

- **The indirect impact on revenue from other taxes**. Since customs duty forms part of the base for other taxes levied on imported goods, such as VAT and excise duty, any reduction in customs duty will cause a reduction in tax collection in the other applicable taxes. Ideally, these will be included as part of the TE report to present a more complete estimate of revenue foregone. Countries that include this in the TE report present the indirect cost either as part of the customs TE cost or under the other individual taxes (VAT etc.) as a consequence of the customs waiver (the latter approach is followed in Uganda and Rwanda).
- **Linking CPCs to TE provisions in the law**. To accurately evaluate the revenue foregone for individual TE provisions, the CPCs or other qualifying criteria to receive the relief must be identifiable in the customs data. In practice, we have found that, in some cases, either the TE provision in the law is not well defined (for example, if it describes a product broadly rather than specifying HS codes) or the CPCs applied do not accurately reflect the individual provisions specified in the law (they may relate to a more aggregated group of TEs or have overlapping descriptions).
- **Identifying TEs applicable only to qualifying individuals or businesses**. Some import duty exemptions might apply on specific quantities of inputs by approved taxpayers. If these reliefs are not given specific CPCs, those TEs can be more difficult to identify in the data and model, as they require matching of import declarations (including product, quantity etc.) to a particular firm. This process may also run into taxpayer confidentiality challenges, depending on who accesses and analyses the data and their authorisations.

- **Overlapping qualifying criteria**. When a transaction has associated revenue foregone that can be explained by a few different TE provisions, the order in which the imports are attributed to a specific TE can make a difference to the size of each individual TE provision. For example, an imported raw material might be exempt from import duty for two reasons: (i) there is a specific exemption on that product, and (ii) another exemption applies to raw materials in general. Attributing the TE to one provision first will mean less TE for the other, when, in principle, it could be assigned to either (and this may be an arbitrary choice). It is even more important to ensure that the same TE is not double-counted under the two provisions.
- **Interactions between exemptions and the benchmark**. Another related issue to be mindful of is where an import can qualify for tax relief under two (or more) distinct provisions, one of which is part of the BTS (such as duty-free imports within a customs union). For such cases, it would make most sense to first exclude the affected imports from revenue foregone calculations, so that they are not inadvertently counted as TE under a separate provision.

3.2.2 Corporate income tax

Turning to CIT, the most useful data for understanding revenue foregone from certain TEs is likely to be administrative microdata at the firm level. In a best-case scenario, such data should capture all (or most) of the requisite tax return over several years, allowing the analyst to understand the full impact of a certain allowance or relief (including into the future). In a second-best scenario, data that captures *the full CIT return for a given year* is still useful. A third-best scenario (which represents the minimum requirement) is that data can be extracted on the value of specific reliefs (such as a capital allowance); it would be acceptable to estimate revenue foregone on that basis.

Example of an income tax holiday

Conceptually, potentially the most straightforward TE to calculate under CIT would be an income tax holiday. That is, the taxable income (tax base) of a firm (the tax unit) is exempt from CIT for a given period of time. Such provisions are often introduced, for example, to stimulate new investment.[26] However, there will only be revenue foregone from that exemption *if and only if* the firm makes a positive taxable income; yet, in the early years after an initial investment outlay, firms are likely to make tax losses, rendering such incentives redundant.[27] Nonetheless, there remain relevant questions over what happens after such a tax holiday expires. A firm may, for

26 In Uganda, for example, 10-year CIT holidays are provided to strategic investors who meet certain qualifying criteria; see Uganda Income Tax Act, section 21(1)(af).

27 This applies more to the case of greenfield investments. In the case of mergers and acquisitions, it is less likely that investments will lead to heavy initial losses.

example, be allowed to carry forward that loss into subsequent years, where CIT is charged on any positive tax liability. In this case, it would be reasonable to cost this loss carried forward as a TE. The above analysis assumes that a beneficiary firm is required to furnish a tax return (and is compliant) and is subject to the same level of scrutiny or audit as other firms. Otherwise, information on their profit and losses may not be available or may be less reliable and more difficult to validate.

Example of a capital allowance

This example helps to highlight how varying data quality can affect the accuracy of revenue foregone estimates. Suppose firms (the taxable unit) are allowed to deduct an 'initial allowance' equal to 50% of the value of any plant and machinery placed into service from their taxable income in the year in which that asset is placed into service, thus reducing their tax base.[28] This can be treated as a TE, vis-à-vis the benchmark deduction for plant and machinery, which is usually outlined elsewhere in income tax legislation. Let us assume that TaxDev Industries (a hypothetical business) uses this provision for its new plant and makes a capital investment of 200 million (and thus receives a tax deduction of 100 million) in the tax year FY18/19. For simplicity in this example, assume that no other depreciation allowance is provided for on the investment in plant and machinery, and thus the deduction under the benchmark system is zero.[29]

In the third-best scenario as defined above, the TE would be calculated as: 100 million × 30% (the statutory corporate tax rate) = *30 million in FY18/19*.

In the second-best scenario, the analyst would have access to declarations data for at least one period and would seek to understand whether the relief in question would lead to TaxDev Industries having a positive tax liability *were it not applied*. That is, by looking at the financial accounts to assess its profit or loss position with and without the special allowance. Three cases may emerge here:

1. If TaxDev Industries were in a tax loss position (including the deduction) of (e.g.) 200 million, then the removal of the deduction would bring the firm's tax liability to –100 million. *There would be no revenue foregone in FY18/19* (since there is still no taxable income).
2. If TaxDev Industries were in a tax loss position (including the deduction) of (e.g.) 50 million, then the removal of the deduction would bring the firm's tax liability to +50 million. *The revenue foregone would be 15 million (50 million × 30%) in FY18/19.*

28 This example is inspired by a capital allowance available in Uganda under section 27A of the Income Tax Act, although we make a number of simplifying assumptions for the example here.

29 In reality, this is not usually the case, but this simplification helps to illustrate the point which follows and is more generally applicable to any tax deduction of this kind.

3. If TaxDev Industries were in a positive taxable income position of (e.g.) +50 million, then the removal of the deduction would bring the firm's tax liability to +150 million. *The revenue foregone would be the difference between (150 million × 30%) and (50 million × 30%) = 30 million in FY18/19.*

It is, then, possible to see how additional information beyond the value of a given allowance or deduction can affect the estimate of revenue foregone in a given financial year.

Finally, in the best-case scenario, the analyst would be able to consider the effect of TaxDev Industries claiming this deduction in FY18/19 on all *subsequent* tax liabilities and apportion revenue foregone to each subsequent year.[30] Let us consider a simple four-period scenario. Again, TaxDev Industries invests 200 million into new plant and machinery in the year FY18/19 and receives a 50% deduction on the cost, equal to 100 million. For this, and each of the subsequent years, it makes a taxable profit of +25 million, but makes no further investments in plant and machinery. Table 3 illustrates that for TaxDev Industries, the value of revenue foregone under this TE is actually 7.5 million for each of the years FY18/19 to FY21/22.

Table 3 CIT deductions and losses carried forward

Financial year	Loss from previous year	Plant and machinery deduction	Taxable profit*	Taxable income after deduction / losses carried forward from deduction	CIT paid	Taxable income if no deduction in FY18/19	Revenue foregone	Loss carried forward
FY18/19	/	–100m	+25m	–75m	0	+25m	7.5	–75m
FY19/20	–75m	0	+25m	–50m	0	+25m	7.5	–50m
FY20/21	–50m	0	+25m	–25m	0	+25m	7.5	–25m
FY21/22	–25m	0	+25m	0	0	+25m	7.5	/

Note: * i.e. not accounting for the loss carried forward.

For as long as a firm that is benefiting from such a TE remains in a tax loss-making position (without the provision in question), the full value will not be accounted for as revenue foregone.

The above examples consider only two scenarios, but both share the commonality that some features of tax systems are not static, in the sense that they affect how corporate income tax is paid over multiple

30 Different countries will have different restrictions here. In Uganda, there are no restrictions on losses carried forward, but in Rwanda, there is a five-year limit. Losses carried forward are not, themselves, considered as TEs in Uganda, but are in Rwanda.

years. Two further examples of this are loss carry-forward and accelerated depreciation provisions.

If considered as a TE, loss carry-forward provisions would need to be interpreted carefully. A common method used is to estimate how much additional CIT would have been paid if there were no stock of losses carried forward – i.e. if the provision never existed. The TE estimated is the reduction in CIT in a given year from a stock of losses that may be accumulated over several years of the provision's existence.

Accelerated depreciation provisions (much like the initial capital allowances provided for in Uganda) allow companies to depreciate the value of an asset quicker than the benchmark economic rate of depreciation. The benefit to the companies is in cashflow and a reduction in the present value of the tax liability, as they can reduce their tax liability in the year that they incur a large investment cost, and pay more CIT later, which will generally align better to when a given investment generates returns. This means that accelerated depreciation shifts the timing of a tax liability rather than reducing the CIT liability in nominal terms. If considered as a TE, a simple 'static' method is to measure what additional CIT would have been paid if the provision did not exist (much like the second-best scenario in the example above). However, that does not consider how CIT changes in future years with the accelerated depreciation. Depreciating an asset more today means that there is less to depreciate in the future, so future CIT should increase proportionately (in nominal terms) to the reduction today. As a result, the simpler static approach could overestimate the revenue foregone. That said, there is always a risk that future CIT does not arise because companies do not make profits in later years (they shut down, leave the country or undertake additional tax planning to offset the increase in CIT liability).

3.2.3 Personal income tax

For unincorporated businesses, a PIT schedule often resembles that of CIT and therefore encounters some of the challenges mentioned above.

However, when referring to employed individuals, TEs under PIT most often take the form of either outright exemptions or tax credits. To estimate the revenue foregone under the PIT, it is often necessary to build a simple model that applies the PIT schedule (which is almost always graduated) to data on taxable incomes of those individuals who benefit from a specific provision. Such data is usually administrative at the employee or firm level, and the former allows a more accurate TE estimation. Depending on the quality and depth of income-related information for each individual (such as clear definition and interpretation of 'salary', job formality and number of months worked), household survey data could be a second-best option, especially if the TEs are dependent on household characteristics.

In the case of an outright exemption, the revenue foregone would then just be the amount of simulated PIT due on a beneficiary's taxable income. In the case of revenue foregone due to an income tax credit, the amount of the credit would need to be added back to taxable income and the tax schedule again applied. The revenue foregone is, then, the difference between tax owed by the beneficiary with and without the credit applied. Note that complexity may arise here in the case where credits are applied sequentially (that is, taxable income minus one credit forms the basis for the application of a second credit). Some tax credits can be refundable to the taxpayer, meaning that they could be counted as either negative TE for the year in which they are accrued or as budget outlays for the year in which they are paid.

3.2.4 Value-added tax

Estimating TEs that fall under VAT can involve some of the most complex exercises. This is because VAT is usually collected across a supply chain involving multiple stages, and tax reliefs are often applied to a mixture of inputs and final consumer goods. It is important to view the net effect of the TE measures on the whole VAT system (credits on input VAT and output VAT liability), rather than isolated parts. Reduced rates or zero rates applied to business-to-business purchases do not generate a revenue loss because the VAT would have been deductible by the buyer. In contrast, an exemption can sometimes increase revenue as it creates embedded VAT that is not deductible by the buyer, making it more important to attempt to model both importation and domestic production pathways. Again, different approaches will lead to varying degrees of accuracy in the resulting estimates of revenue foregone.

Differing approaches to estimating VAT TEs have been adopted in Rwanda and Uganda to date. The techniques outlined are based on practical experience of attempting this exercise in different ways and do not represent a 'gold standard'. As discussed above, often the 'best' data and modelling techniques to use are those that are at hand for the analyst to employ and which best approximate revenue foregone, given a nationally agreed BTS. Appendix A provides a more thorough discussion of the respective approaches adopted, but the approaches can be summarised as follows:

- **Rwanda**: Microsimulation modelling centred on the SUT combined with firm- and transaction-level administrative VAT returns. This approach simulates the current VAT system and a counterfactual (such as the benchmark) by using the SUT to map linkages between all industries. Its accuracy depends on the reliability of the SUT and how well it aligns with taxpayer data (for example, SUTs are not regularly updated). An important practical consideration is that it requires technical capacity to build, update and run the model.

- **Uganda**: Modelling centred on firm- and transaction-level administrative VAT returns on imports and local sales of items subject to VAT exemptions and zero-ratings, complemented by information in the SUT (such as estimating reseller markups etc.).

Although applied in different ways, both approaches to estimating revenue foregone under VAT require reliable and timely administrative data. This does not have to be highly detailed – figures at a sectoral level can be sufficient to begin estimating revenue foregone, keeping in mind that modelling improvements can be made over time if more granular data should become available.

3.2.5 Excise duty

Excise TEs are less common, because excise duties themselves are levied on selected items, typically those with harmful externalities. They are also typically levied equally on imports and domestic supplies, for economic efficiency reasons. Nonetheless, some countries have introduced relief from selected excise duties for equity reasons (for example, fuel duty) or to encourage the use of domestic inputs in local manufacturing processes (as in the case of producers of beer or tobacco that use local raw materials). Calculating revenue foregone on excisables using the 'legal' approach is relatively straightforward; it is simply the difference between modelled revenue under the benchmark tax and the actual tax collected.

As with customs duties, there will likely be knock-on effects to VAT, as excise duty typically forms a part of the VAT base. The difficulty, however, comes in estimating the benchmark rate or observing the tax base itself. In Rwanda, for example, excise duty on cars is levied based on the engine capacity, which is not always captured in a structured manner in administrative data and therefore requires assumptions. The TE derived from an excise duty exemption for locally assembled vehicles is therefore somewhat challenging to estimate.

Lesson #5: There is no one-size-fits-all approach to modelling revenue foregone under different tax types. Often the 'best' methods are those that utilise the available data and resources to their full potential.

3.3 Practical challenges in the estimation process

In this section, we outline several practical considerations related to data collection and modelling of revenue foregone, largely based on our experiences of supporting such processes in Rwanda and Uganda.

3.3.1 Data anonymisation

Estimating TEs for various tax types will usually involve sharing large amounts of data across institutions (typically between the revenue authority and the ministry of finance). This should be done responsibly. Anonymising taxpayer identities in microdata is clearly important for confidentiality purposes and some (but not all) institutions will have procedures in place for doing so. In addition, consistency in the anonymisation method across datasets (and over time) is important as it allows data points from the same taxpayer across different taxes or datasets to be reconciled or merged. A unique 'anonymisation key' held by the owners of the data (usually the revenue authority) allows for this to occur. There are, naturally, times when anonymisation is not possible, such as when identifying beneficiaries of tax holidays which might be captured separately and need to be matched with tax returns according to firm name or taxpayer identification number. Again, it is important that this is done responsibly and according to best practices in the relevant unit.

3.3.2 Data requests and extraction

If the TE modelling is being done by a unit that does not have direct access to administrative data (for example, the ministry of finance carries out the work, but the data sits with the revenue authority), the process of requesting and extracting data can create a bottleneck. Data requests should ideally be made with some prior knowledge of what data is available, and clearly stating the variables and time period required and the purpose for which it is to be used.

The procedure for data requests may involve getting approval from the appropriate authority, especially in cases where data is held by a semi-autonomous revenue authority, which will have legal obligations around data protection, potentially even affecting data-sharing with the ministry of finance. This can add to the time it takes to complete the exercise, but it facilitates the rest of the process, ensuring managerial oversight and compliance with data controls. Furthermore, some data might be held in, for example, non-structured scanned documents that need to be digitised.[31] If this is a one-off activity, it might be done manually; however, if it is a regularly updated source, then it may require investment in a more sustainable solution.

3.3.3 Data gaps

Even if good quality, digital, administrative data systems are in place, there can be data gaps for purposes of TE costing; for example, where tax return forms do not capture the appropriate concepts and

31 In Rwanda and Uganda, for example, TA-supported digitisation of Gazetted EAC stays of application and duty remissions.

values for calculating TEs, or beneficiaries of tax holidays are not required to file returns.[32]

However, if there is appetite for reform, documenting data gaps carries inherent value; if the appropriate feedback mechanisms are in place between technical staff and decision-makers, then the gaps identified through the costing exercise can inform improved procedures to capture such information in future.[33] There may be several recipients of such feedback, depending on the reasons for the issues encountered, including the following:

- **Legislative issues:** Missing declarations can result from a lack of legal obligation on those taxpayers or ambiguity about who is responsible for submitting a declaration. These challenges would need to be flagged primarily to the institution that will lead on amending relevant laws. Poorly worded definitions of exempt items or activities in the tax law can also result in difficulties in matching taxpayer data with TE provisions.
- **IT and administrative issues:** Declaration forms may not have all the fields required to identify a TE and the reason for it, or the declarations might allow firms to self-fill fields that should be automated calculations. This would need to be flagged to the revenue authority, and more specifically its IT or operational teams.
- **Misreporting:** Taxpayer data may be entered incorrectly in the system (for example, a sector is misclassified), or a taxpayer may be misreporting sales in its declarations (such as recording zero-rated sales as exports or vice versa). The TE process may be able to identify systemic errors or irregularities that can be investigated by the revenue administration – for example, a risk management team.

In addition to addressing these issues and recommendations to the relevant institution, ideally there would be processes for communicating them to the appropriate level of seniority in order to ensure that action is taken, where appropriate.

3.3.4 Modelling complexity

While consideration should be given to the accuracy and rigour of TE estimates, it is also important to consider the level of institutional capacity and experience. TE analysis can typically involve a technical team rather than one individual, and so a simple model allows different members to understand, evaluate and apply the methods. As individuals take ownership of the model, they can also steer

32 Even if beneficiaries of tax holidays do file returns, the chance that the information contained therein is verifiable may be low: if a firm benefits from a tax holiday, for example, there is little incentive for the revenue authority to audit it as there would be no immediate gain to the government from uncovering any discrepancies.

33 This may require anything from small administrative changes to issuance of a practice note or an amendment to the relevant tax legislation.

improvements. In situations where there is a concern at a managerial level about a potential strain on resources, an approach that is simple initially but can gradually become more sophisticated moderates the upfront time investment required, making it easier to commit to the reporting process.

Keeping modelling simple initially also facilitates different forms of engagement with a wider range of stakeholders who may have an interest in the exercise. Given that TE sensitisation is a long process, it allows stakeholders to focus on the core concepts of TE first, rather than the finer details of improving estimation accuracy.

3.3.5 Improvement through iterations

Starting simply and making improvements over time, at a pace that grows with the institutional knowledge that is built through repetitions, is important to the overall sustainability of the TE reporting process. One challenge that arises from iterations over time, however, is with reconciling estimates between years as the method may have changed during that time. Maintaining the estimates used in previous reports has the advantage of stability and reduced time investment for re-estimating previous numbers, while updating historic estimates allows more comparability of estimates over time.

The approach taken in Rwanda is to maintain previous estimates if changes to the method are relatively minor or obvious (for example, including additional tax types, but using clear disaggregation) and to make historic revisions for significant changes. In Uganda, each iteration of the TE report to date has revised previous figures according to the most recent modelling techniques employed. Whether historic adjustments can be made will depend on the availability of appropriate past data required to apply the new method.

3.3.6 Time management

The time and resource requirement for carrying out TE reporting should not be underestimated. There are multiple roles required to make the process function smoothly: defining a benchmark; collecting, storing and cleaning data; modelling TE; coordinating the project across different teams and institutions; quality assurance; drafting and communication. Combined, these create a steep learning curve and a range of different challenges that, depending on the environment, can require significant amounts of time to resolve. The regular annual TE reporting process for Uganda and Rwanda now usually begins about four or five months before the TE report is due. Given that staff have competing demands on their time, it is better to start the process as early as feasibly possible. As it becomes a more regular output, the marginal cost of producing another TE report reduces relative to the benefits.

Lesson #6: Starting simple and making improvements to modelling over time, at a pace that increases as institutional knowledge is built up through repetitions, can enhance the overall sustainability of the TE reporting process.

4 Report writing and communication of revenue foregone

In this section, we cover two important aspects in the process of producing a TE report: the writing – and what might be included in the report – and the means of communication.

4.1 Report writing

The TE report, in principle, provides a basis for informing more efficient budget allocations overall between cash and TE, as well as a key input for evaluating the effectiveness of individual tax reliefs against their intended objectives. In practice, however, some TE reports emphasise an aggregated estimate of the total revenue foregone, or revenue foregone by tax type. This provides little explanation or meaningful connection to policy objectives and the sector allocations of other public expenditure stated in the national budget. For example, the publicly available TE report for Rwanda provides a rationale for each of the TEs, but Uganda's report does not. Across countries, there are a variety of ways in which estimates are presented, including as an internal brief, a statement to parliament or a report publication (presented separately or alongside the national budget) that may or may not be accompanied by a press release, public engagements or consultation with or presentation to key stakeholders.[34] The content and communication of the TE report will, often, reflect the underlying motivation for producing it.

While the content of TE reports differs across countries, there are some standards or norms emerging with respect to what should be included and what might, ultimately, represent good practice. For example, the Addis Tax Initiative Post-2020 Monitoring Framework (ATI, 2022) includes a commitment for members to publish the following elements in an annual TE report:

- legal basis, detailed description of the TE, policy objectives
- intended beneficiaries (i.e. businesses, households, government agencies etc.)

34 The exact way estimates are presented, however, may be influenced by the availability or structure of the data.

- type of TE (i.e. what mechanism, such as deduction, reduced rate, exemption etc.)
- timeframe of TE (i.e. sunset clause)
- a review framework (i.e. what conditions for reviewing, when, could be linked to internal cost-benefit analysis)
- revenue foregone (including forecasts for the present financial year, provisional estimates for the past fiscal year and final estimates for the years preceding.

Kassim and Mansour (2018) also identify a similar set of elements to be included in a TE report, based on 'good practices'. These are:

- legal basis
- definition of the benchmark system
- definition of TE
- objective of TE
- beneficiaries
- estimation method
- duration of TE
- type of TE
- TE by sector and tax head
- value of TE.

Furthermore, von Haldenwang et al. (2021) provide a review of the different components of TE reports observed in the construction of the Global Tax Expenditures Database.

One specific case that has important implications when comparing TE reports across countries or over time within one country is the decision on whether to report on the number of provisions offered. Often, decisions may need to be taken regarding the choice of whether to group similar TEs together as a single 'provision' or to count each item separately. For example, the EAC Gazettes contain a list of the number of duty remissions (rate reliefs) applied to goods entering specific member states. In some cases, there may be several distinct items (defined using HS codes) that fall under one exemption, such as a duty rate of 0% to 'Equipment and appurtenant used for polishing and heat treatment of Gemstones'.[35] In other cases, there may be a single exemption for just one distinct item. To

35 Each individual import into the EAC is assigned a Harmonized System (HS) code. Whether a relief is granted to one individual HS code, or to two or more, appears to differ across different categories of goods. For example, both Uganda and Tanzania currently stay application of the EAC Common External Tariff and apply a duty rate of 0% to 'Equipment and appurtenant used for polishing and heat treatment of Gemstones'. This provision pertains to goods classed under no fewer than 12 different HS codes. However, many stays of application apply to just a single HS code (e.g. a specific item, such as barley or chewing gum).

count both cases as single provisions can be somewhat misleading. There is no right or wrong answer, however, as to how to treat such irregularities: classifying every single import (that is granted a duty remission) at the HS code level as a distinct TE would lead to a very high – and frequently fluctuating – repository of provisions. With such cases, it might be worth thinking twice about whether to report on the number of TEs at all, or at least setting some clearly defined rules for what constitutes a single provision or relief, especially with respect to customs.

4.2 Communication

As with the content of TE reports, the means by which TE reports are communicated also differ from country to country. This may, in practice, be influenced by the underpinning motivation for the report. For example, it may have been drafted as a response to a legal requirement (such as a provision in a public financial management (PFM) or budget Act), as a condition of official development assistance agreed with development partners (such as a commitment to transparency on TEs as a trigger for disbursement of a grant), or from the government's genuine desire to improve accountability as part of a reform process (such as to improve Public Expenditure and Financial Accountability (PEFA) scores or as an action identified in a PFM reform programme).[36] Governments fulfilling a legal requirement, for example, may only undertake the minimum needed to comply with the law, such as providing a brief report to parliament, but not go further to provide transparency on the methodology or to seek stakeholder engagement or sensitisation around the findings of the report. Similarly, a donor disbursement condition may incentivise governments to produce an internal report (unless the condition specifically requires publication) without stipulating how the information is presented.

Regardless of the underlying motivation for publishing the TE report, if the practice has not been carried out before, there are a number of sensitivities that should be accounted for in communicating the results, not least of all the fact that estimates of revenue foregone can be misunderstood or misinterpreted by parliamentarians, ministers, senior civil servants, civil society or the media. There may, for example, be a perception of nervousness about the additional scrutiny that a TE report may bring (as discussed in Section 2), particularly if certain incentives were granted on a non-transparent, discretionary basis (or without a sound policy rationale or even legal authority). While many stakeholders would agree that such scrutiny may bring positive benefits in the longer term for TE governance, the process can, in practice, result in an expectation or pressure for their removal after publishing cost estimates, which could be politically

36 PEFA is a framework for assessing the strengths and weaknesses of PFM; reporting on revenue foregone from TEs is one element of the budget documentation standard specified in the assessment of transparency of public finances (performance indicator 5) (PEFA Secretariat, 2016).

challenging, if the government has not prepared itself to undertake further review or rationalisation of TEs. It is therefore important to consider the wider implications for reform that may arise, which may include planning or undertaking cost-benefit analyses of the effectiveness of TEs in order to reform (or defend) the existing set of TEs.

A genuine commitment to transparency and accountability to taxpayers of otherwise hidden costs would suggest that the TE report should provide a holistic view of government intervention across sectors or groups that places TEs in the context of other public expenditure allocations and of how it relates to the government's wider policy objectives, including ensuring that these key messages are communicated effectively and are understood by the public, taxpayers and other relevant parties. This would, ideally, mean that the TE report is public information and is accessed and communicated using an appropriate medium (website, TV, radio etc). For salience to taxpayers and citizens, these costs would be presented in a way that relates to the national budget (such as organising TEs by budget sectors or categories, if possible) and framed by their role in delivery of stated policy objectives. To ensure that they are understood, appropriate presentation and channels of communication will be chosen to reach the target audience, including presentation in different languages and styles and using a range of media that are commonly accessed.

4.3 Common misconceptions

There are specific challenges involved in educating stakeholders such as civil society and the public about the role of TEs in the economy and the limitations of a TE report. If there is political pressure to resist publication of TE reports, or to broaden the scope of the BTS such that the estimates of revenue foregone are effectively diminished (and subsequently subject to less scrutiny), it may be possible to mitigate this to some extent through more effective communication of the findings and engagement around the publication to encourage a more balanced and informed interpretation of the results. This may also support better management of expectations surrounding the implications for policy or reform.

Governments face several common misconceptions surrounding TE, such as the following:

- **'Tax expenditure' equals 'tax exemption' or 'investment incentive'.** In the same way that national budgets allocate resources across several sectors and to a range of beneficiaries, tax 'expenditure' comes in many forms and serves a variety of purposes. Simply describing all TE as 'exemptions' or 'investment incentives' is therefore inaccurate. In many jurisdictions, the phrase 'tax exemption' is associated with negative connotations (in that they affect the fairness or neutrality of the tax system) and

authors of a TE report should consider this so as to carefully communicate the appropriate interpretation of results.

- **Tax expenditures are wasteful or represent a direct revenue loss or leakage.** While there is a body of literature[37] that has provided a strong challenge to the need for investment tax incentives (such as investor motivation surveys), simply stating the estimated revenue foregone from TEs in a report does not imply that this revenue represents a net loss to society. Only an evaluation of the costs and benefits of each TE measure would provide that evidence.
- '**Revenue foregone' is equal to 'revenue gain'.** A common misconception is that the estimated revenue foregone can be read as the amount that government would receive if the tax reliefs were removed. This is particularly pertinent when governments are under pressure to mobilise revenue. However, removal of the tax relief will not increase the amount of revenue collected by as much as might be expected due to behavioural factors: removal of a tax relief may change the incentives for that individual or business to undertake the activity in question. There may also be limitations on a government's ability to remove some reliefs, such as those that are necessary for the tax to be administered effectively or have a legal basis outside the national government's control. It may also be the case that where two or more provisions overlap, if one were removed, a beneficiary could still benefit from the TE via another existing provision. Finally, it is also important to consider TEs in the context of alternative policy instruments (and their respective cost to the public purse). This includes cases in which it is found that an objective can be met more efficiently using an alternative instrument, such as a direct subsidy – the tax relief is removed but replaced with a subsidy, resulting in a small net gain (or no gain) to public funds.

Box 1 Coverage of Uganda's tax expenditures in the media

'Shs5 trillion lost in tax exemptions, incentives'[38]

Initially, an annual account of discretionary TE was provided to Uganda's parliament, but it was never scrutinised by civil society or reported in the media. A more recent report was posted on the website of the Ministry of Finance, Planning and Economic Development (MoFPED), but with no explanation or engagement. This was reported in the press under the headline above, but the numbers quoted were out of context, with no comparison to

37 James (2014), for example, reports 'redundancy ratios' as high as 98% from investor surveys in 16 countries.

38 The Daily Monitor (2021).

expenditure or comment on intended objectives. There was also a misleading reference to TE leading to more regressive taxation to 'make ends meet'. Such an interpretation cannot be reached simply from reading a TE report, but instead requires an evaluation of effectiveness. The episode did, however, lead to calls for more analysis of costs and benefits, which has now been initiated by MoFPED.

Finally, there are important messages to convey around what a TE report does and does not reveal: it is akin to the national budget document, in that it simply states how much public resource has been allocated to different purposes. It does not, typically, include a statement of performance (such as how the funds were used or what results or outputs were achieved), nor does it provide an evaluation of effectiveness of the funds (policy instruments) against their intended objectives. While the evaluation of the benefits of TEs can be more difficult to undertake, a positive outcome of the publication of a TE report might be that it brings to light the need for a fuller evaluation, or creates the demand for such from senior officials where one does not exist.

Lesson #7: Communication becomes the key bridge between the technical exercise and the TE report's objectives around greater transparency and informing policy. In this process, preventing certain misconceptions is paramount.

5 After the report: towards better governance of tax expenditures

It is important to understand that a TE report, in and of itself, is merely an accounting exercise, albeit an important one for transparency regarding public expenditure. For policy decision-makers it is less useful, however, as it presents only one side of the story. Understanding the cost-efficiency of TEs requires assessment of both costs and benefits. Preparing estimates of revenue foregone is a *necessary* first step towards better governance of TE – but the TE report is not *sufficient* to achieve this end. Additional attention to TEs through the improved transparency of a report could, nonetheless, stimulate broader questions about their governance, including the processes in place for their granting (upstream) and monitoring and evaluation (downstream). Enhanced accountability surrounding TEs may prompt reforms and strengthen evidence on which to improve policy design and efficacy of public spending in future. This section discusses the lessons relating to ensuring sustainability of the reporting process, links between transparency and accountability, and managing TE reforms.

5.1 Ownership and sustainability of reporting: the role of technical assistance

Capacity-building and institutional change are important in the production of a TE report and how the process is sustained over time. Often the starting point for a country undertaking TE analysis is the receipt of TA from a multilateral or bilateral donor-funded TA programme. While there are clear benefits to following this approach, such as an abundance of expertise and experiences from other jurisdictions, there are also many inherent risks, some of which are discussed below.

5.1.1 Ownership of the process and consideration of local context

The goal of the initial process (and of the TA) may be to produce a TE report, but ensuring ownership and sustainability should be embedded long before the report is published. As discussed above, the initial definition of the benchmark and mapping of an inventory of TEs is a key part of the process and ensures that government

stakeholders appreciate what lies behind the final estimates and are comfortable with explaining the process to ministers, the public and other stakeholders. This suggests that any initial project or TA to develop a TE report needs first to identify the appropriate government 'owners' of the process and include sufficient time to undertake the initial important foundational steps before starting the estimation exercise. In some cases, this might involve the establishment of a TEs unit within either the ministry of finance or the revenue authority, or both.

5.1.2 Capacity to repeat the reporting exercise

While having an experienced TA prepare the first TE report may be expedient and can provide an initial demonstration of the concept, this option does little for capacity-building within the host government. In Rwanda, for example, local staff needed a lot of time and support (including some adaptation and simplification) to understand available TA-built models, which required complex quantitative analysis and deep understanding of the taxes in question. In Uganda, an initial lack of coordination between government and a key TA provider meant that there was a mismatch in expectations and understanding of the process. Ultimately, however, it prompted the government to engage more fully and take ownership of the process.

A more sustainable approach is for TA providers to partner with (multiple) key stakeholders in the ministry of finance, revenue authority or other pertinent body, and to work concurrently to co-produce estimates of revenue foregone, ensuring that a sufficient degree of skills transfer takes place. It is particularly important during this process to secure the cooperation of the 'owners' of the requisite data (often the revenue authority). To strengthen ownership and ensure sustainability, the end goal should be that the staff of the recipient government are equipped with the requisite skills to repeat (update) the estimates in future years, and potentially also to introduce improvements to the estimates as new or enhanced data becomes available.

Initial assistance might take the form of training, or training manuals prepared concurrently with the TE report, as well as iterative co-creation and coaching throughout the process, with repeated exercises and improvements each year. Expectations about the time and resources required to embed the process fully should be realistic and tailored to the local level of capability. In Rwanda, after three years of embedded assistance, the process for preparing annual TE reports is not yet fully complete, but there has been significant progress in the level of ownership and capacity to produce the report independently by local staff (FCDO, 2022).

5.1.3 Embedding the process and building demand

If there is not yet a demand for TE reporting, it will be important to generate such demand going forward. Even if the initial report was

prepared through an offer of TA, it should not be the case that TE reporting remains a supply-driven process. Thus, an integral part of any TA should be to support the communication of TE report findings to key stakeholders in the host country government and to ensure that they are well understood, along with their implications for budgeting, transparency and wider policy-making. If accepted and appreciated, the report itself may generate demand for such estimates in the future, whether it is prepared by local staff or with ongoing TA (which, ideally, should diminish over time). Demand may also be strengthened by more formal mechanisms, such as embedding a requirement in the legal framework (for example, a PFM Act), as part of a PFM reform programme (assessed through the PEFA framework, for instance), or with incentives provided by donor disbursement conditions.

5.2 Moving from transparency to accountability

The extent to which the initial gain in transparency from the publication of a TE report translates to improvements in accountability (i.e. demands from stakeholders to rationalise the existence of TEs) may depend on having appropriate governance structures and capacity in place.[39] Three factors that were influential in linking transparency to accountability in the Ugandan and Rwandan processes were as follows:

- **Coordination in granting the TEs.** It might be the case that there is no unit within a ministry of finance or revenue authority, or within government more widely, that has sole jurisdiction to grant TEs. This can lead to a lack of coordination and a set of incentives with conflicting or overlapping aims. In the cases of Uganda and Rwanda, however, all TEs must be embedded in the national tax laws and, as such, are under the jurisdiction of the minister of finance.
- **Demand for scrutiny of TEs before and after implementation.** Processes and structures would ideally be in place for examining the rationale for existing TEs and for the granting of new ones. There are important political economy considerations: it is often more difficult to argue for the removal of an existing provision from the tax law than to put the brakes on the insertion of a new one, making it critical to ensure that adequate analysis is carried out before a new TE is introduced. Demand for such processes can be built through demonstrating the usefulness of evidence in improving the process of policy formulation. In both Uganda and Rwanda, following the publication of TE reports, evaluation of the effectiveness of corporate tax incentives was requested. Formal mechanisms can also provide a prompt – for instance, embedding all TEs in the tax laws ensures that amendments are subject to

39 This may take the form of a TE 'governance framework', a formal set of rules that outlines the procedures, roles and responsibilities of key actors in the process of granting, analysing, reporting on and reforming TEs.

parliamentary scrutiny. The use of evidence to inform the process can be prompted by a requirement for impact analysis, as in PFM law.

- **Policy and administration processes that facilitate monitoring and evaluation.** It may also be the case that it is not possible to evaluate the costs or benefits of tax reliefs, as the downstream processes (such as the way in which TE data is captured in tax returns) are not aligned with national tax laws. As discussed previously, it is important to have a process in place to resolve such anomalies when data gaps are identified.[40] The establishment of such structures and norms is by no means an easy task and they can often take time to emerge. However, they are a key requirement if the TE report is to be used as a platform from which to inform better governance practices.

5.3 'Rationalisation' processes and managing TE reform

Increased scrutiny and evidence surrounding TEs can lead to interest in initiating consideration of reform. Typically, this has been referred to as a process of 'rationalisation', which implies that the current situation faces a degree of 'irrationality' in the portfolio of policy choices surrounding TEs. In many cases the need to rationalise the existence of TEs stems from a combination of a lack of evidence and explicit rationales supporting the initial policy decisions, a lack of monitoring and evaluation, confusing or overlapping TEs that appear to have little connection to government's wider policy objectives and a perception of wastefulness if the estimated cost of revenue foregone represents a significant share of GDP.

This paper began by suggesting that revenue foregone from the use of TEs might represent a *low-hanging fruit* in the search for additional revenue. The process of rationalisation is a useful tool for policy-makers to start considering whether spending through TEs is the best way to meet given policy objectives, especially when faced with tight fiscal constraints.

Lesson #8: Estimating revenue foregone is merely the first step to understanding the ultimate economic impacts of TEs. A TE report tells little of the net benefits brought about by tax reliefs and how these compare to alternative policy choices.

40 For example, CPCs that do not easily match TE provisions in the law, or gaps in income tax declaration forms for declaring exempt income. It is worth noting that such issues are not unique to the Rwandan and Ugandan contexts and arise even in countries with more experience in TE reporting.

6 Conclusion

This report has drawn together lessons from the authors' experiences of supporting the nascent process of TE reporting in two low-income African countries, Rwanda and Uganda. Both have, in the past five years, published their first TE reports and have moved to doing so on an annual basis. This represents a significant gain in transparency around the use of TEs in both countries. Furthermore, the processes around the reporting, modelling and publishing are becoming embedded in the relevant authorities, and institutional memory around these issues is being developed.

Many of the challenges associated with TE reporting are not, however, unique to these two countries. The processes of, for example, defining a BTS or accessing the appropriate data in order to model revenue foregone are rife with potential pitfalls. We have, where possible, attempted to provide guidance (based our experiences both on in Rwanda and Uganda and also further afield) that would be of use to a range of stakeholders, particularly to:

- policy-makers seeking to report on TEs for the first time or to understand how to improve on existing approaches
- TA providers and donors seeking to understand how best to support policy-makers throughout the process, including where to allocate resources
- civil society and the public who wish to understand the inherent strengths and limitations of a TE report and the elements they should expect to see included.

TE reporting has, encouragingly, become more widespread globally over the past few decades (see Aliu et al., 2022). While estimating the revenue foregone is useful for transparency regarding the use of public funds, it represents just one side of the equation in evaluating their cost-effectiveness against intended objectives. Estimating the benefits of TEs is a significantly more complex exercise and not one that should be ignored: the results can, ultimately, help to inform a much more efficient allocation of public resources. More work may be needed to strengthen the evidence base and tools available for countries to undertake and expand these exercises. Nonetheless, the process of reporting revenue foregone represents the first step in a cost-benefit analysis of the provisions included. We hope that the lessons contained in this report will be of some value to all parties involved.

References

Aliu, F., Redonda, A. and von Haldenwang, C. (2022) *The Global Tax Expenditures Database (GTED): progress report*. Bonn: German Development Institute (DIE) (https://doi.org/10.23661/r2.2022).

ATI – Addis Tax Initiative (2022) 'ATI Post-2020 Monitoring Framework', Bonn: ATI. (www.addistaxinitiative.net/sites/default/files/resources/The%20ATI%20Declaration%202025%20monitoring%20framework.pdf#:~:text=The%20post-2020%20ATI%20monitoring%20framework%20aims%20to%20keep,data%2C%20and%20building%20on%20indicators%20for%20former%20commitments).

Caldeira, É., Geourjon, A.-M. and Rota-Graziosi, G. (2019) 'Taxing aid: the end of a paradox?' *International Tax and Public Finance* 27(1): 240–255 (https://doi.org/10.1007/s10797-019-09573-6).

CIAT – Inter-American Center of Tax Administrations (2011) *Handbook of best practices on tax expenditure measurements: An Iberoamerican experience.* Panama: CIAT (www.ciat.org/Biblioteca/DocumentosTecnicos/Ingles/2011_ebook_handbook_tax_expenditure.pdf).

Ebrill, M.L.P., Keen, M.M. and Perry, M.V.P. (2001) *The modern VAT*. Washington DC: International Monetary Fund (www.imf.org/external/pubs/nft/2001/VAT/).

FCDO – Foreign, Commonwealth and Development Office (2022) 'The Centre for Tax Analysis in Developing Countries – Phase II (TAXDEV II): Annual review (3) 300689'. London: FCDO (https://devtracker.fcdo.gov.uk/projects/GB-GOV-1-300689/documents).

Geourjon, A.M., Laporte, B., Caldeira, E., de Quatrebarbes, C. and Bouterige, Y. (2019) Tax expenditure assessment: from principles to practice. Methodological guide. Clermont-Ferrand: Foundation for Studies and Research on International Development (Ferdi) (https://ferdi.fr/dl/df-PSDXZuxEEh8LihnEhHUoFkjx/tax-expenditure-assessment-from-principles-to-practice-methodological-guide.pdf).

Hallerberg, M. (2014) 'Tax Expenditures in Germany'. International Budget Partnership (https://internationalbudget.org/wp-content/uploads/Hidden-Corners-Germany.pdf).

Heady, C. and Mansour, M. (2019) *Tax expenditures and their use in fiscal management: A guide to developing countries*. How To note 19/01. Washington DC: International Monetary Fund (www.imf.org/~/media/Files/Publications/HowToNotes/HTNEA2019002.ashx).

HMRC – Her Majesty's Revenue and Customs (2018) 'Estimated Costs of Tax Reliefs (January 2018)'. HMRC (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/675229/Dec17_Reliefs_Bulletin_Final.pdf).

HMRC – Her Majesty's Revenue and Customs (2021) 'Tax relief statistics (December 2021)'. HMRC (www.gov.uk/government/statistics/main-tax-expenditures-and-structural-reliefs/estimated-cost-of-tax-reliefs-statistics).

Hutton, E. (2010) 'A basic framework for evaluating value added tax expenditures'. Discussion Paper No. IDB-BP-138. Washington DC: Inter-American Development Bank (https://publications.iadb.org/en/basic-framework-evaluating-value-added-tax-expenditures).

IMF – International Monetary Fund (2021) 'World Economic Outlook Database', October 2021. Washington DC: IMF (www.imf.org/en/Publications/WEO/weo-database/2021/October).

James, S. (2014) 'Tax and non-tax incentives and investments: evidence and policy implications'. Investment Climate Advisory Services. Washington DC: World Bank Group.

Kassim, L. and Mansour, M. (2018) 'Tax expenditures reporting in developing countries: an evaluation' *Revue d'economie du developpement*, 26(2), 113–167.

McNabb, K., Danquah, M. and Tagem, A.M.E. (2021) *Tax effort revisited: new estimates from the Government Revenue Dataset*. WIDER Working Paper No. 2021/170. Helsinki: UNU-WIDER (https://doi.org/10.35188/UNU-WIDER/2021/110-5).

OECD – Organisation for Economic Co-operation and Development (2010) *Tax expenditures in OECD countries*. Paris: OECD Publishing (https://doi.org/10.1787/9789264076907-en).

OECD (2022) 'Tax treatment of official development assistance: Digital Transparency Hub'. OECD (www.oecd.org/tax/tax-treatment-official-development-assistance/).

Oppel, A., McNabb, K. and Chachu, D. (2022) *The dynamics of domestic revenue mobilization across four decades.* WIDER Working Paper No. 2022/001. Helsinki: UNU-WIDER (https://doi.org/10.35188/UNU-WIDER/2022/132-7).

PEFA Secretariat – Public Expenditure and Financial Accountability (2016) 'Framework for assessing public financial management', 2nd edn. Washington DC: PEFA Secretariat (www.pefa.org/resources/pefa-2016-framework).

Polackova Brixi, H., Valenduc, C. and Swift, Z.L. (2004) *Tax expenditures – shedding light on government spending through the tax system: lessons from developed and transition economies*. Washington DC: The World Bank (http://hdl.handle.net/10986/15067).

Steel, I., Dom, R., Long, C., Monkam, N. and Carter, P. (2018) 'The taxation of foreign aid: don't ask, don't tell, don't know'. ODI Briefing Note. London: ODI.

Surrey, S. and McDaniel, P. (1979) 'The tax expenditure concept: current developments and emerging issues' *Boston College Law Review* 20(2): 225–357 (https://lawdigitalcommons.bc.edu/bclr/vol20/iss2/1).

Surrey, S. and McDaniel, P. (1985) *Tax expenditures*. Boston, MA: Harvard University Press (https://www.hup.harvard.edu/catalog.php?isbn=9780674436527).

The Daily Monitor (2021) ‘Shs5 trillion lost in tax exemptions, incentives’, 13 October (www.monitor.co.ug/uganda/business/finance/shs5-trillion-lost-in-tax-exemptions-incentives--3581570).

von Haldenwang, C., Redonda, A. and Aliu, F. (2021) *Shedding light on worldwide tax expenditures*. GTED Flagship Report 2021. Bonn: German Development Institute (DIE) (https://gted.net/wp-content/uploads/2021/08/210820_GTED_FlagshipReport.pdf).

United Nations (2021) *Guidelines on the tax treatment of government-to-government aid projects*. New York: United Nations (www.un.org/development/desa/financing/sites/www.un.org.development.desa.financing/files/2021-09/G-to-G%20PDF.pdf).

Appendix A: Approaches to modelling revenue foregone under VAT

Rwanda

For the VAT modelling undertaken in Rwanda, an SUT approximates the core structure of the economy: the supply pathways for intermediate and final demand, the extent of informality for each product's supply, and the extent to which a product is supplied by different industries. A key advantage of utilising the SUT is that it allows aggregation of the revenue impacts of exemptions at different stages in supply chains. Table A1 summarises the advantages and disadvantages of relying on data from the SUT for TE estimation.

The model estimates VAT revenue as the sum of revenue from household and government final consumption and revenue from sales of VATable intermediate products to exempted or informal sectors that cannot claim back this input VAT (but may pass on the cost in their own sales, thus generating 'embedded' VAT). The difference between this modelled VAT revenue under the benchmark and VAT collected under the actual tax system then gives total VAT TE.

Additional administrative data is used in the modelling to represent the existing tax structure, namely:

- firms' monthly VAT returns, which provide the share of formal production that is currently exempt and zero-rated, and growth rates in the formal share of each sector
- transaction-level data, which allows calculation of average effective tax rates on the sale of each product to each sector.

The SUT is representative of the size of the economy at a given time and does not tend to be updated annually. Assuming it is still representative of the economy's structure for the year for which the TE is being calculated, the SUT needs to be uprated using sectoral growth rates to reflect changes to the size of the economy.

Table A1 Summary of key considerations for VAT modelling based on SUTs

Advantages	Disadvantages
Addresses the VAT impact across a large web of supply pathways, taking into account the varying potential impacts of informality and exemptions on TE	Depends on statistical accuracy of SUT, requiring it to have separation of supply and taxes
Flexibility in defining benchmark and running different simulations – e.g. revenue foregone from informality	SUT will not align perfectly with administrative data – e.g. in size of formal economy, sector classifications and definition of formality
Can use reliable administrative data for exempted and zero-rated shares, growth rates and average effective tax rates	Time investment to develop the model, update it and train users
Addresses customs and domestic VAT together	Some TEs are still estimated more accurately outside the model
Opportunities to integrate new or more accurate data over time	

Uganda

In the absence of a more sophisticated model for the entire flow of goods and services in the economy, it is possible to rely primarily on administrative transactions-level data, including information about sellers, purchasers and importers. in order to attempt to model supply chains of specific goods and services.

In Uganda, the approach to modelling VAT follows this path and has evolved over the first few iterations of the TE report in order to make use of complementary information from SUTs and other sources. This approach has the advantage of utilising high-quality, disaggregated data on imports and local sales of items subject to VAT reliefs etc., and of relying less heavily on the more aggregated SUTs, which can induce higher margins of error. At the same time, models such as that used in Rwanda take a more sophisticated approach to modelling supply pathways of certain goods and services in an economy and thus carry their own inherent advantages, as described above.

The majority of goods subjected to VAT exemption or zero-rating in Uganda are imported (relief exists as most of these goods are not locally available).[41] The approach followed in order to estimate revenue foregone draws heavily from Hutton (2010: section 3), which outlines how to employ a set of models that take into account different supply pathways. Broadly, the calculations account for the

41 One significant exception is the zero-rating of locally supplied basic foodstuffs, however as of 2022 these are considered as part of Uganda's BTS and thus are not costed.

type of importer/producer (a final consumer, exempt firm, taxable enterprise or taxable reseller) and models the destination of the imports/sales, such as use as an input, final consumption or resale. Table A2 summarises this approach for imported items.

Table A2 Uganda: VAT import calculations

Who purchases/ imports?	Consumer/user	Applicable sectors	Calculation of TE
Final consumer / exempt enterprises	Final consumer / exempt enterprises	Agriculture, unknown	value × VAT rate
Taxable enterprises	Taxable enterprises	All others	No TE, except when used in production of an exempt output, in which case: (value + markup) × sector-specific tax-exempt sales ratio × VAT rate
Taxable resellers	Final consumer / exempt enterprises	Wholesale and retail trade	(value + markup) × share of sales to final consumers × VAT rate
Taxable resellers	Taxable enterprises	Wholesale and retail trade	(value + markup) × (1 – share of sales to final consumers) × sector-specific tax-exempt sales ratio × VAT rate

Source: authors' elaborations based on Hutton (2010).

There are three potential types of importer and different rules apply for the calculation, depending on the importer:

- **A final consumer or exempt firm**
  Calculating VAT revenue foregone on imports by final consumers or exempt firms is most straightforward and is simply the statutory VAT rate multiplied by the value of the item (including any additional taxes or charges that constitute the VAT base). In Uganda, these importers are identified as any importer in the 'UNKNOWN' sector (according to the International Standard Industrial Classification (ISIC)) and any importer in the agriculture sector (whose value chains are almost entirely VAT-exempt).
- **A taxable enterprise**
  The value of imports by 'taxable enterprises' can be apportioned according to the share used in production of a VATable output and that used in the production of a VAT-exempt output. In the former case, there is no TE because if the exemption were not in place, an input tax credit could be claimed by the firm. In the latter case, there will be a TE. But how do we estimate the share of VAT-exempt output used by each importing firm? In the absence of detailed firm-level information, we can rely on sector-specific ratios. These can be garnered from aggregate VAT sales data, which apportion the value of sales, by sector, according to

whether they are standard-rated, zero-rated or VAT-exempt. A markup is also applied.[42]

- **A taxable reseller**
  Finally, there is the case of imports by 'taxable resellers'. These are captured by firms operating in the 'Wholesale and Retail Trade' sector. Again, two scenarios apply. A TE will occur if any further sale of the import goes to a final consumer (or exempt enterprise). In order to find what share of sales by 'Wholesale and Retail Trade' goes to final consumers and what goes to taxable enterprises, ratios can be extracted from aggregate VAT returns data for the Wholesale and Retail Trade sector.

  Regarding the share of sales by taxable resellers to taxable enterprises (which is one minus the share of sales to final consumers), we need to estimate again the share of the goods used in the production of an exempt output. Sector-specific ratios can be applied.

42 On the issue of markups, obviously each intermediate seller in the value chain will add their own markup. However, the simplifying assumption of perfect competition allows us to compress each of these individually smaller markups into one figure. Data on retail markups can typically be garnered from SUTs. In the absence of such data, simple assumptions can be imposed (e.g. 20% or 25%).