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Assessing Tax Expenditure Reporting in G20 and OECD Economies

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ABSTRACT

Governments worldwide pursue public policy objectives through direct spending and tax expenditures (TEs). Interestingly though, and despite their significant impact on government budgets, TEs are opaque and very often not subject to the same level of scrutiny in the budget process as direct spending. This paper compares TE reporting across developed countries by assessing the official TE reports of the 43 G20 and OECD economies, based on nine key dimensions that reflect good practice in TE reporting. Based on the assessment of TE reports, we pool countries into three groups: i) 8 countries that have not reported on TEs in the last ten years, ii) 26 countries that have published a basic report (e.g. by providing estimates for a reduced subset of TEs or estimates based on aggregate figures only) in the last ten years, and iii) 9 countries with a detailed and comprehensive TE report that is being published on a regular basis. Overall, there is significant room to improve TE reporting in all countries. This said, as the heterogeneity among reports is significant, specific recommendations to improve TE reporting should be designed on a case-by-case basis.

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1 Introduction

Governments worldwide pursue public policy objectives through direct spending and tax expenditures (TEs), i.e. benefits granted through preferential tax treatment such as exemptions, deductions, credits, deferrals and lower rates.

Interestingly though, and despite their significant impact on government budgets, TEs are largely opaque and generally not put under the same level of scrutiny in the budget process as direct spending. Indeed, TEs are hardly ever subject to cost-benefit analysis. More worrisome, some countries do not even estimate the revenue foregone through these provisions. As acknowledged in the Greek TE report, "there is also a significant difference between direct and tax expenditures: While the former is subject to yearly debate and approval by the House through the budget process, the latter is debated and approved once it is implemented….".[1]

Systematically identifying, estimating and reporting the fiscal cost of TEs can be a time and resource intensive task. It is nonetheless critical to assess their effectiveness and efficiency and, hence, to ensure the alignment of public policies with their stated goals.

This paper compares TE reporting across developed countries. More specifically, following Kassim and Mansour (2017), we assess the official TE reports of the 43 G20 and OECD economies, based on a number of key dimensions that reflect good practice in TE reporting.

The remainder of the paper is structured as follows. Section 2 discusses the rationale behind TE reporting. Section 3 describes the dimensions used to assess TE reports among G20 and OECD economies. Section 4 provides a comparative analysis of TE reports across the selected group of countries based on the dimensions described in Section 3. Finally, Section 5 concludes and discusses the main policy implications that arise from our study, and Appendix A provides an overview on the assessment of each report (Table A.1) as well as a list with the source of the 35 TE reports underpinning this paper (Table A.2).

2 Tax Expenditures

TEs result in a significant reduction of public revenues worldwide. In the United States (US), the federal government is estimated to have foregone more than 1.5 trillion USD in 2017 – an amount equal to roughly 37% of direct federal spending and roughly 8% of GDP (US Treasury, 2017). Tax reliefs in the United Kingdom (UK) reduce government revenues by

[1] Hellenic Republic Ministry of Finance (2018).

more than 400 billion GBP every year, a significant figure when compared to total government spending – around 800 billion GBP (Miller, 2018).

In addition to being costly, TEs are also often ineffective in reaching their stated goals. The mortgage interest deduction (MID), a tax relief for homeowners allowing mortgage interest payments to be deducted from personal income tax (PIT), is a case in point. Implemented in countries across the globe, including the Netherlands, Switzerland, and the United States, its stated objective is to boost homeownership. Empirical evidence indicates that MIDs are ineffective in pursuing this goal. They may lead households to buy bigger houses and to take on a larger mortgage for tax planning purposes, but they do not affect the initial decision whether to become a homeowner or not (Hilber and Turner, 2014).

Patent boxes (PBs) provide another example. By granting preferential tax treatment to corporate income earned through intellectual property, these provisions aim at boosting research and development (R&D) and innovation. However, whereas empirical evidence shows that PBs do have an impact on attracting patent registrations to a country, their effect on real activity is often negligible as multinational enterprises (MNEs) – which own most of the patents worldwide – adjust the location of their patents rather than their real research investment decisions (Alstadsaeter et al., 2015). In addition, as discussed by Klemens (2017), PBs create incentives for businesses to manipulate the ratio of research-to-ordinary expenses or purchase business method patents with the only purpose of reducing their tax liability.

Moreover, even TEs that are effective with regard to their primary goal may trigger negative externalities that reduce their efficiency as a policy tool. For instance, several tax deductions and exemptions are "upside down" subsidies and thus exacerbate inequality, as they provide larger benefits to high-income families than to low- and middle-income households. For example, Borenstein and Davis (2015) assess the distributional impact of several US federal income tax credits for weatherizing homes, installing solar panels, buying hybrid and electric vehicles, and other clean energy investments. The authors show that the benefits of these TEs have been disproportionally claimed by higher-income households, with the bottom three income quintiles only receiving around 10% of the total, and the top 20% receiving roughly 60%. The regressive effects of the MID (Hilber and Turner, 2014), and of TEs aiming to boost pension savings (Duflo et al., 2006) provide further illustrations.

Low effectiveness and efficiency are not a feature of TEs in general. If correctly designed, they can be an effective policy instrument. For instance, the US Earned Income Tax Credit (EITC) – a refundable tax credit seeking to provide additional financial incentives to work for low-income families – has proven to be highly effective in encouraging single parents to work without reducing the number of worked hours among those already working (Meyer, 2002 and Marr et al., 2015). Some commentators have even called for an expansion of the

EITC so that it does not only target low-income working families with children, but also middle-income workers (Maag, 2017).

Indeed, under certain conditions, TEs could be more cost-effective than direct spending and may hence be the best option to pursue a specific public policy goal. In particular, as discussed by Toder (2000), TEs may be preferred to direct spending when eligibility conditions are directly linked to tax return data, when it is more important to maximize the number of beneficiaries than to minimize excess claims or when the policy objective is to incentivize a clear and broadly defined activity by reducing its net price.

Therefore, knowing which TEs are effective and efficient, and which are not is crucial, as it would allow governments to eliminate the latter while, at the same time, keeping in place (or even expanding) those that are worth supporting.

To sum up, governments should estimate and report the fiscal cost of TEs for many reasons. First, to enhance transparency and accountability. Second, because TE estimates are a necessary input to evaluate the effectiveness and efficiency of these provisions, which in turn, should be a priority for governments to better target their policy objectives. Comprehensive evaluations of TEs, including cost-benefit analyses, are crucial to distinguish those provisions that need to be reformed or simply eliminated from those that are worth supporting or should be expanded. This, in turn, is key for tax reforms aiming to increase the alignment of tax systems with an inclusive growth agenda by broadening tax bases and strengthening progressivity (Brys et al., 2016). Finally, moving in this direction would also contribute to easing governments' budget constraints, which is crucial in the context of developed economies as well as for domestic revenue mobilization in developing countries.

Against this background, there exists a broad consensus highlighting the need to improve TE reporting. The IMF Manual on Fiscal Transparency explicitly mentions that "a statement of the main central government tax expenditures should be required as part of the budget or related fiscal documentation, indicating the public policy purpose of each provision, its duration, and the intended beneficiaries. Except in particularly complex cases, major tax expenditures should be quantified." (IMF, 2007). Likewise, the OECD recommends that the estimated fiscal cost of TEs should be disclosed as part of the budget (OECD, 2017). Since 2014, EU Member States are required to provide information on TEs including their impact on revenues.[2] Some international organizations such as the Inter-American Center of Tax Administrations (CIAT) and the Inter-American Development Bank (IDB) have gone one step further and recommended that TEs should also be reported by subnational governments, especially in federal countries or economies with important levels of decentralization (CIAT, 2011 and Villela et al., 2010).

[2] The Council Directive 2011/85/EU on requirements for budgetary frameworks of the Member States requires that all Member States publish detailed information on the impact of tax expenditures on revenues and is accessible here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2011.306.01.0041.01.ENG.

Strikingly though, TE reporting worldwide lags significantly behind what would be considered best practice. As discussed by the US Congressional Budget Office, TEs in the US are generally not subject to annual reauthorization and thus considerably less analyzed and evaluated than direct spending (CBO, 2012). In the UK, the 2017 TE report listed 239 provisions for which estimates of cost are not available (HMRC, 2017a). Moreover, UK observers highlight a "world of difference between the scrutiny of expenditure and that of tax expenditure", even when both policy instruments are used for similar objectives and their effects on the budget and on income distribution are equal (Corlett, 2015). Likewise, the 2018 TE report in France lists 183 out of a total of 457 provisions for which only an order of magnitude was estimated and 53 TEs were classified as "impossible to be quantified", hence representing an unknown cost for public finances (French MoF, 2018). Across the EU, the reports of those countries that provide TE estimates vary widely regarding their quality and scope (EC, 2014). Despite the 2011 Council Directive 2011/85/EU, which explicitly states that all Member States "… shall publish detailed information on the impact of tax expenditures on revenues", several countries such as the Czech Republic, Luxembourg, Romania and Slovenia do not publish TE reports.[3] TE reporting by lower tiers of government is even less developed than the fragmentary level of reporting by central governments (Villela et al., 2010).

3 Institutional Dimensions of Tax Expenditure Reporting

This section assesses the TE reports of the 43 G20 and OECD economies based on 9 key dimensions. Our assessment seeks to shed light on the quality of TE reports, without digging deeper into the methodological approaches and the magnitude of the revenue foregone estimates published by each country. Whereas we believe that this kind of analysis is also crucial, the scope of this paper is to qualitatively assess official TE reports across multiple dimensions. We leave quantitative within- and cross-country analyses based on indicators such as the share of TE in relation to GDP, total government spending and total tax revenue for future research.

The dimensions considered for the assessment are based on those used by Kassim and Mansour (2017), which – as mentioned by the authors – were "borrowed primarily from practices in OECD countries where TE reporting has been a legal requirement for several

[3] As defined on the EU website, "A "directive" is a legislative act that sets out a goal that all EU countries must achieve. However, it is up to the individual countries to devise their own laws on how to reach these goals" – See here: https://europa.eu/european-union/eu-law/legal-acts_en.

decades". We have slightly modified and expanded some of their indicators and base our assessment on the following nine dimensions:[4]

I. **General information**: Year of the latest report | Language | Format | Source

For general information, we provide the year of publication of the latest report used for the assessment.[5] We also record the language in which the report was published, its format, source/institution and, when published online, the link to where it is available (Table A.2).

II. **Legal dimension**: Legal requirement to report | Integrated into the budget | Legal reference for each TE

We record whether a TE report makes explicit reference to a legal requirement to report on TEs. The existence of such a requirement is crucial to reduce discretion.

In addition, we distinguish between countries such as France, South Africa and Spain that include the official TE report as part of the budget (e.g. as a special section, chapter or separate appendix), and others such as Canada and the UK that do not.

Finally, we identify whether a TE report provides a legal reference for each TE – a feature that is highly desirable given that, as discussed below, most TEs are defined as deviations from a benchmark, which is often given by a specific tax law.

III. **Definition**: TE definition | Benchmark definition

We assess whether a TE report includes a clear definition of what is considered a TE and the underlying benchmark.

There is no unanimously accepted TE definition. Besides some commentators defining TEs based on a set of characteristics (the so-called "direct" approach), most countries use the "indirect" approach, which identifies TEs as a departure from the baseline tax structure, i.e. as deviations from a country-specific benchmark. As discussed by Kassim and Mansour (2017), such an approach is more flexible as it reflects the country's priorities, and the role of the tax system in achieving them. On the other hand, differences in national tax structures, and thus in benchmarks, lead to certain tax provisions being considered a TE in one country and part of the benchmark in another. Tax deferrals are a case in point. Whereas most of the countries consider income tax deferrals a TE, Argentina and Brazil only classify those provisions as a TE that trigger "permanent revenue losses", and in that context, do not consider tax deferrals as a TE.

Some countries define the benchmark tax system as the baseline structure without providing further details, e.g. Argentina and the Slovak Republic. Others, such as Belgium, Canada and Estonia, take a similar approach but, in addition, provide a detailed discussion

[4] Table A.1, provides a comparative summary of country profiles.

[5] The report used in each case is the latest available when the assessment started. In some cases though, a new report may have already been published. For instance, the United States has released its 2020 TE Report in October 2018 and Poland has recently published the 2016 report.

of the benchmark tax by tax. Finally, some countries employ a conceptual benchmark. For instance, in Chile income is defined as all collected or accrued profits, earnings and increases in capital, regardless of their nature, origin, denomination or activity. Likewise, Mexico provides specific definitions of TEs for corporate income tax (CIT), personal income tax (PIT), value-added tax (VAT) and excise taxes.

IV. **Temporal dimension**: Frequency | Year of publication of 1st report | Year since when TE estimates are available | Backward estimates (t-i) | Forward estimates (t+i) |Time frame of TEs

The temporal dimension is crucial for TE reporting as governments often improve their reports over time. Against this background, we provide information on multiple criteria relating to the time span and frequency of reporting.

Countries with more comprehensive and detailed reports are often those that have been reporting for a longer time, e.g. Australia, Canada, the Netherlands, and the US – the first country to have reported on TEs. Ireland and Korea are worth mentioning as exceptions. Despite having started reporting only in 2015, the Irish report is very detailed and includes information on TEs' assessments. Likewise, Korea published its first report in 2010 but the 2018 report already fulfils best practice standards in almost all the assessed dimensions.[6]

In addition, by comparing the evolution of TE reporting over time, one can track concrete changes. The Netherlands is a case in point. Since 1998 a yearly report of TEs is included in the budget memorandum. At the beginning, the report only covered direct taxes. Currently, indirect taxes are also included, and the report describes (endogenous) growth patterns and provides information on evaluations for some TEs.

When possible, we also provide the year of publication of the first TE report as well as the first year for which TE estimates are available.

As discussed by the EC (2014), there is large variability in terms of the number of years covered by the national reports. Whereas some countries only provide estimates for the year in which the report is published (t), some include a backward-looking component providing estimates for some prior years (t-i). Others do the same looking forward (t+i). In the US, for instance, the report published by the Treasury for fiscal year 2015 (t), provided estimates of the fiscal cost of TEs relating to PIT and CIT for years 2013-2019 (t-2; t+4). Since 2016, the estimates cover the t-2; t+8 period, i.e. for 2016, the Treasury reports estimates for 2014-2024.

Another crucial feature is the frequency of reporting. Most countries report on an annual basis. Nonetheless, as TE reporting is a resource and time intensive task, there could be a

[6] The Korean report does not provide information on TE evaluations and, hence, Korea is classified as not reporting on the effectiveness and efficiency of TEs (Dimension VIII). This said, the Ministry of Economy and Finance informed us that there exists a formal evaluation framework. This framework requires that provisions larger than 30 billion KRW are evaluated by external research institutes, at least once, at the expiring year. Smaller TEs are evaluated on an optional basis.

trade-off between the periodicity and the scope and quality of reports. Germany, for example, publishes a biannual official report. This said, Germany's report is one of the most comprehensive ones including, for instance, a sustainability impact assessment that was introduced in 2015, which focuses on the long-term economic, environmental and social effects of each TE.

Finally, it is broadly accepted that reforming or eliminating TEs is often politically difficult, even when their fiscal cost is large, and their effectiveness has been shown to be questionable. Some governments such as Italy and the Netherlands seek to mitigate this challenge through the introduction of sunset clauses that put a time limit to some of their new TEs. We provide information on whether such expiry dates are included in TE reports or not.

V. **Estimation**: Estimation method | Total number of TEs identified and estimated | Estimation threshold

In most cases, and probably because of its relative simplicity, TEs are only estimated and reported based on the revenue forgone approach – a method that compares actual revenue collection with the revenue that would have been collected without the provisions in place, assuming unchanged taxpayers' behavior and unchanged revenues from other taxes. Australia is an exception. In addition to the standard figures based on the revenue foregone method, the Australian Treasury also provides estimates for the 10 largest TEs based on the revenue gain approach – a methodology to calculate the revenues gained if the TE was repealed, which takes account of behavioural responses and hence often results in estimates lower than revenue foregone figures (Australian Treasury, 2017). Until 2008, the US Treasury presented "outlay equivalent" estimates in addition to their standard revenue foregone-based figures. However, since 2009, only revenue foregone estimates are reported.

A related issue is the lack of estimates for a large share of TEs. The difference between the number of TEs that a report identifies and those for which it provides estimates for revenue losses is often considerable. This estimation-gap or under-reporting can be explained by different factors, including confidentiality, lack of data and disproportionate estimation costs, among others. For instance, in the UK report for 2017, 230 out of 424 tax reliefs were not estimated because of the following reasons: "i) information on the usage of this relief is not required in tax returns and cannot be reliably estimated from other data sources, and the cost of collection for statistical purposes is disproportionate, ii) information on the usage of this relief is reported to HMRC, but the relevant data is not held in a centralised form, and the cost of gathering for statistical purposes is disproportionate, iii) information on the usage of this relief is available, but the cost is not quantifiable as it is dependent on other unknown factors, iv) introduction of the relief is too recent for data to be available, v) exemption under the Freedom of Information Act, such as Data Protection or vi) other."[7]

We identify this estimation gap and, when available, also provide information on the threshold amount under which TEs are not estimated.

VI. **Description**: Detailed description of each TE

One of the main goals of TE reporting is to enhance transparency and accountability. Hence, we examine whether a report provides a detailed description of each TE, as very often the name given to each provision is not self-explanatory.

VII. **Classification**: TEs by tax base | TEs by type of relief | TEs by function or budgetary category | TEs by policy goal | TEs by beneficiaries

Besides differences regarding definitions, scope and methodologies, TE reports also vary considerably with regard to the classifications they provide. When available, we include information on whether reports classify TEs by the tax base to which they are applied (PIT, CIT, VAT, excise taxes, etc.), the mechanism through which they are granted (exemption, reduced rate, deduction, credit, deferral, etc.), the budgetary category to which they are attributable (education, fuel and energy, health, defence, etc.), their policy objective (employment, R&D and innovation, housing, reducing poverty, etc.) as well as the targeted beneficiary group (corporations, individuals, SMEs, self-employed, etc.).

VIII. **Evaluation**: Evaluation of effectiveness and efficiency

Identifying and estimating the fiscal cost of TEs should not be seen as the final objective but rather as a necessary step to assess their effectiveness and efficiency, which in turn, should be a priority for policy makers. As discussed by GAO (2012), performance measurement (i.e. the ongoing monitoring and reporting of program accomplishments, particularly progress toward preestablished goals) provides information about whether a program, including a TE, has achieved its intended purpose. Hence, we provide information on countries evaluating TEs, even when only a reduced group of provisions are assessed. For instance, in Germany all TEs are evaluated in terms of target attainment, efficiency and transparency, as well as, since 2015, with regard their sustainability impacts. In the US, the report by the Joint Committee on Taxation (JCT) provides the income distribution of selected TEs.[8]

IX. **Other information**

Some countries provide additional useful information which is not captured by previous dimensions but is nonetheless worth mentioning. For example, Hungary does not provide point estimates but rather a lower and upper estimate for each TE. France and Turkey

[7] HMRC (2017b).

[8] In the US, the Treasury and the JCT calculate separately the fiscal cost of each TE. While, in general, their estimates are similar, both reports differ somewhat in the number of TEs reported and the estimated revenue loss for specific provisions because different income tax baselines, thresholds to report a TE and economic and technical assumptions are used. Unless otherwise specified, we base our assessment on the TE report published by the Treasury, as part of the Executive Branch.

provide information regarding the quality of their TE estimates. Finally, TEs are also granted by subnational governments, particularly in federal or highly decentralized economies.

4 Comparative Assessment of Tax Expenditure Reporting

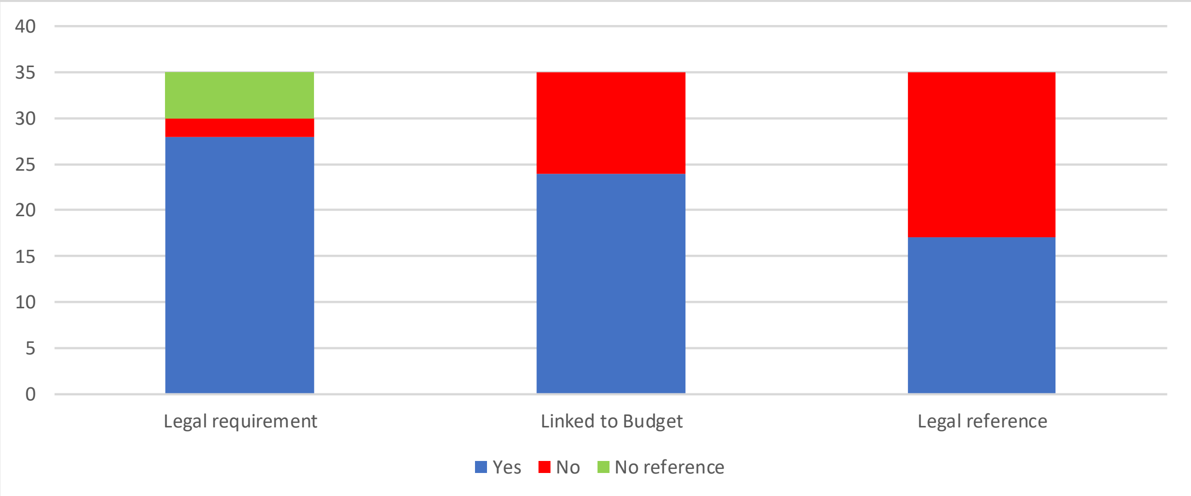
As shown in Table A.1, 8 countries (China, the Czech Republic, Indonesia, Japan, Luxembourg, Russia, Saudi Arabia and Slovenia) out of the 43 G20 and OECD economies have not reported on TEs within the last ten years.[9][10]

Most of the remaining 35 reporting countries do so in their official language. Israel and Turkey publish a report in Hebrew and Turkish, respectively, as well as an English version. Germany publishes the full report in German and a companion summary in English.

The majority of the reports are published in pdf format. Some countries including Australia, Canada, South Africa, the UK and the US (only the latest year) publish versions in other formats such as Word or Excel.

When it comes to the legal dimension, 28 of the reporting countries reference a legal requirement to report on TEs, 2 explicitly state that there is no such requirement and the remaining 5 do not make a reference to this aspect (Figure 1).[11]

Figure 1. Legal Dimension of TEs (Number of Countries)



Moreover, 24 countries include their TE reports into the national budgets. This is particularly the case in most countries that are legally obliged to report. There are a few exceptions. Chile is legally obliged to report (Art. 19.22 in the Constitution) but the report is

[9] With this definition of this first category we are slightly amending the definition in Neubig and Redonda (2017) and Redonda et al. (2018). As a result, the number of non-reporting countries is reduced from ten to eight.
[10] Slovenia has recently passed a law requiring that an official TE report is to be presented to the Parliament from 2020 forward.
[11] All EU Member States are legally required to report on TEs by the EU Directive. We, however, did not count the Czech Republic, Luxembourg and Slovenia among the legally obliged countries as these countries do not have a TE report.

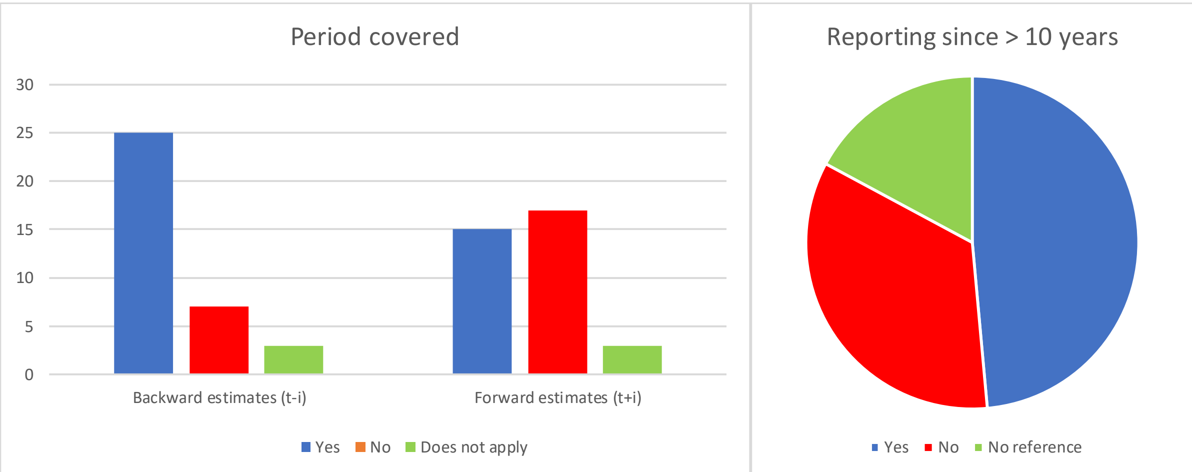
published by the Tax Authority (Servicio de Impuestos Internos), without an explicit link to the budget. The opposite is true for New Zealand and Turkey. Both countries have no legal requirement to report but nonetheless include a TE report into their budget.

Finally, roughly half of the countries (17/35) that report on TEs provide a legal reference for each (or some of the) provision(s). Since Denmark provides a legal reference for those provisions that were introduced or modified in the previous year, we count Denmark as belonging to this category.

Regarding the temporal dimension, most of the countries report on TEs an annual basis. Germany and Israel instead, report every two years. Switzerland and Portugal are not considered among these countries as the former only published a one-off report in 2011 and the latter has stopped the annual publication of TE reports in 2014. Moreover, Denmark and Ireland provide yearly updates of TEs, yet based on a reporting structure that is not comparable to the rest of the economies – see Section 3.

In addition, 17 countries have been reporting on TEs for more than 10 years, 12 started after 2008 and 6 do not provide information about when their first report was published (Figure 2).[12]

Figure 2. Temporal Dimension of TEs (Number of Countries)



Twenty-five countries provide backward estimates, while only 15 provide forecasts for future years. Canada (t-7 to t+1) and the US (t-2 to t+8) cover the longest time periods. Denmark, Ireland and Switzerland are classified as "does not apply", as their reporting cannot be classified based on the provision of backward- and forward-looking estimates. Denmark only provides estimates for new TEs or TEs that have been modified during the previous year. Likewise, Ireland only provides data for the latest available year and the

[12] Some countries present some exceptional cases that we do not take into account. For example, New Zealand has published a one-time report in 1984, but has only started to report on a regular basis in 2010.

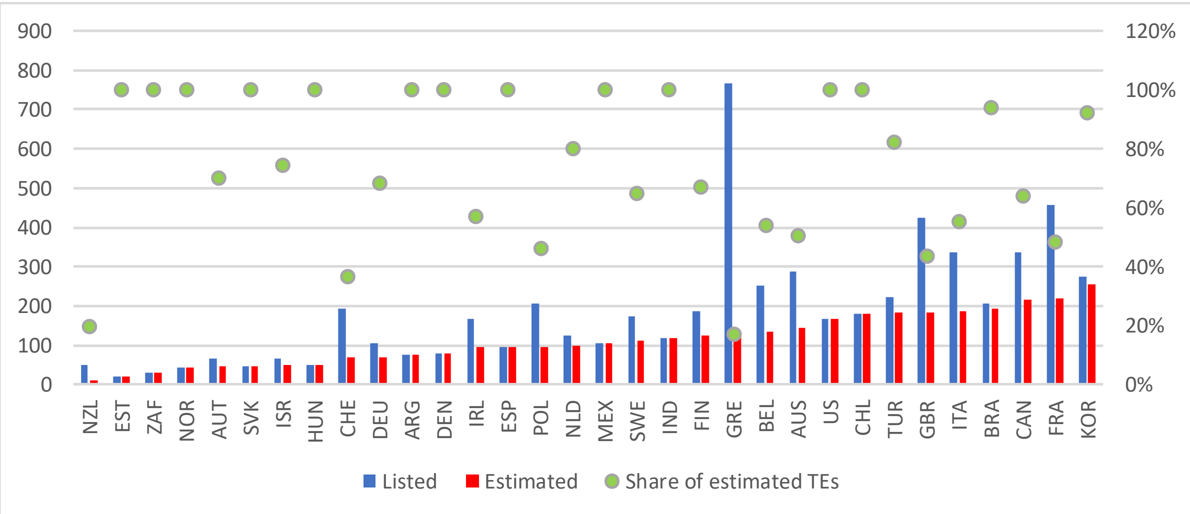
previous one.[13] Switzerland follows a similar strategy as its unique report (published in 2011), only provides the latest available estimate for each TE.

Only ten countries provide information on the time frame of each TE. A few countries including Australia, Austria, Brazil, Germany, Italy, the Netherlands and Korea have added sunset clauses to some TEs and provide the expiry date of these provisions. Canada and France, instead, publish information on the year of introduction of each provision, but do not report on time limits. Greece differentiates among permanent and temporary provisions.

Estimation is one of the dimensions where the heterogeneity among TE reports is the largest. This is not the case with regard to the method used to estimate the fiscal cost of TEs – the vast majority of countries use the revenue foregone method – but rather regarding the scope of those estimations.[14]

Across TE reporting in the G20 and the OECD, the number of estimated TEs ranges from ten in New Zealand to 321 in Latvia (Figure 3).

Figure 3. Estimation of TEs (Number of Provisions)



Note: Italy also lists (estimates) 170 (59) TEs granted by lower tiers of government, which are not included in the assessment. Iceland and Portugal are not included as they only provide estimates aggregated by tax base, type of TE and function.

Moreover, whereas some countries (e.g. India, Mexico, Spain, South Africa and the US) only report those TEs that were effectively estimated (red and blue bars of the same size in Figure 3), others (e.g. Australia, Canada, France, Germany and Korea) list a larger number of provisions, i.e. not only those for which they estimate revenue losses but also provisions for

[13] This said, time series data are published on the Revenue Commissioners on Ireland's Open Data Portal – https://data.gov.ie/dataset/costs-of-tax-expenditures-credits-allowances-and-reliefs.

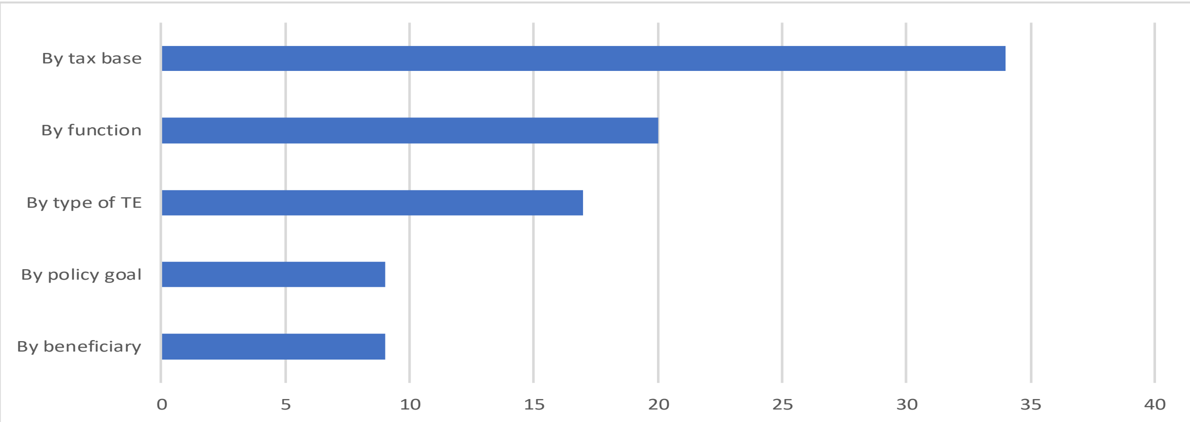
[14] Australia is a worth mentioning exception as, on top of revenue foregone estimates for all provisions, it also provides revenue gain figures for the 10 largest TEs as a complementary piece of information.

which no estimate is reported (countries with larger blue than red bars in Figure 3). As a result, the share of estimated TEs with respect to listed provisions is 100% for the former group of countries. On the other hand, among the latter group, the ratio ranges from 17% in Greece and 20% in New Zealand to 92% in Korea and 94% in Brazil.[15] Obviously, a larger ratio of estimated/listed provisions does not necessarily mean that the report is comprehensive as it is very difficult to know the share of provisions included in the report (estimated or listed) with respect to the number of TEs effectively implemented by the government.

In a few cases, TE reports explicitly discuss the reasons behind the gap between the number of listed and estimated TEs. For example, Argentina, Austria and India mention that, in cases where the economic cost of calculating the revenue foregone through TEs would be too large, these provisions are not estimated. Other countries report a specific revenue foregone threshold under which TEs are not estimated. In Canada, for instance, TEs that are assumed to generate revenue losses below 0.5 million CAD are reported as "S" ("small"), and no estimate is provided. Likewise, France does not estimate TEs assumed to be under 0.5 million EUR. For the Netherlands the corresponding threshold is 5 million EUR and for Latvia it is 0.05% of GDP, which currently amounts to around 13 million EUR.

Classification is another crucial dimension in TE reporting, and also shows a high level of heterogeneity among countries' reports. As shown in Figure 4, nine countries classify TEs by tax base, nine by beneficiaries, 17 by type of TE, 20 by function or budget category and 34 by tax base.

Figure 4. Classification of TEs (Number of Countries)



Note: Including Iceland and Portugal, which provide aggregated data by tax base, type of TE and function.

Regarding the tax bases covered, the narrowest report is the one from the US, which only covers direct taxes, i.e. PIT and CIT. Canada and New Zealand report on PIT and CIT as well

[15] The degree of detail of the information provided also differs significantly among countries. Whereas some countries list and even describe some of the schemes that were not estimated, others simply mention the total number of existing TEs, without providing further information.

as on GST. The other countries also include other tax bases such as property, excise, inheritance or estate, capital gains, wealth, energy and other taxes– although not all these tax bases are covered by all countries.

Twenty countries provide a detailed description of each TE provision, which is crucial to increase transparency by, for instance, avoiding the need to consult the tax law to understand each specific provision.

As mentioned before, TE estimates should not be seen as a goal *per se*, but rather as a first step to evaluate the effectiveness and efficiency of these provisions. Twelve countries have already moved in that direction and provide information on TE evaluation.[16] The degree of detail is highly heterogeneous among countries. In Australia, for example, TEs with a value of less than 200 million AUD and those that cannot be quantified are reviewed on a three-year cycle, with roughly an equal number of these smaller TEs examined each year. All larger TEs, or any provisions where there has been a significant policy change or there is expected to be significant growth or volatility over the forward estimates period are reviewed annually. In Germany, all TEs are evaluated in terms of "target attainment, efficiency and transparency". Since 2015, the government also reports on the sustainability impact for each TEs. In Ireland, a number of TEs are reviewed yearly to ensure that they remain fit-for-purpose, and to determine whether certain provisions should be ended, or if new expenditures are warranted. In the Netherlands, every scheme has to be assessed every seven years. Summaries of last year's evaluations and outlooks on planned evaluations for coming years are reported. Some countries only evaluate a few TEs per year. This is the case, for instance, in Austria, Canada, Mexico and Poland.

Moreover, some countries include assessments on the distributive effects of TEs. For instance, India reports the distribution of TEs granted across cohorts in terms of corporate income effective tax rates as well as profits as well as by public vs private firms but, again, only based on aggregate data rather than on individual TEs. Similarly, as mentioned before, the report by the US JCT presents the distributional effects of selected income TEs.

Finally, some reports provide additional relevant information. For instance, a few reports put the magnitude of the revenue foregone by TEs in perspective by providing indicators such as TEs as a percentage of GDP (Brazil, Chile, Latvia, Mexico and South Africa), the share of each TE as a percentage of total TEs (Brazil and Spain), TEs as a percentage of total tax revenue (Brazil and Latvia) and TEs as a percentage of specific tax revenue streams (Belgium, Estonia and Sweden). However, in most cases these indicators are only computed for aggregate data and/or for a subset of provisions.

[16] As mentioned before, Korea does evaluate some TEs but the results are not provided in its TE report and, hence, it is not counted among the 12 countries.

Some reports also include information on the reliability of the estimates. Australia and Finland, for instance, report when specific estimates should be interpreted as an "order of magnitude". Turkey classifies TE estimates as approximate, good or very good. France provides similar information by classifying the quality of estimates among very good, good, order of magnitude and impossible to quantify.

Hungary reports a lower- and upper-bound estimate for each provision. This is an interesting feature as TE figures are estimates and are, hence, often adjusted ex-post. Austria is a case in point. As shown in Table 1, TE estimates for year t are updated in years t+1 or t+2. As an illustration, in the case of the *exemption for overseas activities under difficult circumstances*, the estimated fiscal cost for 2013 was 27 million EUR. In 2014, the original 2013 estimate was updated and reduced from 27 to 20 million EUR. The same procedure was implemented for the 2014 estimate, reducing the original figure (20) by 3 million EUR one year after. When it comes to the *investment-related profit allowance* instead, the 2014 estimate was not updated in 2015, but was reduced in 2016 from 155 to 145 million EUR.

Table 1. Ex-post Adjustments of Tax Expenditure Estimates. The Case of Austria

Tax Expenditure	Figures for year 2013 (in million EUR)			Figures for year 2014 (in million EUR)		
	2013 report	2014 report	2015 report	2013 report	2014 report	2015 report
Exemption for overseas activities under difficult circumstances	27	20	20	20	17	17
Investment-related profit allowance	135	155	155	155	155	145

Source: 2013, 2014, 2015 and 2016 Incentives Reports published by the Austrian Ministry of Finance.

Another crucial issue are TEs granted by subnational governments. Best practice in terms of TE reporting calls for the estimation and reporting of TEs implemented by lower tiers of government, such as states, provinces and even municipalities. Among the 35 countries that were identified as reporting on a federal level, only 5 provide information about subnational TEs. Italy lists (estimates) 170 (59) provisions granted at the local level. France also reports local TEs, but only if they have an impact on the federal budget. Latvia and Poland report some TEs implemented by lower tiers of government and Portugal provides this kind of information but only includes aggregated estimates, i.e. no information by specific TE.

Some countries may have separate reports for subnational TEs. This is the case in the US, where all states produce a TE report.[17] Nonetheless, the US seems to be the exception as most federal (or decentralized) economies do not show such a level of transparency and detail in the reporting of subnational TEs. For instance, in Argentina, the national Law 25.917 implemented in 2004 explicitly states that all provincial budgets as well as the federal government's budget must include TE estimates. However, to the best of our

[17] The Institute on Taxation and Economic Policy provides a repository to the reports - https://itep.org/state-by-state-tax-expenditure-reports/.

knowledge, only 6 out of the 24 subnational governments in the country currently report on TEs (Ley Nacional N. 25917 – Regimen de Responsabilidad Fiscal, Art. 18).

5 Conclusion and Policy Implications

This paper presents a comparative assessment of TE reporting in the 43 G20 and OECD economies. The assessment is based on 9 key dimensions reflecting good practice standards in TE reporting.

Overall, there is significant room to improve TE reporting in all countries. This said, the heterogeneity among reports is high and, hence, specific recommendations to improve TE reports vary from case to case.

To draw conclusions and formulate policy recommendations, we pool countries into three groups: i) countries that have not reported on TEs in the last ten years, ii) countries with a basic TE report and iii) countries that have a detailed and comprehensive TE report – countries are classified in Group III if their TE reports do not comply with best practice in only one (or none) of the assessed dimensions (Table 2).

Table 2. Classification of Countries

Group I No TE report	Group II Basic TE report		Group III Detailed TE report
China	Argentina	Latvia	Australia
Czech Republic	Brazil	Mexico	Austria
Indonesia	Belgium	New Zealand	Canada
Japan	Chile	Norway	France
Luxembourg	Denmark	Poland	Germany
Russia	Estonia	Portugal	Italy
Saudi Arabia	Finland	Slovak Republic	Netherlands
Slovenia	Greece	Spain	Korea
	Hungary	South Africa	Sweden
	Iceland	Switzerland	
	India	Turkey	
	Ireland	United Kingdom	
	Israel	United States	

For the eight countries in Group I, the recommendation is straightforward. They should start identifying, estimating and reporting the revenue foregone through TEs as soon as possible. Obviously, we are aware that starting to estimate the fiscal cost of TEs from scratch requires resources. This may be a valid constraint for developing and emerging economies but not for economies that are among the largest or richest in the world, such as China, Japan, and Luxembourg. Even developing and emerging economies should move in this direction as analyzing TEs is a a high-return investment for governments. As highlighted by Neubig and Redonda (2017), where constraints pose obstacles nonetheless,

less comprehensive TE reports that simply identify and describe all TEs would be a critical first step and quantification of a limited number of significant TEs an important step two.

Countries in Group II do report on TEs but their reports lag behind best practice in more than one of the nine assessed dimensions. The countries included in this group publish highly heterogeneous reports. Very often, the reports are basic in scope and/or not published on a regular basis. For instance, this group pools together countries providing estimates for a reduced subset of TEs (e.g. Estonia, New Zealand and South Africa provide estimates for 30 TEs or less) as well as countries such as Iceland and Portugal that report aggregated estimates rather than disaggregated figures provision by provision. The group also includes countries that have reported on TEs within the last ten years, but have not done so in the recent past. Portugal, for instance, published its last report in 2014. Switzerland published a one-off official report on federal TEs in 2011, which was based to a significant extent on 2005 figures from the canton of Bern, extrapolated to the rest of the country.[18] This category also includes countries that do not report comprehensively but do provide information on a subset of TEs on a regular basis. Denmark, for instance, published an official TE report annually through 2006 within the budget proposal (Finansloven) but since 2007 only publishes a list of selected schemes, i.e. new TEs and provisions that were modified during the previous year. Countries that report the fiscal cost of some TEs without providing any additional information that would help the reader to put those estimates in context, e.g. with regard to the provisions' beneficiaries and goal/function or a detailed description (e.g. Hungary, South Africa) are included in Group II as well. Finally, countries covering a reduced number of tax bases are also pooled into this group. For instance, the TE report of the U.S. is quite detailed but only covers TEs granted through personal and corporate income taxes and, in addition, it does not provide any information regarding TE evaluations.

These countries could aim for a 2-step approach to improve their reports. First, using their current reports as a starting point, they should increase their scope and degree of detail. In addition, those that have not reported for several years should make a clear commitment to increase the frequency of TE reporting. As a second step, they should introduce more ambitious improvements such as providing backward/forward looking estimates, reporting on sunset clauses, and evaluating the largest TEs. This second step could be implemented gradually.

Group III includes countries with detailed and comprehensive TE reports, i.e. countries with only one (or none) dimension lagging behind best practice. These nine countries should focus on specific aspects of their reports to be improved. For example, countries such as Austria and Germany should improve their discussion of benchmarking. Likewise, some

[18] The Swiss federal government recently received a parliamentary inquiry regarding the lack of an updated TE report and answered that a report is currently being prepared.

countries should try to expand the time span of their reports by incorporating backward- (Italy) and forward-looking (Belgium, France) estimates. As mentioned before, the Korean report is very detailed and comprehensive but should incorporate information on TE evaluation.

Our final remark zooms-in on the critical role of international cooperation. While TE reporting will always need to take country-specific features into account, joint approaches and efforts across countries to advance TE reporting will be key to accelerating momentum in the field. Moving in this direction does not necessarily imply harmonizing tax bases across countries or reaching a broad consensus on benchmark definitions. Nationally defined benchmarks can remain at the core of TE reporting. However, a joint understanding of the urgent need to improve TE reporting, the development of methodological standards to increase international comparability as well as the definition of broadly accepted best practice in TE reporting are key to advance this important agenda.

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APPENDIX A

Table A.1: Tax Expenditure Reporting. Country Profiles

Country	Legal dimension			Definition		Temporal dimension			Estimation		Description	Classification	Evaluation	Other information
	Legal requirement	Link to Budget	Legal reference	TE definition	Benchmark definition	Year of first report (Year since when estimates are available)	Period covered	Time frame	Number of TEs identified (estimated)	Threshold for TE estimation				
Argentina (2018)	n.a.	No	No	Revenue foregone through preferential tax treatment other than the one provided by ordinary tax laws to benefit certain activities, areas, taxpayers, or types of consumption. Definition based on a long term approach, hence only schemes that create a permanent revenue loss are classified as TEs - tax deferrals are not.	The structure of each tax as discussed in the corresponding law is taken as the reference.	n.a. (2001)	t-2 - t	No	77 (77)	n.a.	No	Tax base | Type of TE	No	Differences between TEs granted in the context of their respective tax laws or in the context of economic development (regional, sectoral, etc.) policies. TEs as % of GDP.
Australia (2017)	Yes - Charter of Budget Honesty Act, 1998	Yes	Yes	A TE arises where the tax treatment of an activity or class of taxpayer differs from the standard tax treatment that applies to similar taxpayers or types of activity.	The benchmark has been chosen in a way that attempts to apply a consistent tax treatment to similar taxpayers and similar activities. These judgments are informed by long standing features of the tax system, practice in tax expenditure publications in other jurisdictions and consultation with stakeholders. A Detailed discussion is provided.	1997 (1994)	t-4 - t+3	Introduction and expiry date	289 (146)	n.a.	Yes	Tax base | Type of TE | Function	Yes	Quality of estimates (very low, low, medium, high, very high). Feature articles examining specific large TEs in depth including information on data and methodology used to quantify the TE, examining alternative benchmark tax treatments, estimating the distributional impact of TEs or interactions between TEs and direct expenditures.
Austria (2016)	Yes - Bundeshaushaltsgesetz, 2013 (Art. 47)	Yes	Yes	Revenue foregone via preferential tax treatment benefitting private or legal persons carrying out activities regulated by common law, which are perceived by the government as being in the public interest.	n.a.	2004 (2002)	t-2 - t	Time limit	67 (47)	n.a.	Yes	Policy goal	Yes	n.a.

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Belgium (2018)	Yes - Federal Act on the organization of the budget and accounting of the federal government, 2003 (Art.47)	Yes	No	Revenue foregone resulting from fiscal incentives triggered by a departure from the general tax system in favour of certain tax payers or economic, social, cultural activities that could be replaced by a direct subsidy.	The general system (or benchmark) is discussed tax by tax.	n.a. (2001)	t-7 - t-3	No	251 (136)	n.a.	Yes	Tax base | Function	No	TEs as % of specific tax revenue (aggregated figures).
Brazil (2017)	Yes - Lei Complementar no 101, 2000 (Art. 4o, § 2o, inciso V)	Yes	Yes	Indirect expenses by the government through the tax system aiming to achieve certain economic or social goals by creating an exception to the referential tax system, reducing government revenue and increasing taxpayer wealth. Tax deferrals are not considered TEs.	A benchmark is defined by a combination of what the current tax code stipulates, as well as current legal, economic and fiscal doctrine. A benchmark is defined for multiple taxes, such as VAT, CIT, etc. A detailed discussion per tax is provided.	1988 (1989)	t	Expiry date	205 (193)	n.a.	Yes	Tax base | Type of TE | Function	No	TEs as % of GDP, of total TE, of total tax revenue, and by region.
Canada (2017)	n.a.	No	Yes	TEs are defined based on the definition of the benchmark tax system.	The benchmark tax structure is characterized by only the most fundamental aspects of the tax system. Hence, information is reported on a wide range of tax measures, including measures that may not be considered tax preferences or substitutes to direct program spending. A detailed description by tax base is provided.	1979 (1976)	t-7 - t+1	Introduction date and recent history	337 (216)	Amounts under 500,000 CAD are reported as "S" ("small"), amounts between 500,000 CAD and 5 million CAD are rounded to the nearest 1 million and amounts above 5 million CAD are rounded to the nearest \$5 million.	Yes	Tax base | Type of TE | Function | Policy goal | Beneficiaries	Yes	Source of data. Reason behind the implementation of each TE. A statistical profile of federal TEs that covers the 1991–2015 period is provided.

Table A.1: Tax Expenditure Reporting. Country Profiles

<table>
<tr><th rowspan="2">Country</th><th colspan="3">Legal dimension</th><th colspan="2">Definition</th><th colspan="3">Temporal dimension</th><th colspan="2">Estimation</th><th rowspan="2">Description</th><th rowspan="2">Classification</th><th rowspan="2">Evaluation</th><th rowspan="2">Other information</th></tr>
<tr><th>Legal requirement</th><th>Link to Budget</th><th>Legal reference</th><th>TE definition</th><th>Benchmark definition</th><th>Year of first report (Year since when estimates are available)</th><th>Period covered</th><th>Time frame</th><th>Number of TEs identified (estimated)</th><th>Threshold for TE estimation</th></tr>
<tr><td>Chile (2016)</td><td>Yes - Constitución Política de la República (Artículo 19, numeral 22)</td><td>No</td><td>No</td><td>Revenue forgone by the government when it grants a tax treatment different from the general treatment set out in the tax legislation that is intended to benefit, promote or encourage specific activities, sectors, industries, regions or groups of taxpayers.</td><td>A conceptual benchmark for income taxes is employed while for VAT, a single rate applicable to all domestic sales and imported goods is adopted as the benchmark.</td><td>2003[1](2002)</td><td>t-1 - t+1</td><td>No</td><td>179 (179)</td><td>n.a.</td><td>No</td><td>Tax base | Type of TE | Function</td><td>No</td><td>Additional information including estimates using a Net Present Value methodology. Estimates in Chilean Pesos and in USD. TEs as % of GDP, but only for aggregate data.</td></tr>
<tr><td>China</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Czech Republic[15]</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Denmark (2017)</td><td>Yes - EU Directive</td><td>No</td><td>Yes</td><td>Deviations from the normal tax system, which imply favorable tax treatment of certain types of activities or groups of taxpayers.</td><td>The reference framework (benchmark) is the general rule of the applicable tax legislation. Although, it is not always possible to provide a clear definition of the normal tax system.</td><td>1996 (Varies)[2]</td><td>Does not apply[2]</td><td>No</td><td>80 (80)</td><td>n.a.</td><td>No</td><td>Tax base</td><td>No</td><td>n.a.</td></tr>
<tr><td>Estonia (2017)</td><td>Yes - EU Directive</td><td>Yes</td><td>Yes</td><td>Deviations from the benchmark.</td><td>A discussion of the benchmark by tax base is provided.</td><td>2011 (2009)</td><td>t - t+1</td><td>No</td><td>20 (20)</td><td>n.a.</td><td>No</td><td>Tax base | Function</td><td>No</td><td>TE as % of specific tax revenue.</td></tr>
<tr><td>Finland (2017)</td><td>Yes - EU Directive</td><td>No</td><td>Yes</td><td>Exemptions from the normal taxation structure. The definitions of tax subsidies, as well as the estimates of their impact on tax revenue, are dependent on the standard taxation system used and the calculation methods used in tax collection.</td><td>They refer to a 2009 paper, where a detailed discussion of the benchmark is provided.</td><td>1989 (1989)</td><td>t-1 - t+1</td><td>No</td><td>188 (126)</td><td>n.a.</td><td>No</td><td>Tax base | Function</td><td>No</td><td>Information on the quality of the estimates.</td></tr>
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Country	Legal dimension			Definition		Temporal dimension			Estimation		Description	Classification	Evaluation	Other information
	Legal requirement	Link to Budget	Legal reference	TE definition	Benchmark definition	Year of first report (Year since when estimates are available)	Period covered	Time frame	Number of TEs identified (estimated)	Threshold for TE estimation				
France (2018)	Yes - Loi de finances, 1980 (Art. 32)	Yes	Yes	Regulatory or legislative provisions that trigger a loss of revenue for the government and hence a reduction of tax payers' liability with respect to the benchmark.	Detailed discussion by tax base is provided.	1979 (2011)	t-2 - t	Introduction date and recent history	457 (221)	0.5 million EUR	Yes	Tax base | Type of TE | Function | Policy goal | Beneficiaries	Yes	Information on the quality of the estimates.
Germany (2017)	Yes - Gesetzes zur Förderung der Stabilität und des Wachstums der Wirtschaft (StabG, § 12)	Yes	Yes	A special tax regulation providing differentiated treatment of certain sectors by foregoing tax revenue by sectors deemed as beneficial to society as a whole.	n.a.	1967 (2009)	t-2 - t+1	Expiry date	104 (71)	n.a.	Yes	Tax base | Policy goal	Yes	Results of the evaluations (that are often outsourced) and results based on the sustainability assessment are discussed. Also, information regarding the tier of government financing the provision.
Greece (2018)	Yes - Law 4270/14 (Art. 75 par. 5)	Yes	Yes	TEs are provisions that directly or indirectly result in loss of tax revenue	Detailed discussion for each tax base	n.a. (n.a.)	t-1	Permanent vs temporary	768 (130)	n.a.	Yes	Tax base | Type of TE | Policy objective | Beneficiaries	No	n.a.
Hungary (2018)	Yes - EU Directive	Yes	No	n.a.	n.a.	n.a. (n.a.)	t	No	51 (51)	n.a.	No	Tax base	No	They provide a lower estimate and upper estimate.
Iceland (2018)	Yes - 2016 Fjárhagsáætlun	Yes	No	TEs create a decrease in tax revenues arising from deviations from the tax benchmark.	n.a.	2016 (2016)	t-1 - t	No	Does not apply[3]	n.a.	No	Tax base | Type of TE | Function	No	n.a.
India (2018)	n.a.	Yes	No	Range of measures (special tax rates, exemptions, deductions, rebates, deferrals and credits) that have an impact on Government revenues and also reflect a significant policy of the Government.	n.a.	2006 (2004)	t-2 - t	No	120 (120)	n.a.	No	Tax base | Beneficiaries	No	Distribution by effective tax rates, distribution by profits before taxes, public vs private firms (only for aggregate data).
Indonesia	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A.1: Tax Expenditure Reporting. Country Profiles

Country	Legal dimension			Definition		Temporal dimension			Estimation		Description	Classification	Evaluation	Other information
	Legal requirement	Link to Budget	Legal reference	TE definition	Benchmark definition	Year of first report (Year since when estimates are available)	Period covered	Time frame	Number of TEs identified (estimated)	Threshold for TE estimation				
Ireland (2017)	Yes - EU Directive	Yes	Yes	Transfers of public resources that: a) reduce tax obligations with respect to a benchmark tax (rather than by direct expenditure) or b) provisions of tax legislation that reduce or postpone revenue for a comparatively narrow population of taxpayers relative to the tax base.	Defining what is the "normal" or "benchmark" tax code against which the nature and scale of TEs is to be measured is itself difficult, as is placing a boundary on the concept of "a comparatively narrow population", as all three are open to some interpretation.	2015 (2004)[3]	Does not apply[4]	No	167 (95)	n.a.	Yes	Tax base | Beneficiaries	Yes	Thresholds for the deepness in the evaluation of the provisions.
Israel (2017/18)	n.a.	Yes	No	n.a.	n.a.	n.a. (n.a.)	t+1 - t+2	No	66 (49)	n.a.	No	Tax base | *Function*	No	n.a.
Italy (2017)	Yes - Art. 1 del decreto legislativo 24 settembre 2015, n. 160, in attuazione dell'articolo 4 della Legge 11 marzo 2014, n. 23 (Legge delega sulla riforma tributaria)	Yes	Yes	Measures that reduce or postpone the tax liability of a specific group of tax payers or economic activity with respect to a reference (the benchmark).	The legal benchmark tax system is the reference against which to establish the nature and extent of any tax concession. It is set as the regular tax arrangements that apply to similar classes of taxpayers or types of activity. Reference to the 2016 report, providing a detailed discussion.	2016[5](2012)	t - t+2	Time limit and whether provisions have been in place for more than 5 years	338 (187)[6]	n.a.	Yes	Tax base | Type of TE | Function | Beneficiaries	No	Fiscal cost per capita.
Japan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia (2016)	Yes - EU Directive	No	No	Any law or practice that reduces or defer taxes to a group of taxpayers compared to the basic tax rate. Any deviation from the standard tax regime foreseen by the tax laws reducing a taxpayer's liability.	n.a.	2013 (2013)	t-2 - t	No	321 (321)	TEs accounting for at less than 0.05% of GDP are not reported	Yes	Tax base | Type of TE	No	TEs as % of total tax revenue and as % of GDP. Information on recent changes.
Luxembourg[15]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A.1: Tax Expenditure Reporting. Country Profiles

Country	Legal dimension			Definition		Temporal dimension			Estimation		Description	Classification	Evaluation	Other information
	Legal requirement	Link to Budget	Legal reference	TE definition	Benchmark definition	Year of first report (Year since when estimates are available)	Period covered	Time frame	Number of TEs identified (estimated)	Threshold for TE estimation				
Mexico (2017)	Yes - Ley de Ingresos de la Federación (Art. 30)	Yes	No	Indirect support, generally applied automatically, granted to specific sectors or to taxpayers through the tax system.	Conceptual approach. Detailed discussion by tax base.	2002 (2002)	t - t+1	No	105 (105)	n.a.	Yes	Tax base | Type of TE	Yes	TEs as % of GDP.
Netherlands (2017)	Yes - EU Directive	Yes	No	Government expenditure that comes in the form of a loss or deferment of tax receipts, resulting from a provision in the law to the extent that this provision is not in accordance with the primary structure of the tax law.	The benchmark is the most neutral reference to the actual tax goal to raise taxes to finance government expenditures, in such a way that the distribution of the tax burden is balanced.	1987 (1998)	t-4 - t+1	Expiry date	125 (100)	TEs smaller than 5 million EUR are not estimated	No	Tax base | Function	Yes	Average annual percentage growth between t-4 and t+1, information of endogenous growth.
New Zealand (2017)	No	Yes	No	Features of the tax system that reduce an entity's tax obligation to give effect to policy other than to raise revenue.	n.a.	2010[7] (2008/09)	t-6 - t-1	Whether a provision is permanent.	51 (10)	n.a.	Yes	Tax base | Type of TE | Policy goal	No	For t-4, t-3 and t-2 they provide both, forecasts and actual values.
Norway (2017)	Yes - (TBC)	No	No	Tax exemptions and special tax schemes that reduce the government revenues by providing advantages for the beneficiaries compared to be taxed according to the standard rules.	A detailed discussion by tax base is provided.	1999 (1998)	t-1 - t	No	45 (45)	n.a.	Yes	Tax base | Function	Yes	The Net Present Value is used to compute some TEs, e.g. Tax deferrals.
Poland (2015)	Yes - EU Directive	No	Yes	Transfers of public resources that are achieved by reducing the tax liability with respect to a benchmark tax.	The benchmark tax system follows a conceptual approach for income taxes. A reference law approach is adopted for the VAT and excise taxes.	2010 (2009)	t-6 - t-1	No	208 (96)	n.a.	Yes	Tax base | Function	Yes	Statistical analysis, only for aggregate data.

Table A.1: Tax Expenditure Reporting. Country Profiles

Country	Legal dimension			Definition		Temporal dimension			Estimation		Description	Classification	Evaluation	Other information
	Legal requirement	Link to Budget	Legal reference	TE definition	Benchmark definition	Year of first report (Year since when estimates are available)	Period covered	Time frame	Number of TEs identified (estimated)	Threshold for TE estimation				
Portugal (2014)	Yes - EU Directive	No	No	Revenue foregone by a reduction or elimination of the tax liability, in compliance with public functions, in line with constitutional obligations and with objectives wider than tax collection.	The benchmark has been defined in accordance with OECD guidelines and is discussed in detail.	2013[8](2013)	t-3 - t	No	Does not apply[9]	n.a.	No	Tax base | Type of TE | Function	No	n.a.
Russia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovak Republic (2016)	Yes - Ústavný zákon č. 493/2011 o rozpočtovej zodpovednosti	Yes	No	Special tax reliefs to support certain activities or taxpayers in special circumstances, which have an impact on the government's revenue and budget, have a clear policy goal, are not a structural TE included as part of the benchmark and are targeted.	The benchmark for individual taxes is the legislative standards in force in the year for which the budget is approved.	n.a (n.a.)	t-2 - t+3	No	47 (47)	n.a.	No	Tax base | Policy goal	No	n.a.
Slovenia[15]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Africa (2018)	n.a.	Yes	No	TEs are estimates of the total revenue forgone as a result of preferential tax treatment.	n.a.	2005/06 (2010/11)	t-6 - t-3	No	30 (30)	n.a.	No	Tax Base	No[10]	TEs as % of GDP. Time evolution.
South Korea (2018)	Yes - National Finance Act and Special Tax Treatment Control Law)	Yes	Yes	Reduction of national tax revenues resulting from the special provisions, as exceptions to the normal tax system, to reduce the tax burden of (a specific target group of) taxpayers.	A standard tax system applied equivalently to the tax payers regarding tax base, tax rate, tax period, tax treaties, etc.	2010 (2009)	t-1 - t+1	Yes	276 (254)	n.a.	Yes	Tax base | Type of TE | Function | Beneficiaries	No[11]	Information about changes of TEs due to newly expired or introduced provisions.

Table A.1: Tax Expenditure Reporting. Country Profiles

Country	Legal dimension			Definition		Temporal dimension			Estimation		Description	Classification	Evaluation	Other information
	Legal requirement	Link to Budget	Legal reference	TE definition	Benchmark definition	Year of first report (Year since when estimates are available)	Period covered	Time frame	Number of TEs identified (estimated)	Threshold for TE estimation				
Spain (2017)	Yes - Constitución española, 1979 (Art. 134.2)	Yes	Yes	A deviation from the benchmark that targets a specific group, activity, sector or region, that can be modified or eliminated by the tax law, etc.	The benchmark is defined as the stable configuration of the tax liability.	1996 (1995)	t	No	95 (95)	n.a.	Yes	Tax base | Type of TE | Beneficiaries	No	Variation since t-1 (in %), TE as % of total TE, data by function only for aggregate data.
Sweden (2017)	Yes - Budgetlagen (2011:203), (10 kap. 4 §)	Yes	Yes	Reduction of the tax liability for a particular group or category of taxpayers compared to the norm or benchmark.	A detailed discussion by tax base is provided.	2005 (2004)	t-1 - t+2	No	174 (113)	n.a.	Yes	Tax base | Function	Yes	Distinction between TEs with a policy goal and those arising as result of the practical management of the tax system, i.e. for administrative reasons such as simplicity, legitimacy or to avoid unacceptable consequences for the individual. TEs as % of specific tax revenue, only aggregated data.
Switzerland (2011)	Yes - Loi sur les Subventions, 1990	No	No	Any departure from the legal norm is considered as a TE.	A detailed discussion of the benchmark is provided.	2011[12](*Varies*)[13]	Does not apply[13]	No	192 (70)	n.a.	No	Tax base | Type of TE | Beneficiaries	No	Estimates using consumption as an alternative benchmark (for CIT and PIT).
Turkey (2017)	No	Yes	Yes	Tax revenue loss arising from a legal provisions deviating from the standard tax structure stipulated by law, and provided as a privilege over general regulations in order to achieve certain economic and social goals.	n.a.	2016[14](2015)	t-1 - t+3	No	222 (183)	n.a.	Yes	Tax base | Function	No	Information regarding the quality of the estimates (approximate, good or very good) is provided. Classification by policy goal, only aggregated data.
United Kingdom (2017)	Yes - EU Directive	No	No	Tax reliefs aiming to help or encourage particular types of individuals, activities or products for economic or social objectives.	n.a.	2013 (2012)	t-4 - t	No	424 (185)	n.a.	No	Tax base | Type of TE	Yes	Differentiation between TEs and structural reliefs, i.e. reliefs that can reasonably be regarded (or partly regarded) as an integral part of the tax structure.

Table A.1: Tax Expenditure Reporting. Country Profiles

Country	Legal dimension			Definition		Temporal dimension			Estimation		Description	Classification	Evaluation	Other information
	Legal requirement	Link to Budget	Legal reference	TE definition	Benchmark definition	Year of first report (Year since when estimates are available)	Period covered	Time frame	Number of TEs identified (estimated)	Threshold for TE estimation				
United States (2018)	Yes - Congressional Budget Act, 1974 (Public Law 93–344)	Yes	No	Revenue losses due to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability. Identification and measurement depends on the baseline tax system against which the actual tax system is compared.	Identification and measurement of TEs depends crucially on the baseline tax system against which the actual tax system is compared. TE estimates are patterned on a comprehensive income tax, which defines income as the sum of consumption and the change in net wealth in a given period of time. Two baseline concepts—the normal tax baseline and the reference tax law baseline—are used to identify and estimate TEs. A detailed discussion is provided.	1967 (1994)	t-2 - t+8	Expiry date	167 (167)	All estimates are rounded to the nearest 10 million USD. Provisions with estimates that rounded to zero in each year are not reported.	Yes	Tax base | Function	No	Present value estimates are provided for tax deferrals.

1. The 2003 report mentions estimations for previous years, but it was impossible to find them.
2. Since 2007, only the changes to existing TEs and new TEs are estimated - Yearly updates are available here: `https://www.skm.dk/skattetal/statistik/skatteudgifter/skatteudgifter-samlet-liste-ultimo-2017`.
3. Only estimates for the latest available and the previous years are published. In the 2017 report, estimates were in most cases for 2015 and 2014.
4. TE estimates are available since 2004, although not as part of the official TE report - see `https://data.gov.ie/dataset/costs-of-tax-expenditures-credits-allowances-and-reliefs`.
5. The first comparable report was published in 2016. Previous reports have been published since 2010.
6. The report also identifies (estimates) 170 (59) local TEs, i.e. those referring to the territorial authorities of the different governments.
7. The first report since 1984 was published in 2010.
8. The 2013 report mentions that "efforts started in 1989", although no additional information is provided.
9. Estimates based on aggregated data rather than provision by provision.
10. The report states that "Government has started assessing the merit of these tax expenditures, along with the business incentives offered more broadly." The report explicitly mentions the Department of Planning, Monitoring and Evaluation as well as the Department of Trade and Industry and the National Treasury, but no links or concrete references are provided.
11. As discussed in Section 2, Korea has a framework for TE evaluation in place. However, the TE report does not provide any information on it and, hence, Korea is classified as not reporting on the effectiveness and efficiency of TEs.
12. The 2011 report mentions that an estimation was going to be published in the second half of 2008.
13. Only the latest available estimate is published.
14. The 2016 report mentions that a report was published (in Turkish) in 2007, but it was not possible to find it.
15. As EU member state, the country is legally obliged to report on TEs.

Table A.2: Source of Tax Expenditure Report by Country

Country	Institution / Link
Country	Institution
	Link
Argentina	Ministerio de Hacienda (The Treasury)
	https://www.economia.gob.ar/sip/dniaf/Gastos_tributarios_2016-18.pdf
Australia	The Treasury
	https://treasury.gov.au/publication/2017-tax-expenditures-statement/
Austria	Bundesministerium für Finanzen (Ministry of Finance)
	https://www.bmf.gv.at/budget/das-budget/Foerderungsbericht_2016.pdf?5te3ig
Belgium	Chambre des Représentants (Chamber of Representatives)
	https://finances.belgium.be/fr/statistiques_et_analyses/chiffres/inventaire_depenses_fiscales_federales
Brazil	Ministerio da Fazenda (Ministry of Economic Affairs)
	http://idg.receita.fazenda.gov.br/dados/receitadata/renuncia-fiscal/previsoes-ploa/arquivos-e-imagens/demonstrativos-dos-gastos-tributarios-dgt
Canada	2lDepartment of Finance
	https://www.fin.gc.ca/taxexp-depfisc/2017/taxexp17-eng.asp
Chile	Servicio de Impuestos Internos (Internal Revenue Service)
	http://www.sii.cl/aprenda_sobre_impuestos/estudios/gasto_tributario.htm
China	-
	-
Czech Republic	-
Denmark	Skatteministeriet (Ministry of Taxation)
	https://www.skm.dk/skattetal/statistik/skatteudgifter
Estonia	Rahandusministeerium (Ministry of Finance)
	https://www.rahandusministeerium.ee/et/system/files_force/document_files/res_2018-2021_eng.pdf?download=1
Finland	Valtiovarainministeriö (Ministry of Finance)
	https://vatt.fi/documents/2956369/3875431/Verotuet+2016+2018/3b464a40-50e3-4a90-8904-73c5b6f2b0c0
France	Ministère d'Economie, des Finances et de Comptes Publiques (Ministry of Economics Affairs, Finance and Public Accounts)
	https://www.performance-publique.budget.gouv.fr/documents-budgetaires/lois-projets-lois-documents-annexes-annee/exercice-2018#.W9mr-2hKg2w
Germany	Bundesministerium des Finanzen (Ministry of Finance)
	https://www.bundesfinanzministerium.de/Content/DE/Downloads/Broschueren_Bestellservice/2017-09-21-subventionsbericht-langfassung.html
Greece	Ministry of Finance
	Link n.a. | The 2018 TE report is available upon request.
Hungary	Parlament
	http://www.parlament.hu/irom40/15381/adatok/altindmell/adokedvezmenyek.pdf
Iceland	Fjármála- og efnahagsráuneyti (Ministry of Finance and Economic Affairs)
	http://www.althingi.is/altext/pdf/148/s/0001.pdf
India	Ministry of Finance
	https://www.indiabudget.gov.in/ub2018-19/rec/annex7.pdf
Indonesia	-
	-
Ireland	Department of Finance
	http://www.budget.gov.ie/Budgets/2018/Documents/Report_on_Tax%20_Expenditures_2017.pdf
Israel	Ministry of Finance
	http://mof.gov.il/en/PolicyAndBudget/Documents/StateBudgetProposal_2017-2018.pdf

Table A.2: Source of Tax Expenditures Reports

Country	Institution Link
Italy	Ministero dell'Economia e delle Finanze (Ministry of Economics Affairs and Finance) http://www.rgs.mef.gov.it/_Documenti/VERSIONE-I/Attivit--i/Bilancio_di_previsione/Bilancio_finanziario/2018/Disegno-di-Legge-di-Bilancio/Allegato-t-18-20/2018-DLB-04-AT-000-Entrata.pdf
Japan	- -
Latvia	Finanšu ministrijas (Ministry of Finance) http://www.fm.gov.lv/files/nodoklupolitika/2015/NODOKLU%20ATVIEGLOJUMU%20NOVERTEJUMS%20PAR%202015.pdf
Luxembourg	- -
Mexico	Secretaría de Hacienda y Crédito Público (Office for the Treasury and Public Credit) https://www.gob.mx/shcp/documentos/presupuesto-de-gastos-fiscales-2017
Netherlands	Ministerie van Financiën (Ministry of Finance) http://rijksbegroting.nl/2018/kamerstukken,2017/9/20/kst237146_6.html
New Zealand	The Treasury http://www.treasury.govt.nz/budget/2017/taxexpenditure
Norway	Det Kongelige Finansdepartment (The Royal Finance Department) https://www.statsbudsjettet.no/upload/Statsbudsjett_2017/dokumenter/pdf/skatt.pdf
Poland	Ministerstwo Finansów (Ministry of Finance) http://www.finanse.mf.gov.pl/abc-podatkow/preferencje-podatkowe-w-polsce
Portugal	Ministero das Financas (Ministry of Finance) https://www.portugal.gov.pt/media/1368449/20140317%20Rel%20Despesa%20Fiscal%202014.pdf
Russia	- -
Saudi Arabia	- -
Slovak Republic	Ministerstvo financií (Ministry of Finance) http://www.finance.gov.sk/Default.aspx?CatID=11224
Slovenia	- -
South Africa	Ministry of Finance http://www.treasury.gov.za/documents/national%20budget/2018/default.aspx
Korea	National Assembly http://www.assembly.go.kr/assm/assemact/account/account0101/assmBudget/budgetUserList.do
Spain	Ministerio de Hacienda y Funcion Publica (Ministry of Finance and Civil Service) http://www.sepg.pap.minhafp.gob.es/sitios/sepg/es-ES/Presupuestos/PresupuestosEjerciciosAnteriores/Paginas/PresupuestosEjerciciosAnteriores.aspx
Sweden	Finansdepartementet (Department of Finance) http://www.regeringen.se/rattsdokument/skrivelse/2017/04/skr.-20161798/
Switzerland	Département Fédéral des Finances (Federal Department of Finance) http://www.artias.ch/wp-content/uploads/2012/02/all%C3%A9gements-fiscaux-rapport-2011.pdf
Turkey	Maliye Bakanlığı (Ministry of Finance) http://www.gep.gov.tr/faces/templates/Raporlar.xhtml?kategori=Vergi+Harcama+Raporlar%C4%B1
United Kingdom	Her Majesty's Revenue and Customs https://www.gov.uk/government/statistics/main-tax-expenditures-and-structural-reliefs
United States	The Treasury https://home.treasury.gov/policy-issues/tax-policy/tax-expenditures