Tax Incentives and the Global Minimum Corporate Tax

RECONSIDERING TAX INCENTIVES AFTER THE GLOBE RULES

OECD
BETTER POLICIES FOR BETTER LIVES

Tax Incentives and the Global Minimum Corporate Tax

Reconsidering Tax Incentives after the GloBE Rules

Please cite this publication as:

OECD (2022), *Tax Incentives and the Global Minimum Corporate Tax: Reconsidering Tax Incentives after the GloBE Rules*, OECD Publishing, Paris, https://doi.org/10.1787/25d30b96-en.

Photo credits: Cover © Shutterstock/metamorworks

Foreword

In October 2021, the international community agreed a landmark deal involving a two-pillar solution to address the tax challenges arising from the digitalisation and the globalisation of the economy. As part of this plan, Pillar Two introduces domestic rules that establish a global minimum effective corporate tax rate of 15% for large multinational enterprises (MNEs) and a subject-to-tax rule which is a treaty-based rule that applies to royalties, interest and other categories of related party payments that are taxed below a nominal rate of 9%. These provisions will have important implications for the use of tax incentives around the world.

This report provides several concrete considerations for countries to consider as they prepare for the implementation of Pillar Two. Wherever tax incentives drive an MNE's effective tax rate (ETR) in a jurisdiction below 15%, the MNE would potentially be subject to Top-up Taxes under the GloBE Rules, a core component of Pillar Two. These rules will, therefore, have an impact on the effectiveness of certain tax incentives.

The design of tax incentives will require careful reassessment in a post-Pillar Two environment. This report supports policymakers in reassessing their tax incentives, building on the OECD's ongoing work in the area of tax incentives and ETRs. It considers the existing use of tax incentives in developed and developing countries, analyses key provisions of the GloBE Rules and shows how they may affect different types of tax incentives differently. The report concludes with several policy considerations for jurisdictions.

The report was prepared at the request of the Indonesian G20 Presidency, as part of the OECD's ongoing efforts to support the implementation of the two-pillar solution. It has been prepared for presentation to the G20 Finance Ministers and Central Bank Governors at their meeting to be held in October 2022.

This report was produced by the Tax Policy and Statistics Division of the OECD's Centre for Tax Policy and Administration. The underlying analysis and the drafting of the report was led by Ana Cinta González Cabral and was supervised by Pierce O'Reilly and David Bradbury, under the leadership of Pascal Saint-Amans. The report benefitted from inputs from Alessandra Celani, Luisa Dressler, Pierce O'Reilly, Juan Carlos Perez Peña, and Manuel Vogler. The authors would like to thank Andrew Auerbach, Félicie Bonnet, Melinda Brown, Bert Brys, Ben Dickinson, David Gaukrodger, Tibor Hanappi, Steven Kohart, Ana Novik, John Peterson, Joachim Pohl, Achim Pross, Joseph Stead, and Martin Wermelinger for their comments. The authors would also like to thank Shafik Hebous and Ruud de Mooij from the International Monetary Fund; Richard Bolwijn, Bruno Casella, Hamed El Kady and James Zhan from the United Nations Conference on Trade and Development; the delegates of Working Party No. 2 on Tax Policy Analysis and Tax Statistics, and members of the Platform for Collaboration on Tax for helpful comments and suggestions.

Table of contents

Foreword 3

Executive summary 6

1 Overview 9

2 Tax incentives use and design 11
2.1. Use of tax incentives around the world 11
2.2. Tax incentive design: impacts on scope and generosity 14
2.3. Balancing effective investment promotion and public revenues 18

3 Key aspects of GloBE 24
3.1. Scope 25
3.2. GloBE Income 25
3.3. Outline of GloBE 26
3.4. Covered Taxes 26
3.5. GloBE ETR and Top-up Tax 27
3.6. Determination of the Constituent Entity liable for the Top-up Tax 28

4 The GloBE Rules on the use of tax incentives 29
4.1. Jurisdiction-level factors 30
4.2. Entity-level factors 31
4.3. Tax incentive-level factors 32

5 GloBE and tax incentive design 33
5.1. The GloBE ETR calculation and the tax incentive instrument 35
5.2. The impact of economic substance on GloBE outcomes 41

6 Options for policymakers 47
6.1. Time to reconsider and revisit tax incentives 47
6.2. Tax reform strategies 48
6.3. Use of tax incentives after the implementation of the GloBE Rules 50
6.4. Short-term action 52
6.5. Strengthening government capacities and supporting revenue mobilisation 53

7 Conclusion 55

References 56

Annex A. OECD ITID 63

Annex B. Methodology 65

Annex C. Additional charts 73

Tables

Table 1. Mapping the impact of tax incentive instrument design in the GloBE ETR calculation 37

Table B.1. Variable definitions 66
Table B.2. Calibration parameters 70
Table B.3. Summary Statistics of SBIE to profits by sector 71
Table B.4. Tax incentives parameters 72

Table A.1. Covered countries in the OECD ITID as of July 2022 64

Figures

Figure 1. Tax incentives, a common policy tool across developed and developing economies 13
Figure 2. Foreign affiliates of MNEs above the EUR 750 threshold face low ETRs across regions 14
Figure 3. Prominent use of income-based tax incentives among developing countries 15
Figure 4. In developing countries, tax incentives are often targeted to certain sectors and may include substance conditions 17
Figure 5. Tax expenditures from CIT incentives while opaque can be substantial 20
Figure 6. The complex governance of tax incentives in developing countries may impede tax reform and reduce accountability 22
Figure 7. Steps in determining a Top-up Tax liability for an MNE 25
Figure 8. Top-up tax calculation 28
Figure 9. A three-tiered framework to consider the interaction between the GloBE Rules and tax incentives 29
Figure 10. EATR pre- and post-GloBE using alternative tax instruments 38
Figure 11. EATR pre- and post-GloBE for QRTCs and other tax credits 40
Figure 12. EATR pre- and post-GloBE for accelerated depreciation provisions for tangible assets may be less affected by the GloBE Rules 42
Figure 13. The GloBE Rules have less of an impact where substance to profit ratios are high 43
Figure 14. MNE's activities and economic substance 44
Figure 15. Illustrating variation at the sectoral level: EATR post-GloBE with SBIE to GloBE Income ratio calibrated at the industry level 45

Figure A.1. Key dimensions of the OECD Investment Tax Incentives database 63
Figure C.1. Period-by-period total taxes due and GloBE ETR 73
Figure C.2. Accelerated depreciation or immediate expensing provisions for tangible assets 74
Figure C.3. Accelerated depreciation for intangible assets for temporary differences that do not revert within five years 75
Figure C.4. EATR pre- and post-GloBE using alternative tax instruments 76
Figure C.5. EATR pre- and post-GloBE for accelerated depreciation provisions 77

Executive summary

In October 2021, the G20 Leaders Declaration welcomed the historic Two-Pillar international tax package, agreed by more than 135 members of the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting. Pillar Two of this package involves a global minimum effective corporate tax rate of 15% for large MNEs, which seeks to respond to continued concerns regarding profit shifting, harmful tax competition, and a damaging 'race-to-the-bottom' on corporate tax rates. This report, which has been prepared at the request of the Indonesian G20 Presidency, considers the impact of Pillar Two on the use and design of tax incentives, with a particular focus on developing countries.

Pillar Two places multilaterally agreed limits on tax competition and will ease the pressures on jurisdictions to offer tax incentives. Where a multinational enterprise's (MNE's) effective tax rate (ETR) in a jurisdiction falls below 15%, the MNE would potentially be subject to top-up taxes under the Global Anti-Base Erosion (GloBE) Rules, a core component of Pillar Two. In the past, jurisdictions have sought to attract investment through tax incentives, many of which have been found to be wasteful and ineffective, particularly in developing countries. Pillar Two will reduce the incentives for MNE's to engage in profit shifting and will support jurisdictions in achieving a better balance between using tax policy to attract investment and mobilising domestic revenues.

Jurisdictions will continue to be able to use the tax system to attract investment under the GloBE Rules, but the rules will discourage the use of damaging tax incentive policies. Corporate Income Tax (CIT) incentives are widely used across jurisdictions in pursuit of a variety of goals. However, if poorly designed they can be of limited effectiveness, while resulting in substantial revenue losses. The GloBE Rules will impact the use of different tax incentives in different ways, with some incentives only being affected to a limited extent if at all. Where tax incentives are successful in attracting tangible investment and jobs, the rules will have a more limited impact. However, where tax incentives allow MNEs to generate substantial low-taxed profits in a jurisdiction without providing substantial tangible investment or jobs, the GloBE Rules will help protect the corporate tax base.

The revenues generated by Pillar Two can be used by jurisdictions to support economic development or to improve their overall investment environments. For example, through spending in areas such as physical infrastructure or labour force skills development. Such non-tax factors are valued by investors and will become increasingly important in a post-Pillar Two environment, where jurisdictions seek to improve their competitiveness by relying on policies beyond tax.

Jurisdictions should begin preparing for the arrival of Pillar Two now, including through a thorough assessment of the tax incentives currently in place. The introduction of Pillar Two presents a unique opportunity to engage in tax incentive reform, especially for developing and emerging economies. Failing to act or moving too slowly will result in foregone tax revenues, as other jurisdictions move to impose top-up taxes. In some jurisdictions, tax incentive reform may be challenging to implement, due to the complex governance of tax incentives. In considering any reform options, jurisdictions should also consider stabilisation clauses in contracts and obligations, which may result from certain investment agreements.

The design of tax incentives will require careful reconsideration in a post-Pillar Two environment, as the GloBE Rules will not affect all taxpayers or all tax incentives in the same ways and to the same extent. This report aims to support jurisdictions in reconsidering their tax incentives in a post-GloBE environment. Using an ETR framework, this report analyses the interaction of tax incentives and the GloBE Rules and sets out a framework to guide jurisdictions as they prepare for Pillar Two. This framework can support the granular analysis required to understand the jurisdiction-specific impact of the GloBE Rules on tax incentives and to inform the appropriate policy responses.

In the more immediate term, jurisdictions should consider the introduction of a qualified domestic minimum top-up tax (**QDMT).** The introduction of a QDMT in the immediate term can ensure that jurisdictions can tax low-taxed income arising domestically before that income is subject to top-up taxes imposed by other jurisdictions. The impact of introducing a QDMT on competitiveness should be limited, as the income would otherwise be taxed by other jurisdictions under the GloBE Rules. Even where a QDMT has been implemented, it is likely that there will still be a case for tax incentive reform as some incentives may become ineffective.

Key policy messages

The report, prepared at the request of the Indonesian G20 presidency, provides a number of concrete considerations for developing countries to consider as they prepare for the implementation of Pillar Two:

- **Governments should exercise caution when considering implementing new tax incentives, or entering into new investment contracts, specifically with stabilisation clauses** in the period leading up to the implementation of Pillar Two.
- **As they consider tax incentive reform, jurisdictions should examine which taxpayers are benefiting from different incentives, and how different taxpayers and tax incentives will be affected by the GloBE Rules, noting that**:
  - **Tax incentives can still provide benefits for firms that are not in-scope of the GloBE Rules**, such as domestic firms or subsidiaries of MNE groups with revenues below EUR 750 million.
  - **Firms with a greater amount of substance in a given jurisdiction will be less affected than others**, as they will benefit from the substance-based income exclusion (SBIE) and will face a smaller increase in effective taxation as a result of the introduction of the GloBE Rules.
  - **Tax incentives that are better targeted are likely to be less affected by the GloBE Rules than incentives that are very broad, all else equal**. Incentives that are narrowly targeted to certain categories of income or expenditure may be less affected due to the blending of MNEs' income within a jurisdiction.
  - **Expenditure-based tax incentives that target payroll or tangible assets may be less affected than income-based tax incentives.** Such provisions require expenditures that are part of the SBIE, which excludes a share of profits from top-up taxes based on the level of economic substance.
  - **Tax incentives that allow the faster recovery of the cost of tangible assets will be unaffected by the GloBE Rules**. These include immediate expensing or accelerated depreciation for investment in tangible assets.
  - **The GloBE Rules follow financial accounting by treating cash grants and refundable tax credits as income, which means that these types of incentives are less likely to be affected.** While these instruments may allow jurisdictions to continue to offer incentives to MNEs, jurisdictions should exercise caution due to their potentially significant fiscal impact for developing countries.

This report suggests that the design of the GloBE Rules can provide new impetus for jurisdictions to engage in tax incentive reform that will make their incentive mix more effective in attracting real investments in a post-GloBE environment, while discouraging the use of incentives that provide windfall gains to MNEs through very low levels of taxation.

The framework developed in this report can provide a basis for jurisdictions to carry out their own analysis of their incentives, with the OECD standing ready to assist developing countries where such assistance is requested.

1 Overview

1. **The Global Anti-Base Erosion (GloBE) Rules, a key component of Pillar Two, imposes a minimum effective level of taxation of 15% for MNEs that meet the EUR 750 million threshold.** The introduction of the GloBE Rules will help protect countries' revenue bases against Base Erosion and Profit Shifting (BEPS) practices, reducing incentives for MNEs to shift profits and easing pressures on jurisdictions to introduce often excessively generous tax incentives to compete for investment. At the same time, the GloBE Rules may limit the effectiveness of certain tax incentives where they reduce firms' effective tax rates (ETRs) below 15%. As tax incentives are commonly used instruments across both developed and developing economies in pursuit of a variety of goals, governments will need to consider the implications of the GloBE Rules for their domestic tax policies. Given the greater reliance on corporate income tax (CIT) revenues and the extensive use of tax incentives this question becomes even more central to developing economies. Key issues that need to be considered include how the GloBE Rules will affect the use of tax incentives, the extent to which jurisdictions, investors operating therein, and tax incentives might be affected and the policy options available to governments, in particular in developing economies, to prepare their policy environment for GloBE implementation.

2. **This report, prepared at the request of the Indonesian G20 presidency, analyses the implications of the GloBE Rules for tax incentive design with a focus on developing and emerging economies.** The goal of the report is threefold. First, it seeks to highlight the different dimensions policymakers should consider in assessing the impact of the GloBE Rules on their jurisdictions. The report notes that different jurisdictions will be affected differently, requiring a jurisdiction-specific response. Second, it seeks to illustrate that the impact will depend heavily on tax incentive design. Some tax incentives may contain design features that make them less affected by the GloBE Rules, all else equal. This may have implications for tax incentive design going forward. Third, accounting for the extent to which the jurisdiction might be affected and the tax incentives used, it highlights the importance of jurisdiction actions to prepare for the introduction of GloBE by reforming inefficient tax incentives and considering the introduction of Qualified Domestic Minimum top-up Taxes (QDMT). In doing so, it urges jurisdictions to base reform efforts on sound policy principles and establish priorities in their reform process. The introduction of a QDMT might allow them to capture low-taxed income in the jurisdiction that would otherwise be taxed by others. Moving early will help maximise opportunities for domestic revenue mobilisation among developing and emerging economies.

3. **While this report focuses on the GloBE Rules, Pillar Two also consists of the subject to tax rule (STTR)**, which applies to certain payments that are taxed below a nominal rate of 9% such as royalties or interest. The STTR will also have implications for the use of certain tax incentives, especially those tax incentives that provide preferential tax rates to certain types of income and that may give rise to nominal tax rates below 9%. Since the design of the STTR is still under discussion in the OECD/G20 Inclusive Framework on BEPS, its interaction with tax incentive use is not explicitly discussed in this report but is left for future work.

4. **The report is organised as follows.** To set the scene, Section 2 provides an account of tax incentive use and design across selected developed and developing economies and Section 3 provides a brief description of the GloBE Rules. Section 4 presents a framework that discusses the heterogeneous effects of the GloBE Rules based on jurisdiction-specific, investor-specific and tax incentive-specific

factors. Section 5 illustrates the impact of GloBE on different tax incentive designs. Section 6 discusses the implications of the GloBE Rules for tax incentive design in a post-GloBE environment and outlines possible policy actions that jurisdictions may wish to consider in the run-up to Pillar Two implementation.

2 Tax incentives use and design

5. **The use of tax incentives is widespread across the world, but understanding their impacts is complex.** This section provides an overview of tax incentive use and design across the world, with a focus on developing countries. Section 2.1provides an overview of the use of tax incentives drawing on the most up-to-date data available. The section shows that tax incentives are widely and increasingly used, and can often result in MNEs having ETRs below 15%. Section 2.2highlights the complexity of many tax incentive designs, which means that the generosity and effectiveness of different incentives varies widely. It also highlights the opacity of many incentives, not least where they are not explicitly written in the law but are the subject of private contracts and arrangements with MNEs. Section 2.3reflects on the complex governance of tax incentives in developing economies which paired with outside political economy pressures to maintain certain tax provisions and the lack of understanding on their effectiveness can be a barrier to reform.

2.1. Use of tax incentives around the world

6. **Tax incentives are widely used among developed and developing economies to promote and attract economic activity in their jurisdictions.** Tax incentives can be introduced for a range of reasons. They can be used to address certain market failures and encourage investments that bring positive spillovers to the rest of the economy (OECD, 2022[1]), such as investment in research and development (R&D) and innovation, in high-technology industries or to support the green transition. Tax incentives can be used to encourage certain behaviours, or they can be a tool to deliver fiscal stimulus. Many governments used tax incentives as a means of supporting businesses through the COVID-19 pandemic (OECD, 2020[2]). For many developing and emerging economies, tax incentives play a significant role as part of the industrial and economic development strategy. Tax incentives can be used to promote certain activities, sectors, investment in public goods or investment in specific geographic locations. Developing countries also use tax incentives extensively to attract foreign direct investment (FDI), which represents a key source of external finance for development that can bring capital, technology and know-how to the jurisdiction that can bring positive spillovers to the domestic economy in certain circumstances (Harrison and Rodríguez-Clare, 2010[3]). However, as will be discussed in Section 3.3, poorly designed tax incentives can fail to achieve their intended goals and can result in windfall gains to investors, and the loss of much needed public revenues. Striking the right balance between creating an attractive climate for investment while protecting public finances is a key challenge for tax incentive policies in many developing countries.

7. **The proliferation of tax incentives over time may be linked to competition to attract and retain mobile capital.** With the exception of South Asia, the share of jurisdictions in developing countries introducing new tax incentives or making them more generous between 2009 and 2015 either surpassed or equalled those repealing their incentives or making them less generous (World Bank, 2017[4]) (Panel A, Figure 1). Among OECD countries, the number of jurisdictions in OECD offering support for innovation-related income, mainly through intellectual property regimes, is five times larger in 2021 than it was in 2000

and the generosity of tax incentives has also increased (Panel B1 and B2 in Figure 1).[1] While these trends may also be related to changes in governments' preferences for the use of tax support as opposed to other forms of support, evidence suggest that governments respond strategically to changes in tax policy in other jurisdictions (Devereux, Lockwood and Redoano, 2008[5]; Klemm and Van Parys, 2012[6]). The increasing use of tax incentives, and in particular of income-based tax incentives, should be seen in the context of the global decline in statutory and effective CIT rates.[2] This has often been described as a 'race to the bottom' (Devereux et al., 2002[7]; OECD, 2020[8]).

8. **In many parts of the world, foreign affiliates of MNEs face ETRs that can be well below 15%, even in jurisdictions with high statutory tax rates.** These low ETRs at least partly arise due to tax incentives. Based on anonymised and aggregated country-by-country report (CbCR) data, Figure 2 shows the share of jurisdictions by region by groups according to the statutory tax rate (STR) and the ETR of MNE Group affiliates. While very few regions offer STRs below 15%, the number of jurisdictions in which the average ETRs faced by MNEs is below 15% is substantial. While low ETRs can result from BEPS activities, they can also result from the host jurisdiction providing reduced tax rates, tax holidays or other base narrowing provisions such as investment tax allowances. Average rates mask substantial heterogeneity. Pockets of low-tax profits can also be found in jurisdictions where profits are, on average, taxed at a rate of above 15%. An upper bound figure based on CbCR data suggests that 54% of total profits of MNEs above the EUR 750 million threshold in 2018 were subject to an ETR below 10%.[3] In addition, as opposed to purely domestic firms, MNEs have the possibility to locate their activities and operate across the globe. By strategically locating activities, MNEs may be able to obtain a tax advantage, for example by accessing preferential tax treatment in lower tax jurisdictions. At the global level, it is likely that MNEs are accessing greater preferential tax treatment than if coordination existed. In addition the loss of public revenues, preferential tax treatment can result in an uneven playing field between MNEs and non-MNEs, especially where the preferential tax treatment largely benefits MNEs who are also more likely to be able to lower their costs of investing through profit shifting channels (Sorbe and Johansson, 2017[9]; Bilicka, 2019[10]).

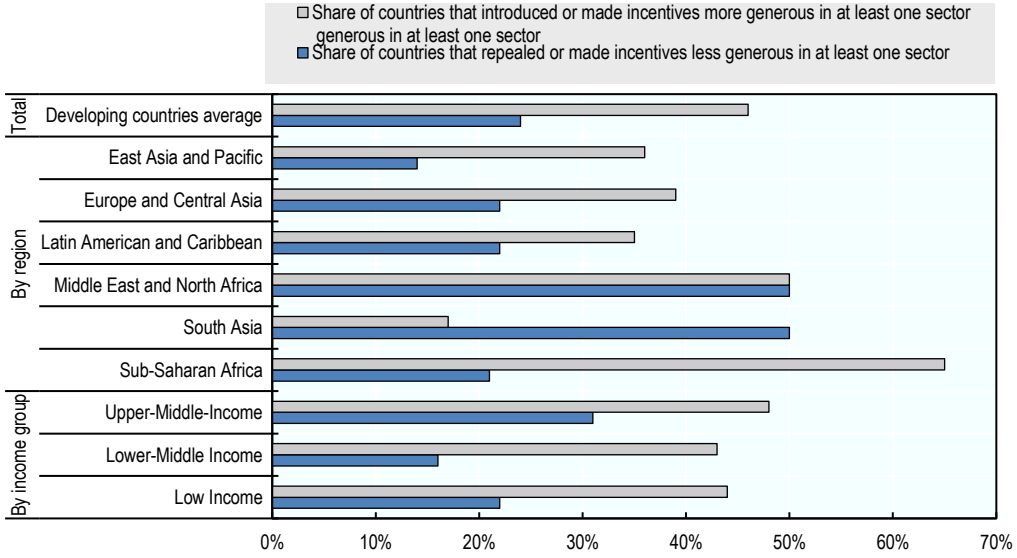
[1] The OECD R&D Tax Incentives Database contains a series of indicators reflecting the generosity of R&D tax incentives and revenue forgone from R&D tax incentives across 49 economies, including all OECD countries and EU countries. Complemented with indicators on direct government support to R&D, the database seeks to provide a complete picture of government support to business R&D (OECD, 2022[17]).

[2] Tax incentives that provide preferential tax treatment to the expenditure incurred by a firm are referred to as expenditure-based tax incentives. Examples of such incentives are investment tax allowances. Tax incentives that provide preferential tax treatment to the income derived from an investment are referred to as income-based tax incentives. Examples of such incentives are tax holidays or intellectual property regimes.

[3] This figure is based on Table IV of the anonymised and aggregated CbCRs and should be read as an upper bound as it may be affected by the double counting of dividends present in CbCR data. See disclaimer in OECD Corporate Tax Statistics (OECD, 2021[15]). Average ETRs in Figure 2. have been adjusted to eliminate the ETR faced by MNE's domestically in order to address double counting concerns, which may affect this rate. The same level of cleaning is not attainable for Table IV in its current form due to data aggregation. Similar figures are found in microdata studies using CbCR data, see Fuest, Hugger and Neumeier. (2022[86]) using CbCR microdata for MNEs with a presence in Germany.

Figure 1. Tax incentives, a common policy tool across developed and developing economies

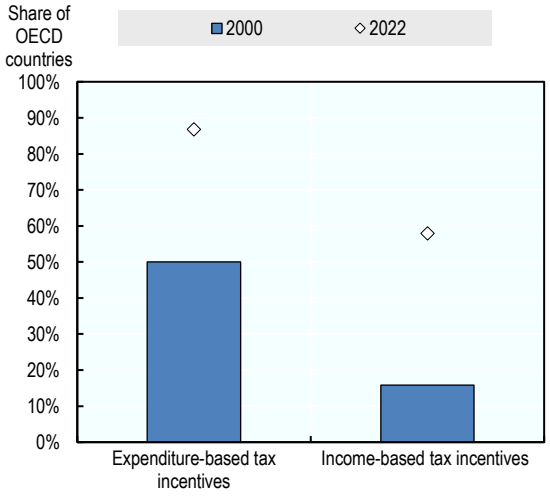
Panel A: Increasing use and generosity of tax incentives among developing countries, 2009-15



Note: The data features in the World Bank 2017/2018 Global Investment Competitiveness report and is based on data for 107 developing countries.
Source: World Bank Developing Country Tax Incentives database.

Panel B1: Increasing use of tax incentives for R&D and innovation among OECD countries

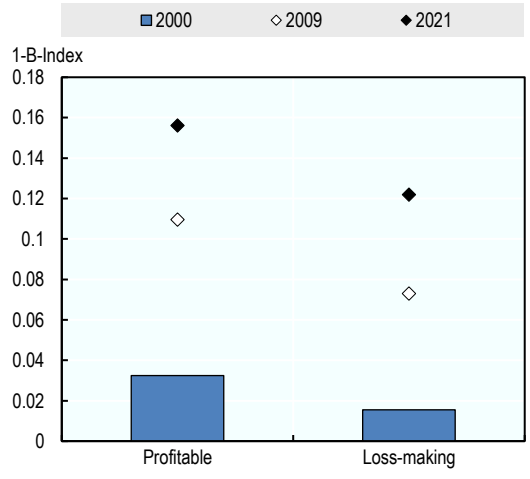
Share of OECD countries with at least one CIT incentive for R&D and innovation, by type of instrument



Source: OECD R&D tax incentives database and González Cabral, (Appelt and Hanappi, forthcoming[8])

Panel B2: Increasing generosity of tax support for R&D and innovation among OECD countries

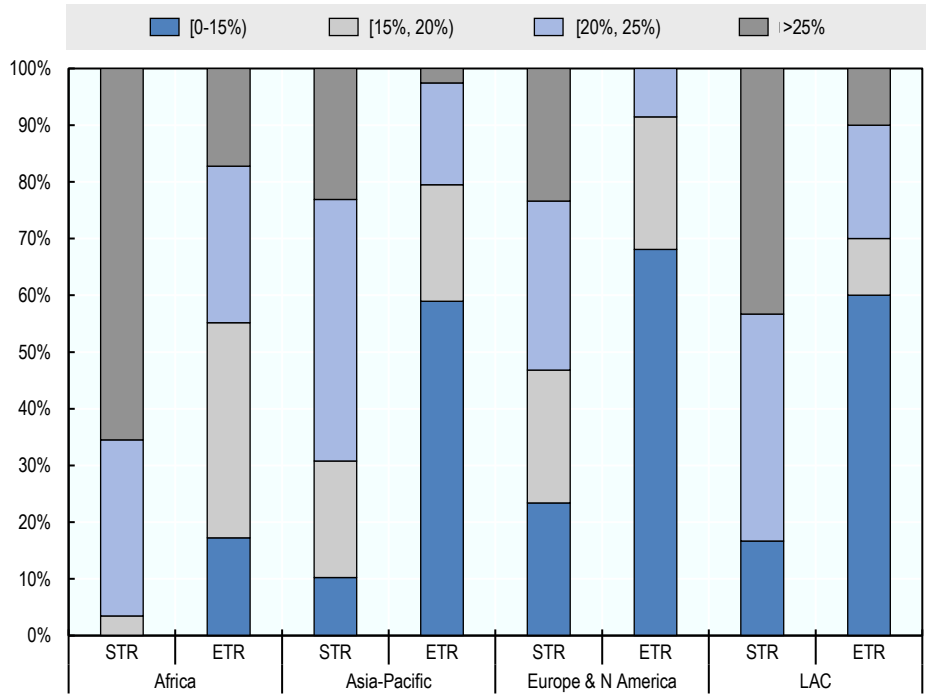
Increase in implied subsidy rates (1-B-Index) among OECD countries due to increases in generosity or introduction



Source: OECD R&D tax incentives database.

Figure 2. Foreign affiliates of MNEs above the EUR 750 threshold face low ETRs across regions

Share of jurisdictions in the region by bins of the statutory tax rate (STR) and effective tax rates (ETR), 2018



Note: This chart is based on Table I from 2018 country-by-country (CbC) reporting and are calculated based on the average ETR faced by foreign affiliates of MNEs above the EUR 750 million threshold in a given jurisdiction. Bilateral ETRs are capped between zero and the statutory tax rate to limit the effect on the average ETRs and relate to 2018 when at least 20 CbC reports are available or refer to the weighted ETR between 2017 and 2018 if in both years at least 20 CbC reports are available. The ETRs faced by MNEs domestically in a jurisdiction are not used to compute the average ETR as these are potentially affected by the double counting of dividends. Data refers to jurisdictions for which sufficient CbC reporting data is available. This represents 29 jurisdictions in Africa, 39 jurisdictions in the Asia-Pacific region, 47 jurisdictions in Europe and North America and 30 jurisdictions in LAC. Jurisdictions are then allocated to bins of the ETR or STR and by regions.
Source OECD.

2.2. Tax incentive design: impacts on scope and generosity

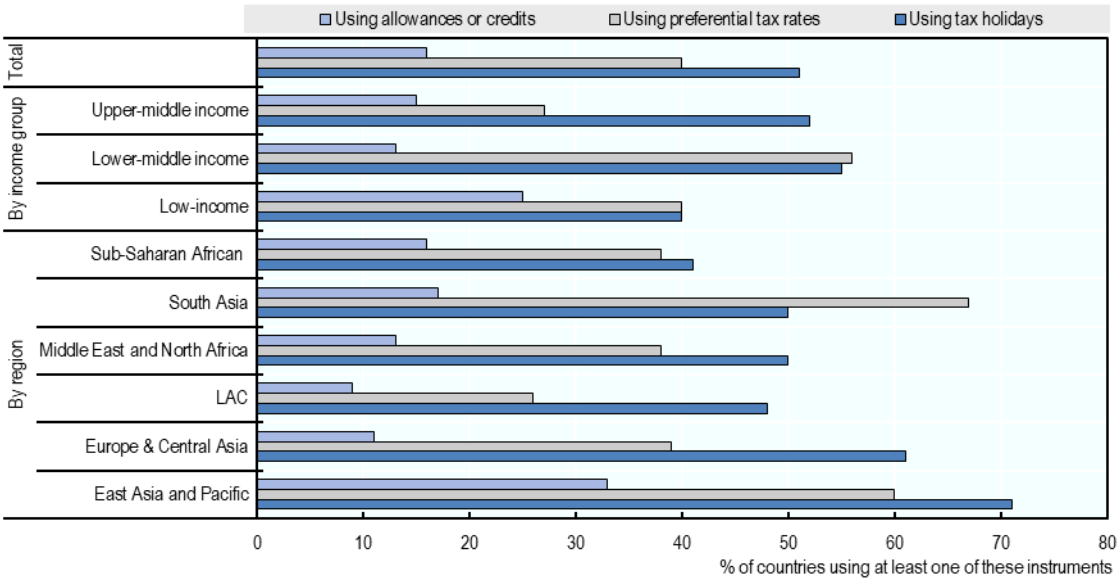
9. **The design of tax instruments varies across regions, with broadly targeted income-based tax incentives being prominently used among developing countries.** Reduced tax rates or tax holidays that fully exempt the obligation to pay CIT are more common tax instruments than investment tax allowances or tax credits among developing countries (Figure 3). The OECD Investment Tax Incentives database (ITID) covering recent information on the use of tax incentives across developing countries confirms these findings (Celani, Dressler and Wermelinger, 2022[12]). Accelerated depreciation provisions that allow for the faster recovery of the cost of an asset can also be quite common among developing countries, sometimes within certain sectors such as in agriculture or mining.[4] Income-based tax incentives

[4] In the OECD ITID, 78% of low income countries, 46% of lower middle income countries and 62% of upper middle income countries offer accelerated depreciation provisions in at least one sector. These figures are based on information on 48 countries. Among these 48 countries, 27 of them have 70 accelerated depreciation CIT incentives available as of 1 January 2021. The OECD ITID collects information about investment tax incentives at a granular

are better suited to attract profits or new investment than they are to induce incremental investment, in line with the motivation to attract FDI (Devereux and Griffith, 2003[13]). In contrast, developed countries appear to rely more on expenditure-based tax incentives such as accelerated depreciation provisions, investment tax allowances or credits than on broad-based income tax exemptions (Hanappi, 2018[14]; OECD, 2021[15]; James, 2013[16]; OECD, 2022[17]). Since 2011, the majority of new CIT incentives introduced across developed and developing economies were income-based tax incentives. Europe and North America followed by Latin American and the Caribbean (LAC) are the only regions where expenditure-based tax incentives still represented around 30% of newly introduced incentives (UNCTAD, 2022[18]).

Figure 3. Prominent use of income-based tax incentives among developing countries

Share of countries offering the tax instruments listed in at least one sector



Note: This chart is based on the database subjacent to the World Bank 2017/2018 Global Investment Competitiveness report and is based on data for 107 developing countries.
Source: World Bank Developing Countries Tax Incentives Database as published in World Bank 2017/2018 Global Investment Competitiveness report (World Bank, 2017[4]).

10. **Tax incentives are often accompanied by eligibility conditions that relate tax support to specific taxpayer characteristics, specific types of income or expenditure or certain economic activities.** Eligibility conditions are common to target investments in certain sectors or activities, or in cases where the investment take places in specific locations such as Special Economic Zones (SEZs) or less developed regions. All developing economies covered in the OECD ITID target at least one of their incentives to investments in specific sectors. Over 70% of countries target investments located in a SEZ and 67% provide incentives targeted to particular geographical areas (Panel A, Figure 4.). Tax incentives can also apply narrowly only to a specific type of income or expenditure, e.g., export income or income from intellectual property (Panel B Figure 4.). In particular, developing countries often support export activities most frequently through income-based tax incentives. Targeting support to R&D and innovation activities is widespread in developed economies but less so among developing economies (James, 2013[16]; OECD, 2022[17]) and mostly takes the form of expenditure-based tax support. Intellectual property

level, focusing on incentive design features and eligibility conditions (see Annex A). The information is created through systematic screening of country-specific primary and secondary legislation that relates to tax incentives (Celani, Dressler and Wermelinger, 2022[12]).

regimes that target support to certain types of IP have become commonplace among developed countries with varying eligibility conditions (González Cabral, Appelt and Hanappi, forthcoming[19]). Eligibility conditions narrow the scope of application of the different tax instruments and often compound. For example, eligibility requirements based on sector and investment size can be imposed jointly, creating variation in the extent of tax benefits offered. This in turn means that the GloBE Rules are likely to result in heterogeneous impacts as will be discussed below.

11. **Many tax incentives include design features that reinforce the link between tax support and economic substance in the jurisdiction.** Tax incentives may often require certain levels of capital or employment in order to trigger eligibility for tax relief (Celani, Dressler and Wermelinger, 2022[12]). Out of all jurisdictions covered in the OECD ITID, 50% of the jurisdictions covered have at least one incentive that imposes a minimum value of investment to benefit from relief and 13% of jurisdictions have one incentive that imposes a minimum level of employment ('investment value' in Panel A of Figure 4.). 'Outcome conditions' are a more indirect way of linking relief to substance than minimum investment requirements and depend more strongly on firm performance ('outcome' in Panel A of Figure 4.). Only 17% of countries condition relief on the firm *creating* a certain number of new jobs upon completion of the period where tax benefits were available and only 10% require that a certain value added to output ratio be reached.[5] In some instances, the extent of preferential tax treatment granted increases with the size of the investment either via extended periods of relief or lower reduced tax rates (González Cabral, Appelt and Hanappi, forthcoming[19]).[6] Other design features such as the requirement to reinvest income subject to relief can also ensure a continuing link to substance. In addition, for tax incentives that may provide relief to mobile tax bases, such as intellectual property regimes, the OECD/G20 BEPS Action 5 minimum standard, requires income to be linked to economic substance in order for a taxpayer to benefit from preferential tax treatment (OECD, 2015[20]). Tax incentives that reinforce substance requirements may be partially protected by the GloBE substance-based income exclusion (SBIE) as will be discussed further below.

12. **Limitations to the extent of tax benefits are often in place as a means to protect public finances.** These limitations can take a variety of forms, including limited periods of relief or caps on the amount of tax benefits that can be granted through explicit ceilings or thresholds. Among other methods, tax relief can be limited by fixing a certain number of years, e.g., by providing a temporary versus a full exemption. Among those developing economies providing a temporary full exemption, including tax holidays, the average length in the OECD ITID was of 6.1 years (Celani, Dressler and Wermelinger, 2022[12]), but significant variation exists across regions and sectors (World Bank, 2017[4]).[7] Ceilings that limit the maximum amount of relief, either in absolute of relative terms, or that limit the amount of income and expenditure on which taxpayers can claim relief are also common. Of the countries covered in the OECD R&D tax incentives database, 26 out of 49 have such provisions in place. Similarly, 9 out of 48 countries in the OECD ITID provide a tax incentive with a benefit ceiling, mainly in the context of expenditure-based incentives. Certain other design features also limit generosity. For example, incremental R&D tax incentives that only provide tax relief for the increase in R&D expenditure with respect to a base level result in less generous implied tax subsidies than volume-based tax incentives (González Cabral, Appelt and Hanappi, 2021[21]).

---

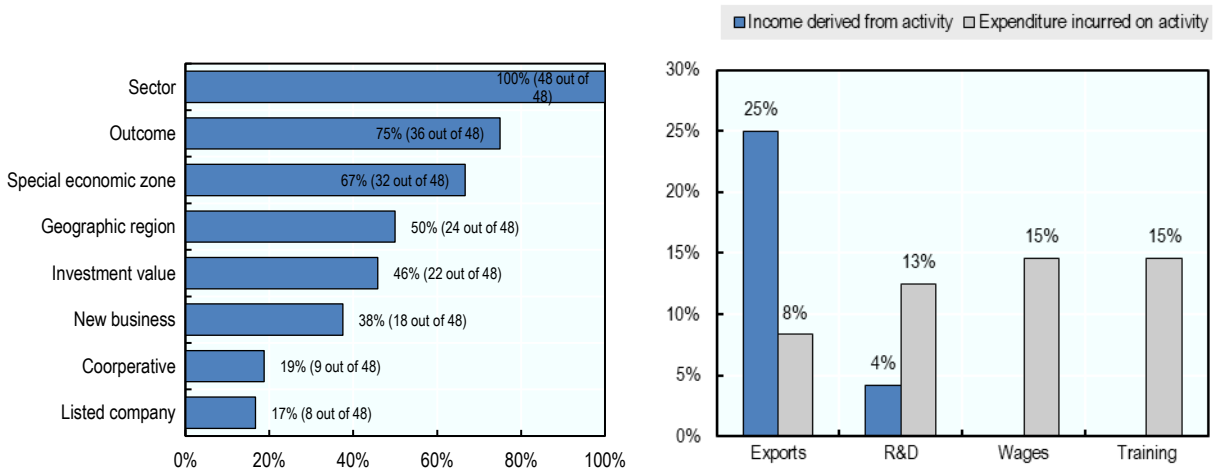
[5] The outcome, investment or size conditions needs to be carefully designed, as they may be costly to administer and validate.

[6] In such cases, the incentives offer more competitive rates to larger performers, which can reinforce tax competition pressures.

[7] This figure is based on data from 48 developing countries and 121 tax incentives and it represents the average duration of temporary full tax exemptions or temporary 0% CIT rates. When including non-zero reduced CIT rates, the average increases to 6.3 years.

Figure 4. In developing countries, tax incentives are often targeted to certain sectors and may include substance conditions

Share of developing countries with at least one CIT incentive by eligibility condition (Panel A) or by targeting income and expenditures related to specific activities (Panel B)



Note: Share of countries refers to the share of countries with at least one CIT incentive as a share of all countries. Panel A: Eligibility conditions are criteria that investors must meet in order to benefit from an investment tax incentive. Outcome = Conditions that require the investor to achieve a certain performance relating, for example, to employment (e.g., minimum number of employees or number of new jobs created), exporting (e.g., minimum exports to turnover share) and others. Investment size refers to requirement for a business to have (a) a minimum investment value or (b) a minimum number of employees to qualify for an incentive. See Celani, Dressler and Wermelinger (2022[12]) for complete list of outcome conditions and other definitions. Panel B: Targeted income from exports includes income derived from exports or from transit trade.

Source: OECD Investment Tax Incentives database, July 2022 version, based on information on 48 countries and 388 entries of CIT incentives available on 1 January 2021. Information on incentives targeting R&D is not available for all countries.

13. **The generosity of tax incentives can also be impacted by whether they can be carried forward or refunded where firms are unable to fully utilise the benefits in a given tax year.** Carry-over or refundability provisions may be available for some tax incentives but not all. Refundability provisions are rare among developing countries. This may be linked to the limited fiscal space in developing countries and the fact that they less frequently use tax credits as discussed above. However, 17 out of the 49 countries in the OECD R&D tax incentive database have refundability provisions in place. Where such refundability provisions are in place as in the case of many R&D tax incentives, they are either targeted to small performers or subject to ceilings to curb their impact on public finances (Appelt, Galindo-Rueda and González Cabral, 2019[22]; OECD, 2022[17]). As will be discussed below, the GloBE Rules follow financial accounting by treating cash grants and refundable tax credits as income, which means that these types of incentives are less likely to be affected by the GloBE rules.

14. **As a result, tax incentives can substantially undercut firms' ETRs, but heterogeneity is to be expected depending on the specific design features of the instrument, their scope and generosity of tax support.** Tax incentives can substantially undercut both marginal and average ETRs faced by investors affecting the scale and location decisions. Expenditure-based R&D tax incentives reduce on average the minimum pre-tax rate of return required for a project to break even for investors by 128% (cost of capital) and the effective average rate (EATR) by 45%, with the extent of generosity varying

with design (Appelt, Galindo-Rueda and González Cabral, 2019[22]; González Cabral, Appelt and Hanappi, 2021[21]).[8] In a sample of Sub-Saharan countries, tax incentives within SEZs, which are mostly income-based, typically provide for the most generous tax treatment and result in EATRs that were 65% lower on average than under the standard tax treatment, reaching up to 99% lower rates in some cases (Celani, Dressler and Hanappi, forthcoming[23]). Other design elements may curtail the material tax benefits firms receive through the tax incentive. For example, where ceilings are in place, depending on how binding they are, the implied subsidy faced by firms can be substantially reduced (OECD, 2021[24]; Celani, Dressler and Hanappi, forthcoming[23]). The generosity of income-based tax incentives such as tax holidays depends on the length of relief and the treatment of other tax provisions such as depreciation allowances during the period of the holiday (Celani, Dressler and Hanappi, forthcoming[23]; Klemm, 2008[25]; Botman, Klemm and Baqir, 2008[26]). For other income-based incentives such as IP regimes, the firms' ETR will depend on the share of qualifying IP income that would benefit from relief under the nexus ratio. The ETR would also depend on the scope of an IP regime in terms of qualifying income and assets, which will vary widely across jurisdictions (Appelt, González Cabral and Hanappi, 2022[27]). These varying features, including ceilings, limitations, design, scope, and duration of relief shows that the tax incentive landscape is highly heterogeneous, meaning that the GloBE Rules will likely have a highly heterogeneous impact.

2.3. Balancing effective investment promotion and public revenues

15. **The popularity of tax incentives in particular in developing economies may be linked to their apparent ease of administration and the lack of upfront costs, although revenues forgone can be significant.** Tax incentives are non-discretionary, meaning that governments do not have to 'pick' the firms benefiting from support on a case-by-case basis.[9] Providing non-refundable tax incentives requires no upfront government funds. While combining tax and direct measures to support investment is common among OECD countries (Panel A in Figure 5 shows the policy mix for R&D and innovation (OECD, 2022[17])),[10] for developing and emerging economies, particularly where fiscal space is limited, direct government support or refundable credits may be a less viable option. In such cases, forgoing revenues through tax incentives can become a key mechanism to promote economic activity.[11] The cost of tax incentives can be substantial but remains less visible compared to direct government support, in part due to the limited reporting of tax expenditures (Redonda and Neubig, 2018[28]). Across regions, tax expenditures through CIT incentives represent 0.2% and 0.3% of GDP in Africa and Asia, for the median jurisdiction where data is available (Panel B in Figure 5). This rate is similar to the rate in Europe though the impact on total taxes is larger, as the reliance on CIT revenues for those regions, as a percentage of total tax revenues, is almost four times as high as in Europe. In 25% of countries in Africa and Asia, tax

[8] These indicators of the cost of capital and the EATR are calculated on the basis of a hypothetical investment project that is held constant to compare certain tax provisions of tax systems across jurisdictions. These are often referred to forward-looking effective tax rates as opposed to backward-looking rates which are calculated on the basis of the actual taxes paid by firms (Devereux and Griffith, 2003[13]; Nicodème, 2007[89]). CbCR statistics of ETRs reported in Figure 2 are an example of backward-looking rates.

[9] Some degree of targeting support to certain firms or activities however can remain, as discussed in Section 2.2

[10] Tax incentives typically promote more development and applied research while direct support is more suited to basic research (OECD, 2020[42]).

[11] Direct support can also channelled to private firms through development banks or official development assistance. However, direct support measures can imply picking 'winners'. This requires not only having the administrative capacity and the expertise to discern the projects that will yield a strong social return but also may make the process less transparent incentivising rent-seeking behaviour, which can be particularly challenging where corruption risks are high. Well-designed tax incentives can in this case enhance transparency and accountability if the adequate reporting mechanisms are in place.

expenditures are almost double the median rate. This suggests that the impact of tax incentives on fiscal space in these jurisdictions may be substantial in terms of revenue foregone. It also suggests there is potential via tax incentive reform to mobilise domestic revenues.

16. **Evidence on the effectiveness of tax incentives is mixed and the lack of careful monitoring and analysis may impede the understanding of whether the benefits outweigh the costs of providing support.** The effectiveness of tax incentives is context-specific and can vary not only with the design of the tax incentive but also with other framing conditions (Box 1). Poorly-designed incentives may restrict revenue-raising capacity without yielding significant investment increases, thereby limiting efforts to mobilise domestic resources and creating windfall gains to investors, or yielding investments of low quality, with limited spillovers on productivity and employment (IMF OECD UN World Bank, 2015[29]).

17. **Strong public finances are key to development, crucial for delivering the public goods and services that are often lacking in developing countries, such as skills development and education, health, and infrastructure.** It is therefore essential that tax incentives are well designed, transparent, maximise additionality, and minimise windfall gains to ensure that their benefits outweigh their costs. Investment tax incentives can be best used where they maximise positive spillovers and align with broader policy goals such as advancing decarbonisation strategies, improving job quality, or improving local supply linkages (Celani, Dressler and Wermelinger, 2022[12]). However, a lack of capacity in many tax administrations, as well as the complexity of the design of many tax incentives, can limit understanding of their impact and effectiveness (OECD, 2022[1]; OECD, 2022[30]). This is especially the case where multiple tax incentives interact.

18. **In addition, an excessive reliance on tax incentives may be counterproductive in regions where capacity is low, as they may compound already existing profit-shifting challenges.** An excessive reliance on tax incentives may lead to a complex combination of different incentives that can prompt or exacerbate profit shifting behaviours (Bird, 2008[31]). Generous tax incentives such as tax holidays may induce firms to reclassify or channel income into the entity benefitting from the tax incentive or to set up a new entity to become eligible for support again (Zee, Stotsky and Ley, 2002[32]; IMF, 2021[33]).[12] Although profit shifting leads to substantial revenue losses around the world, developing countries are particularly exposed due to their higher reliance on CIT revenues – around 20% of total tax revenues in Africa and Asia-Pacific and 13% in LAC compared to 6% in Europe – and the reduced capacity to identify and close such loopholes.[13] Such practices not only lead to undermining domestic revenue mobilisation efforts but also effectively curtail the capacity of tax administrations to utilise tax policy effectively (Besley and Persson, 2013[34]).

19. **The complex governance of tax incentives in many developing and emerging economies may be an impediment to effective reform of tax incentives.** Tax incentives are often governed by laws other than the tax law (i.e., tax code or the income tax law) and administered by multiple different authorities. The complexity of these arrangements risks complicating design and implementation processes and in the worst case may contribute to less efficient policies and may hinder reform efforts. Only a third of developing and emerging economies in the OECD ITID have consolidated their CIT incentives into the tax laws while over 50% of all countries have a fragmented legal basis, with tax incentives governed through multiple pieces of legislation (Figure 6.). Consolidating tax incentives into a single law can increase their transparency and reduce potential overlap and duplication across incentives (Jedlicka and Sabha, 2017[53]; IMF-OECD-UN-World Bank, 2015[54]). Furthermore, the Ministry of Finance

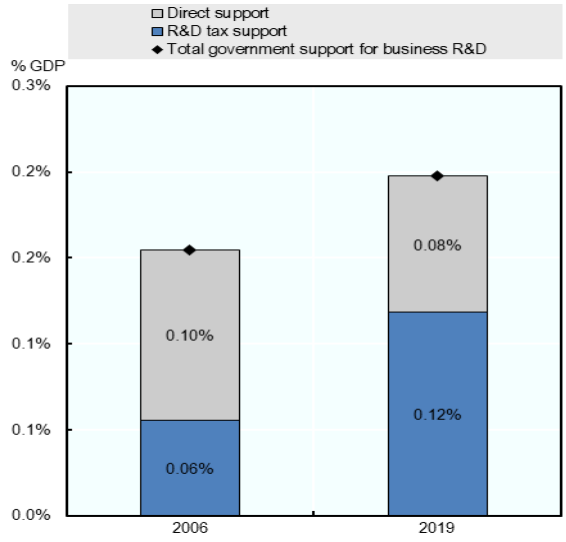
[12] MNEs can reduce tax bases in jurisdictions through BEPS behaviours such as transfer mispricing, the misuse of tax treaties, the strategic location of intangible assets or the use of intragroup debt (Beer, Mooij and Liu, 2020[78]).,

[13] For evidence on profit shifting see Crivelli, De Mooij and Keen (2015[80]), Torslov, Wier and Zucman (2018[79]) and Bratta, Santomartino and Acciari (2021[85])

is the sole granting authority of tax incentives in only 30% of all developing and emerging economies in the ITID, and in many cases, multiple authorities are responsible for governing incentives (Figure 6.).

Figure 5. Tax expenditures from CIT incentives while opaque can be substantial

Panel A: Most OECD countries combine direct and tax support in the innovation policy-mix, with tax being the lead instrument in 2019 representing 60% of total government support

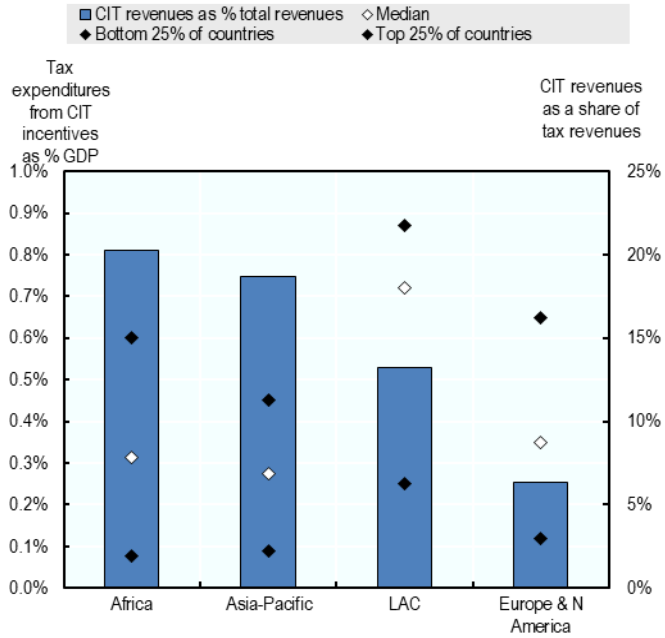


Source: OECD R&D tax incentives database

Note: Data covers all OECD countries and refers only to expenditure-based R&D tax incentives.

Panel B: Tax expenditures can be very costly even where the dependency on CIT revenues is high, 2019

Ranked in descending order of dependency on CIT revenues



Source: Global Tax Expenditures database and OECD Revenue Statistics.

Note: For GTED, the data for Africa covers 18 jurisdictions, 12 jurisdictions in Asia-Pacific, 33 jurisdictions in Europe and North America and 14 jurisdictions in the LAC region. Revenue Statistics cover 29 jurisdictions in Africa, 23 in Asia-Pacific, 32 in Europe and North America and 26 jurisdictions in LAC.

Box 1. Evidence on the effectiveness of tax incentives

The costs and benefits of investment tax incentives are highly design- and context-specific and are not always well understood. Empirical evidence on the benefits of tax incentives is limited but so far confirms that their design is critical for their success. An in-depth understanding of the design of tax incentives is key to understanding their effectiveness, efficiency and whether they contribute to sustainable development outcomes.

Evidence generally supports the better performance of expenditure-based tax incentives compared to income-based tax incentives. Expenditure-based incentives such as accelerated depreciation or investment allowances increase the likelihood of generating additional investment as they directly target investment expenses. The value of income-based tax incentives such as exemptions or reduced rates, on the other hand, relate to the profit rate of a firm. As such, they only benefit successful firms and likely provide benefits to companies that would invest without the preferential treatment.

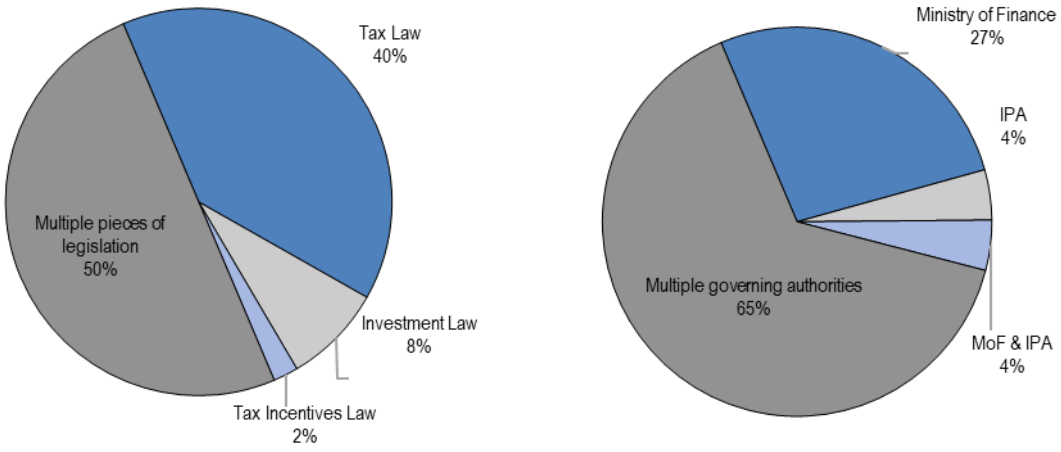
Some literature has suggested limited investment responses to income-based incentives in developing economies (Chai and Goyal, 2008[35]; Klemm and Van Parys, 2012[6]). By contrast, there is evidence suggesting that accelerated depreciation and immediate expensing have been effective in increasing investment in OECD countries (Maffini, Xing and Devereux, 2019[36]; Zwick and Mahon, 2017[37]; House and Shapiro, 2008[38]; Cohen and Cummins, 2006[39]). Similarly, among developed countries, evidence of the effectiveness of expenditure-based R&D tax incentives is much more conclusive than for income-based tax incentives, which can induce tax motivated behaviours (Hall, 2019[40]; Guceri and Liu, 2017[41]; OECD, 2020[42]; Appelt et al., 2016[43]; Gaessler, Hall and Harhoff, 2018[44]). In a global context, particularly in the case of mobile activities, tax incentives may act as 'beggar-thy-neighbour' instruments leading to no significant increase in global investment but simply to a relocation of investment across jurisdictions (Knoll et al., 2021[45]).

Beyond design features of incentives, framework conditions such as political and institutional stability, the availability of infrastructure and a skilled workforce affect the effectiveness and uptake of tax incentives. In the absence of otherwise attractive economic conditions, tax incentives can result in limited cost-efficiency and effectiveness. Countries with a poor investment environment are unlikely to attract additional investment even with a very generous incentive (IMF OECD UN World Bank, 2015[29]). Van Parys and James (2009[46]) show that FDI responds less to taxation in countries with a poor investment climate. Appelt et al. (2019[22]) show that while some correlation exists between the most generous R&D tax incentives and the average subsidies observed by firms, there is not a one-to-one relationship with differing levels of uptake being one of the reasons behind such discrepancies. Tax incentives are likely most effective when well designed and when coupled with a conducive investment climate (Cui, Hicks and Xing, 2022[47]). Tax incentives are not able to compensate for weak investment conditions (OECD, 2007[48]; Parys et al., 2010[49]). For example, the quality of infrastructure and the regulatory framework are often cited by investors as more important factors in determining their investment location decision than tax incentives (UNIDO, 2013[50]; IMF-OECD, 2017[51]; Canh et al., 2013[52]).

Figure 6. The complex governance of tax incentives in developing countries may impede tax reform and reduce accountability

Panel A. CIT incentives, by legal basis and country

Panel B. CIT incentives, by granting authority and country



Note: For Panel A the category 'Multiple pieces of legislation' includes CIT incentives introduced through more than one law or through laws and regulations. IPA stands for investment promotion agency.
Source: OECD Investment Tax Incentives database, July 2022 version, based on information on 48 countries and 388 entries of CIT incentives available on 1 January 2021. Panel B is based on information on granting authority for 299 of 388 CIT incentives.

20. **At times, the taxes applicable to MNEs are not those observed in tax law but are instead governed by contracts between public authorities in the jurisdiction and the investor.** Foreign investors may seek tax stabilisation clauses in contracts. Such contract clauses seek traditionally to shelter investors from political instability and the risk of regulatory and tax changes when undertaking large-scale capital investments, e.g., in the mining and hydrocarbon sectors. Contractual tax stabilisation clauses can take different shapes. For example, they may seek to freeze the status of the tax system at the time of the investment or seek to freeze a particular preferential tax treatment. In a sample of investment contracts surveyed in Sub-Saharan Africa, the extent of the difference between the tax treatment from the application of stabilisation clauses and that generally applicable is significant (IMF, 2021[33]). Where such clauses exist, they could reduce the jurisdictions' ability to effectively implement updated policy approaches (UNCTAD, 2021[55]). Contracts with stabilisation clauses often provide for arbitration. In some cases, national investment laws may also include (tax) stabilisation clauses (UNCTAD, 2022).

21. **In addition to contractual constraints on the updating of tax policies, many jurisdictions may have investment treaties that could potentially affect tax policy outcomes.** Investment treaties are agreements between governments intended to protect international investors and their investments, and to promote investment flows. There are more than 2 500 investment protection treaties in force globally. Most of the treaties are bilateral investment treaties (BITs), but investment protection content is also increasingly incorporated in Preferential Trade Agreements. They offer investors a range of protections, including provisions requiring 'fair and equitable treatment' and compensation for 'direct' or 'indirect expropriation'. Many investment treaties also contain umbrella clauses obliging States to honour commitments they have undertaken with regard to the investment. These provisions allow for non-contractual claims; fair and equitable treatment clauses have also been interpreted in a range of cases to include some stabilisation content.

22. **Most investment treaties, particularly older treaties, do not mention tax and thus apply to tax measures as they do to all government action.** This means that tax measures may potentially be challenged as breaching treaty commitments. Some treaties exclude some tax-related measures from their scope or contain specific arrangements for tax-related measures (Gordon and Pohl, 2015[57]). Investment treaties generally allow treaty-covered investors to bring claims in Investor-State Dispute Settlement (ISDS), which today generally involves arbitration. Investment treaty provisions have sometimes been interpreted broadly in arbitration proceedings. There is also considerable scope for treaty shopping in ISDS. Arbitral decisions in ISDS are final. More analysis of the interaction of these regimes is needed, taking account of investment treaties, ISDS interpretations and the implementation of Pillar Two.

3 Key aspects of GloBE

23. **The GloBE Rules provide for a co-ordinated system of taxation intended to ensure large MNE groups pay a minimum level of tax on the income arising in each of the jurisdictions where they operate.** It does so by imposing a Top-up Tax on profits arising in a jurisdiction whenever the ETR, determined on a jurisdictional basis, is below the minimum rate. The starting point for this ETR computation is the amount of each entity's Financial Accounting Net Income, calculated in accordance with the group's consolidated financial standard. The GloBE Rules then adjust this amount to take account of common differences between financial accounting and taxable income in line with the intended policy outcomes under GloBE. The GloBE Rules also apply a broad definition of Covered Taxes that includes not only taxes on income but also taxes on retained earnings and taxes that are imposed 'in lieu' of an income tax. While the ETR is determined on a jurisdictional basis, the GloBE Rules allow for the crediting of foreign taxes, including those imposed on a foreign subsidiary under a Controlled Foreign Company (CFC) regime. The GloBE Rules also follow financial accounting in treating grants and qualified refundable tax credits (QRTC) as income of the recipient rather than a reduction in taxes.

24. **The GloBE Rules are designed to avoid imposing additional Top-up Tax as a result of timing differences.** The GloBE Rules achieve this outcome by incorporating certain deferred tax adjustments into the calculation of Covered Taxes in order to reflect differences between book and tax in the recognition of income and expenses as well as the carry forward of losses. The effect of these adjustments is that, under a moderate tax rate, tax incentives such as accelerated depreciation and immediate expensing, which simply accelerate the deduction for tax purposes, will generally not give rise to additional tax liability under the GloBE Rules absent any other base narrowing provisions.

25. **The GloBE Rules impose Top-up Tax on excess profits.** In the event an MNE is determined to have a jurisdictional ETR below the minimum rate, the GloBE Rules only impose a Top-up Tax on the excess profits arising in that jurisdiction. A jurisdictions profits are treated as excess profits to the extent they exceed the SBIE. The SBIE is calculated by reference to the cost of assets and payroll in that jurisdiction. By imposing a Top-up Tax on the excess profit, the GloBE Rules recognise that a portion of the income arising in a jurisdiction is attributable to assets and activities in that jurisdiction and is outside the scope of taxation under the GloBE Rules.

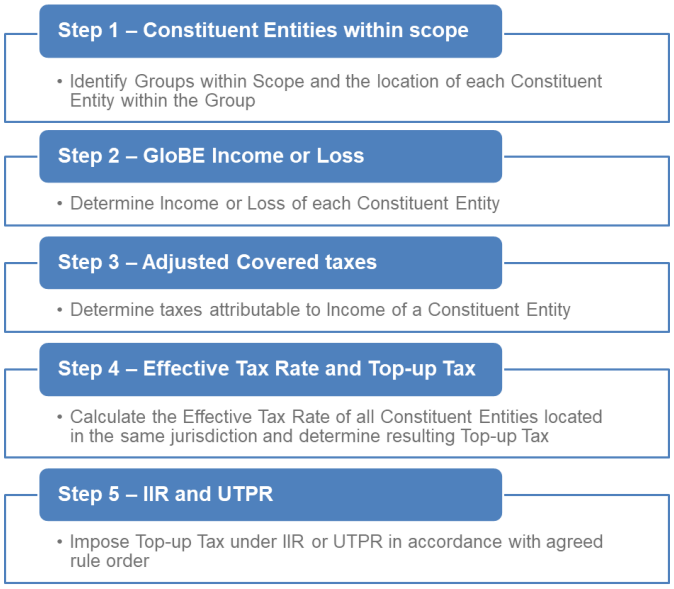
26. **The design of the GloBE Rules has important implications for their impact on tax incentives.** The remainder of this section provides a brief overview of the GloBE Rules focusing on key elements that will be most relevant to analyse the implications for tax incentive use post-GloBE.[14] After providing an overview of the operation of the GloBE Rules, the section outlines the scope of the rules, the definition of GloBE Income, Covered Taxes, and the GloBE ETR calculation and how these components come together to determine Top-up Taxes paid. The section concludes with a discussion of which constituent entities would be liable for GloBE purposes.

[14] All of these provisions are discussed in much more detail in the GloBE Rules and commentary (OECD, 2021[58]; OECD, 2022[59]). Some aspects of the model rules are to be developed in more detail as part of the GloBE Implementation Framework.

3.1. Scope

27. **The scope of the GloBE Rules defines the entities and types of income that will be subject to the rules.** GloBE applies to large MNE Groups and some exceptions exist with respect to in-scope GloBE Income. MNE Groups that have annual revenues of EUR 750 million or more in at least two of the four fiscal years preceding the fiscal year that is being tested are in scope of the GloBE Rules. Governmental Entities, International Organisations, Non-profit Organisations, and Pension Funds are excluded from the scope of the rules notwithstanding that they may be members of an MNE Group within scope. Investment Funds and Real Estate Investment Vehicles are also excluded if they are the UPE of the MNE Group. As part of the agreement, jurisdictions can apply a lower threshold than EUR 750 million for MNE Groups headquartered in their jurisdictions, but only for the purposes of the application of the IIR. Certain types of income are excluded from the GloBE calculation. For example, international shipping income and ancillary international shipping income (subject to a limitation) is also excluded from the application of the GloBE Rules.[15]

Figure 7. Steps in determining a Top-up Tax liability for an MNE



Source: OECD.

3.2. GloBE Income

28. **The GloBE Rules rely on financial accounting to determine the GloBE Income or loss, which is used in turn to compute the ETR for each jurisdiction and the Top-up Tax, if any, of each member of the MNE Group.** The use of financial accounting rules provides a more consistent outcome among jurisdictions to determine the GloBE tax base if compared to the use of local tax rules. Furthermore, any reductions to the local tax base by virtue of tax exemptions or non-economic deductions will not affect the

[15] Income from International Shipping, such as that derived from the transportation of passengers or cargo ships in international traffic as well as Qualified Ancillary International Shipping Income which refers to income derived from activities connected to it such as the leasing and short-term storage of containers, are excluded from GloBE Income. The GloBE Rules establish that Qualified Ancillary International Shipping Income aggregated for all CEs in a given jurisdiction cannot surpass 50% of those CE's International Shipping Income.

GloBE Income because such reductions are not made to financial accounting income. This has important implications for the use of tax incentives. Given that these incentives will not affect financial accounting income but will affect taxes paid, many incentives may reduce the GloBE ETR.

29. **The GloBE Income or Loss is subject to certain adjustments to better align financial accounts and tax accounting.** These adjustments have been kept to a minimum and are made where necessary to reflect common permanent differences, such as to remove most dividends and equity gains so that the minimum tax does not apply to such income, or corrections for prior year errors. Further, the GloBE Income or loss is adjusted for certain refundable tax credits, which are granted by the government to engage in certain activities (e.g., research and development) and meet the definition of QRTCs. QRTCs are a refundable tax credit designed in a way such that it must be paid as cash or available as cash equivalents within four years from when a CE satisfies the conditions for receiving the credit under the laws of the jurisdiction granting the credit. QRTCs and their implications for the design of tax incentives are discussed further in Section 5.

3.3. Outline of GloBE

30. **The GloBE Rules ensure that MNE Groups with annual revenues at or above EUR 750 million are subject to a minimum level of taxation in each of the jurisdictions where they operate.** If the MNE Group's Constituent Entities (CEs) (i.e., its subsidiaries and permanent establishments (PE)), are subject to an ETR below 15%, then it has to pay a Top-up Tax for the difference.[16] The calculation of the GloBE ETR is made at the jurisdiction level and is based on the accounts that are used to prepare the consolidated financial statements of the MNE Group, subject to certain adjustments. The financial net income or loss reported in such accounts is also used for the purposes of determining the tax base of the jurisdiction in case its ETR is below 15%.

31. **Under the GloBE Rules, Top-up Taxes are collected under a system composed by the Income Inclusion rule (IIR) and the Undertaxed Payments Rule (UTPR), unless low-tax profits are taxed under a qualified domestic minimum tax (QDMT)**. The IIR is the primary rule of the GloBE Rules, which requires the Ultimate Parent Entity (UPE) of the MNE Group to collect the Top-up Tax, subject to certain exceptions in cases of split-ownership structures.[17] The UTPR is a backstop rule that ensures that the Top-up Tax is collected in cases where it is not collected under the IIR. A QDMT is a domestic minimum tax that determines the low-taxed excess profits in the jurisdiction in a manner that is generally equivalent to GloBE (OECD, 2021[58]; OECD, 2022[59]).[18] Figure 7. illustrates the steps undertaken by the GloBE Rules.

3.4. Covered Taxes

32. **In addition to the GloBE Income, Covered Taxes are the other factor used to determine the ETR of a jurisdiction.** Covered taxes include income taxes, which are defined in a way to provide consistent and flexible recognition across a wide range of tax systems but does not include non-income-

[16] A CE is any Entity that is included in a Group and any Permanent Establishment (PE) of a Main Entity. CEs do not include Excluded Entities. An MNE group is any Group that includes at least one Entity or PE that is not located in the jurisdiction of the Ultimate Parent Entity.

[17] The UPE means either an entity that owns directly or indirectly a Controlling Interest in any other Entity and which is not owned, with a Controlling Interest, directly or indirectly by another Entity; or the main Entity of a Group.

[18] Excess profits are defined as GloBE Income in the jurisdiction minus the SBIE.

based taxes such as indirect taxes, payroll, and property taxes. Taxes imposed 'in lieu' of a generally applicable CIT (e.g., a tax that substitutes an income tax) are also regarded as Covered Taxes.[19] Taxes imposed in lieu of a generally applicable CIT would also include taxes arising from the STTR. The GloBE Rules also allocate withholding taxes (except for those imposed on intra-group dividends) and taxes paid under a CFC regime to the entity that earned the underlying income to be considered as Covered Taxes for that entity (subject to some limitations).

33. **The CE's Covered Taxes are adjusted to reflect certain timing differences**. The GloBE Rules provide for a mechanism to address temporary differences, which arise when income or a loss is recognised in a different year for financial accounting and tax purposes. With this objective in mind, the GloBE Rules use deferred tax accounting with certain GloBE specific adjustments to address temporary differences. The GloBE Rules, however, penalise any temporary difference that goes beyond five years to avoid long-term deferrals. This does not apply to certain categories of temporary differences such as those produced by virtue of accelerated depreciation and immediate expensing of tangible assets. As will be discussed further below, this has impacts on tax incentives that provide benefits to firms based on timing differences.

3.5. GloBE ETR and Top-up Tax

3.5.1. ETR calculation

34. **The ETR calculation is used to determine whether in a fiscal year, the MNE Group is subject to an ETR below the minimum rate in any of the jurisdictions where it operates.** The GloBE ETR of a jurisdiction is equal to the sum of Adjusted Covered Taxes of all CEs located in the jurisdiction divided by the Net GloBE Income of the jurisdiction. In the case of a Net GloBE loss, no ETR is calculated for the jurisdiction.

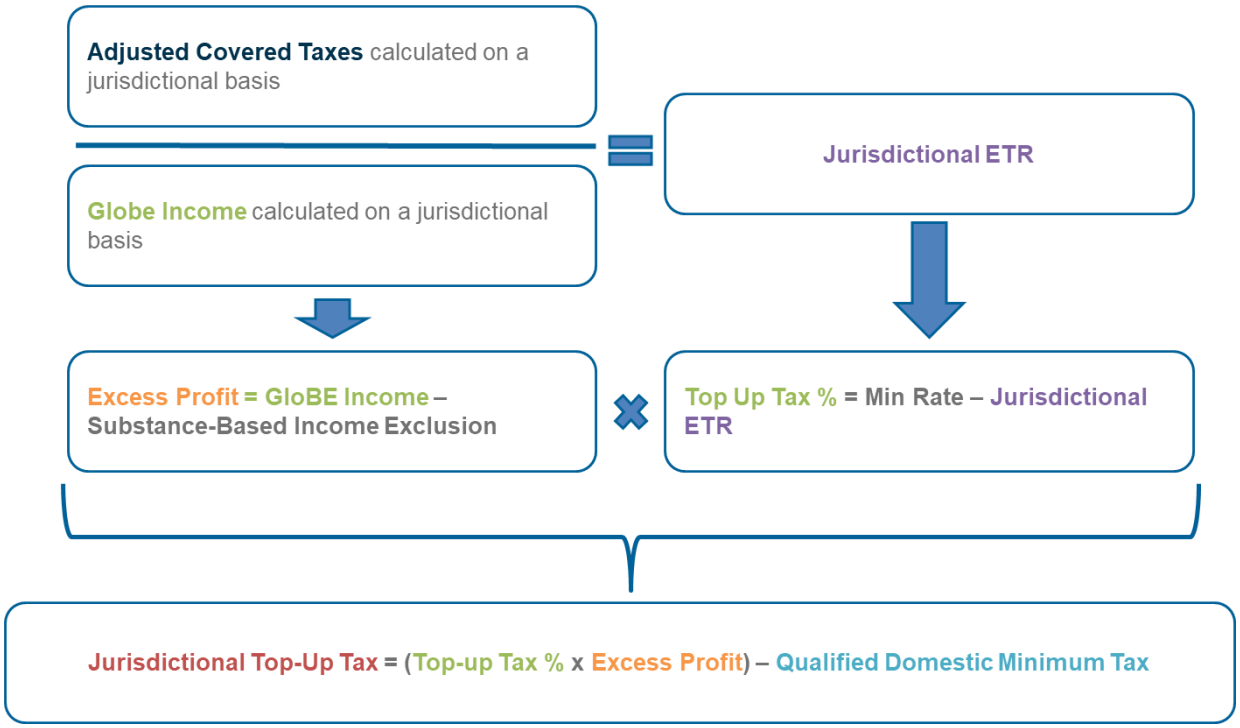
3.5.2. Top-up Tax calculation

35. If the jurisdictional GloBE ETR is below the minimum rate, then Top-up Tax with respect to a jurisdiction is due if the GloBE Income exceeds the substance-based income exclusion (SBIE). The Top-up Tax percentage is the difference between the 15% minimum rate and the GloBE ETR in the jurisdiction. Top-up tax due is the result of applying the Top-up Tax percentage to excess profits, which is the result of deducting from GloBE Income in the jurisdiction the amount attributable to the SBIE.

36. **The SBIE allows profits associated with economic substance to be deducted from the GloBE base.** In practice, it is a reduction to the tax base of the jurisdiction and is calculated as a percentage mark-up on tangible assets and payroll costs. The exclusion is equal to 5% of the carrying value of tangible assets and payroll costs in the jurisdiction. A transition rule provides a phased introduction of the SBIE over the first ten years. In 2023, the exclusion would be equal to 8% of the carrying value of tangible assets and 10% of the payroll costs, which would be reduced gradually up to 5%. Finally, if a jurisdiction has a QDMT that is consistent with the GloBE Rules, any tax paid under such a QDMT will be credited against GloBE Top-up Tax. The Top-up Tax calculation is summarised in Figure 8. :

[19] Simplified income tax calculations based on the number of units produced or commercial surface area that apply instead of CIT will be considered a Covered Tax. Similarly, domestic minimum CITs are likely Covered Taxes. However, digital service taxes that apply to the gross revenues from certain digital services are imposed in addition to but not as a substitute of CIT will not be considered a Covered Tax (OECD, 2022[59]).

Figure 8. Top-up tax calculation



3.6. Determination of the Constituent Entity liable for the Top-up Tax

37. **After an amount of Top-up Tax has been determined by the taxpayer for a given jurisdiction, the charging provisions are triggered which determine which jurisdiction shall collect the Top-up Tax.** The primary rule is the IIR, which requires the UPE of the MNE Group to pay the tax. An exception to this rule is the case in which a partially-owned UPE has ownership interests in the low-taxed CE.[20] If the UPE is located in a jurisdiction that has not introduced the IIR, then the next Intermediate Parent Entity down the ownership chain can apply the IIR.[21] If the UPE is not located in a jurisdiction with an IIR or the Top-up Tax that should have been collected by the UPE is not collected under the IIR by other Parent Entities, then the UTPR applies. The UTPR uses an allocation mechanism to distribute the Top-up Tax among jurisdictions where the MNE Group operates. These jurisdictions will then apply the UTPR and collect the Top-up Tax by denying a deduction or requiring a similar adjustment to the CEs located in their jurisdiction. A QDMT may allow jurisdictions where a CE is operating to collect such Top-up Tax before it is collected by either the UPE jurisdiction or other jurisdictions.

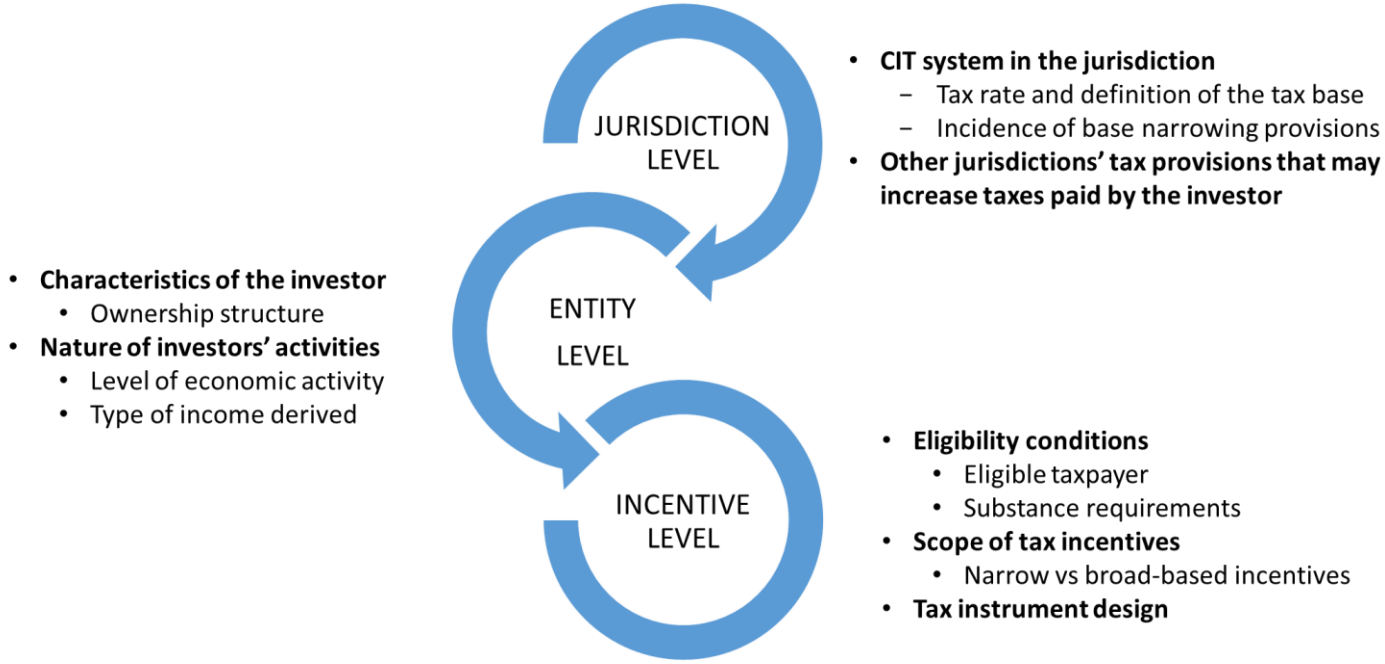
[20] A Partially-Owned Parent Entity means either a CE (other than the UPE, a PE or Investment Entity) that owns (directly or indirectly) an Ownership Interest in another CE of the same MNE group or a CE that has more than a 20% Ownership Interest in its profits held directly or indirectly by persons that are not CE of the MNE group.

[21] An Intermediate Parent Entity means a CE (other than a UPE, Partially-Owned Parent Entity, PE or Investment Entity) that owns (directly or indirectly) an Ownership Interest in another CE in the same MNE group.

4 The GloBE Rules on the use of tax incentives

38. **The GloBE Rules will interact with different tax incentives in a variety of ways.** As the discussion in Section 2 has highlighted, there are many different features of tax incentives that can affect their generosity, the extent to which they are targeted to certain investors or activities and their effectiveness. Section 3 has also highlighted several features of the GloBE Rules, which are of relevance in determining the impact of the rules on tax incentives. Bringing together Sections 2 and 3, it is clear that not all tax incentives will be impacted in the same manner. The impact of the GloBE Rules on tax incentives will depend on their design, on the jurisdiction, and on the circumstances of the affected MNE, including the specifics of the operations it has in a jurisdiction. Developing countries seeking to assess how their jurisdiction, investors and tax incentives will be affected should account for these interactions in in defining the appropriate policy response.

Figure 9. A three-tiered framework to consider the interaction between the GloBE Rules and tax incentives



Source: OECD.

39. **This section provides a framework for considering how different tax incentives will be affected differently by the GloBE Rules**. Figure 9 sets forth a framework to consider a series of factors at the jurisdiction, entity and tax incentive-level that will cause variation in the effects of the GloBE Rules.

This framework can support jurisdictions in identifying how and to what extent the GloBE Rules may affect the business environment and their use of tax incentives as part of their policy mix. The three levels, discussed separately below, interact with one another highlighting the heterogeneous impact of the GloBE Rules across investors and jurisdictions and, in turn, the need for careful granular analysis at the jurisdiction level.

4.1. Jurisdiction-level factors

40. **Jurisdictions will be affected differently by the introduction of the GloBE Rules, in part driven by their current tax system.** Specifically, the impact of the GloBE Rules on tax incentives will depend upon the standard CIT system in a jurisdiction. Jurisdictions with an overall low effective level of taxation will likely be more affected by the GloBE Rules. This is the case where low taxation arises through a low or zero CIT tax rate or through the expanded use of base narrowing provisions, such as through tax incentives. Low-tax outcomes can also arise in jurisdictions that are high tax on average leading to situations where Top-up Tax may arise, as discussed in Section 2. Put differently, jurisdictions with an average or above average STR and a broad CIT base will be less affected by the GloBE Rules all else equal.

41. **GloBE is determined at the jurisdiction level, so baseline tax systems will matter as well as tax incentives in determining outcomes.** This means that MNE operations in a given jurisdiction will be added together to calculate its GloBE Income and GloBE ETR. Where jurisdictions have high STRs, which tends to be the case more prominently in developing countries (Figure 2), even if they have some tax incentives available in their jurisdiction, an MNEs average ETR may still be above the 15% minimum tax threshold. For example, consider the case of a jurisdiction with a high standard tax treatment but with a patent box leading to some income being taxed at an ETR below the minimum rate. Even though a firm may have some income taxed at an ETR below 15%, if its other income in the jurisdiction is taxed at a high enough rate, its jurisdiction GloBE ETR may not fall below the 15% required to trigger Top-up Taxation. The overall effective level of taxation in the jurisdiction will be affected by how widespread base narrowing provisions are, which may lead to low ETRs even where the STR is relatively high, as discussed below.

42. **Jurisdictions with CIT bases that provide for significant exemptions or exclusions for certain categories of income in-scope of GloBE are more likely to give rise to situations where Top-Up Taxes may arise.** The tax base for the GloBE Rules is based on Financial Accounting Net Income or Loss. Where a jurisdiction excludes or exempts a particular category of income from tax (such as gain of the sale of a capital asset) this could give rise to a permanent difference between the amounts of Net Income or Loss recognised for financial accounting and local tax purposes. Whether this type of permanent difference gives rise to a top-up tax liability will depend on a number of factors. In many cases the GloBE Rules allow for an adjustment to be made in respect of common book-to-tax differences (e.g., gains on the sale of shares). The liability for top-up tax due to a permanent difference will also depend on the jurisdiction's ETR on other income arising in the same period. In contrast, top-up tax is unlikely to arise as a result of temporary differences since the GloBE Rules have a deferred tax accounting mechanism whereby differences between financial accounting and tax accounting in the timing of recognition of income and expenditure are taken into account.

43. **Even within jurisdictions, the standard tax treatment can have varying impacts on different firms, placing different MNEs at more or less risk of facing Top-up Taxes.** In some instances, jurisdictions provide differential tax treatment to firms of certain sizes, operating in certain sectors or performing certain activities in the jurisdiction. As discussed in Section 2, preferential tax treatment is often utilised to incentivise certain behaviours or investments, e.g., through reduced tax rates to certain sectors or to investments in specific locations. In such cases, firms meeting the eligibility criteria will be more exposed to Top-up Taxes than other firms in the economy. A higher level of effective taxation may be used

for example, in order to capture location-specific rents. CIT surcharges for companies in the oil and gas sector are common in resource-rich jurisdictions. In the absence of other tax incentives and abstracting from other base narrowing effects, these firms would typically face a higher level of effective taxation than the average firm in the economy, making them less exposed to Top-up Taxes.[22] Overall, this implies that even within the same jurisdiction certain firms or sectors may be impacted differently.

44. **Some international aspects of a jurisdiction's tax system may also affect GloBE outcomes.** Investors in some jurisdictions may already face increased taxation due to the provisions introduced by other jurisdictions to counteract low-tax outcomes. Notably, CFC rules may be levied on income earned in the jurisdiction if it is deemed low-tax by the UPE jurisdiction.[23] Where the investor already faces such taxes, the overall increase in effective taxation due to Top-up Taxes would be lower because the GloBE rules allocate the investors' CFC tax to the CFC in calculating the GloBE ETR. This is an important consideration as failure to account for taxes imposed by other jurisdictions will lead to an overestimation of the extent to which Top-up Taxes arising from GloBE may affect the investment costs of MNEs and therefore whether tax incentives are in need of reform.

4.2. Entity-level factors

45. **Within jurisdictions, the extent to which the GloBE Rules may increase effective taxation will depend on the type of investor and the activities they undertake in the jurisdiction.** The GloBE Rules will only affect a subset of CEs operating in the jurisdiction, i.e., those belonging to an MNE group in-scope. Standalone investors that are not part of a group as well as entities belonging to groups below the EUR 750 million threshold will not be subject to the rules. These entities will not be affected by the GloBE Rules and, therefore, any tax incentives directed towards these firms will not be affected either. Similarly, entities earning income that is out-of-scope, e.g., shipping income, are also less likely to be affected.

46. **Among in-scope investors, there will be a greater likelihood of Top-up Taxes being payable where economic substance in the jurisdiction is low.** As discussed in Section 3, the SBIE provides some carve-out for profits based on real activity in the jurisdiction, which is proxied by the value of tangible assets and payroll. All else equal, entities operating in sectors and carrying-out activities that require high levels of economic substance in the jurisdiction, e.g., capital-intensive industries, will be less affected.

47. **Where an MNE has a mix of ETRs across different entities in a jurisdiction, it may be less impacted by the GloBE Rules.** As discussed above, jurisdictional blending will mean that high-tax jurisdictions may be less impacted by the GloBE Rules even if they have some low-taxed incomes. A similar point holds true for firms. For example, where multiple entities operate in a jurisdiction, firms will be able to blend low-tax income with high-tax income to calculate the GloBE ETR, moderating the impact on highly profitable activities. This is because Top-up Taxes are calculated at the jurisdiction rather than the entity level.

---

[22] In some cases, even though higher rates are used for certain sectors, the presence of tax incentives may completely reverse the initial goal of raising the level of taxation where there are location-specific rents, see for example the case in the mining sector in Sub-Saharan Africa (IMF, 2021[33]). Mining tax incentives are very common across developing countries (IGF-OECD, 2018[87]).

[23] CFC taxes are Covered Taxes for the purposes of GloBE ETR calculation as outlined in Section 3. Therefore, for an entity whose income is subject to CFC taxes, there would be less Top-up Tax due for GloBE purposes. Note that CFC taxes are in some cases only levied on certain types of passive income, the applicable rate are typically defined as a fraction of the STR, the definition of a CFC varies across jurisdictions with different ownership thresholds and there is typically no minimum revenue threshold for application. Hence while similar in spirit, they have a different nature and application than Pillar Two.

4.3. Tax incentive-level factors

48. **The extent to which the GloBE Rules will affect the use of tax incentives will greatly depend on their design**. Certain factors may mitigate the impact of the GloBE Rules on some tax incentives. First, tax incentives targeted to activities that are out-of-scope for GloBE, e.g., shipping or funds will be unaffected. Second, as discussed in Section 2.2, many countries require firms to undertake a minimum level of investment or job creation in the jurisdiction to be eligible for relief. Tax incentives that have substance requirements encourage MNEs to carry out additional substantive activities in the jurisdiction and will benefit from the SBIE. In other words, the effect of GloBE is a function of the footprint of the MNE in the jurisdiction. Third, tax incentives that are targeted to a specific category of income or expenditure (such as reduced tax rates for certain kinds of IP income) will be less affected than those tax incentives broadly applicable (such as a permanent reduced tax rate for export-oriented firms).[24] This results from the fact that, for narrowly defined incentives, low-tax income will be blended with other higher-taxed income of the firm limiting the overall effect on the ETR. Fourth, an important consideration is whether investors can combine the use of different tax incentives or whether they are constrained from doing so. Where incentives can be combined, the accumulation of different incentives may give rise to high levels of tax support that may in turn generate low ETRs. Finally, some tax incentives are less affected due to the way in which they are accounted for in Financial Accounting and the GloBE ETR calculation. This will be discussed further in the next section.

[24] This will depend on the footprint of the MNE within the jurisdiction, as discussed in Section 5.2

5 GloBE and tax incentive design

49. **This section focuses on the implications of the GloBE Rules for the design and use of tax incentives in a post-Pillar Two environment.** As highlighted in Section 2, tax incentives vary significantly across developed and developing countries, in terms of their designs, eligibility conditions, ceilings, limitations, and carry-forward and refundability provisions. Likewise, the GloBE impacts different tax incentive types differently, depending on the scope, substance requirements, and the incentive type; including whether the incentive provides relief through the provision of temporary or permanent differences in tax liability. While understanding these interactions is complex, it is also key when jurisdictions are considering tax incentive reform in light of the introduction of the GloBE Rules.

50. **Three key elements of the GloBE Rules cause variation in impact on tax incentives: the scope of the rules, the calculation of the GloBE ETR (and its constituent components) and the SBIE.** This section focuses mainly on the implications for the use of tax incentives for firms that are in-scope of the GloBE Rules. As discussed in Section 4.2, firms that are out-of-scope, and tax incentives directed towards them, are unaffected. The first part of the section discusses the treatment of different tax instruments for the calculation of the GloBE ETR, which is key in determining the extent to which Top-up Taxation will be payable. A first assessment of the tax instruments more likely to be affected by the rules is contained in Table 1. The second part of the section examines the extent to which the effects observed in the first part may be affected by the interaction of the SBIE with specific tax instruments. This is particularly the case where these incentives are designed in a way that may encourage greater economic substance in the jurisdiction.

51. Policymakers assessing different tax incentive designs need to consider the overall impact on the tax burden over the life of the investment. Tax incentives may deliver benefits at different times over the life of an investment. In some instances, benefits can be delivered at the onset of the investment, in others through periodic deductions. Tax incentives may simply shift the timing of tax payments over the life of an investment providing benefits to taxpayers by deferring taxes. Depending on the effect of tax incentives, whether they produce a permanent difference or simply a deferral of taxes, the effect of GloBE can be very different. The treatment of timing-based incentives under the GloBE Rules paired with impact of different tax incentives over the life of an investment requires a framework of analysis that is flexible enough to capture the evolution of tax incentives and GloBE impacts over the lifetime of the investment.

52. **This section analyses the impact of different incentive types on ETRs over the life of an investment.** For investments that benefit from different tax incentive types, comparing total taxes paid over the lifetime of the investment before and after the GloBE Rules apply shows the extent to which the GloBE Rules may affect different tax incentives differently. The Effective Average Tax Rate (EATR) compares the tax burden on a profitable investment, and summarises the total taxes paid by the investor over the lifetime of the investment, including Top-up Taxes where the ETR in a given period falls below 15%.[25]

[25] The EATR, being the average effective rate, is chosen as it bears a greater similarity to the calculation of the GloBE ETR. The EATR is also the leading indicator to assess how the GloBE Rules may affect discrete investment decisions such as where to locate investments. As it is a forward-looking indicator, it facilitates the analysis of how GloBE may

53. **The approach adopted in this paper uses stylised examples to highlight the impact of GloBE on the use of tax incentives.** This allows policymakers to better understand which incentives will be more strongly affected by GloBE and under which conditions, illustrating the jurisdiction and entity level factors outlined in Section 4. The model builds on the well-known forward-looking ETR model (Devereux and Griffith, 2003[13]) and is developed to capture the treatment of different tax incentives under the GloBE Rules (see Box 2 for a summary and Annex B for details on the methodology and empirical calibration). The methodology used to produce stylised examples in this report can also be calibrated to perform country-specific analysis of the impact of GloBE Rules on different tax incentives. Carrying out an ETR-based analysis of a given jurisdiction's tax incentives can assist policymakers in understanding the impact of GloBE on the costs of investment in their jurisdiction for MNEs. [26]

Box 2. Methodology for illustrative examples

Extending the forward-looking ETR framework to model the impact of the GloBE Rules

The modelling in this section builds on the OECD forward-looking ETR framework that is based on the work of Devereux and Griffith (2003[13]) and Klemm (2008[25]) for flexibility. These models have been used in a variety of contexts to model the effects of wide range of tax policies (Botman, Klemm and Baqir, 2008[26]; Celani, Dressler and Hanappi, forthcoming[23]). They allow the comparison of different tax policies on investment costs, and thus on the ETR on investment. The model presented here is adapted to estimate the extent to which GloBE affects investment costs in the presence of tax incentives, reproducing the steps outlined in Section 3. Importantly, (i) it mimics how different tax incentives are treated for the computation of the GloBE ETR; (ii) it accounts for the SBIE to compute excess profits and Top-up Tax.

To identify the impact of the GloBE Rules, the model considers the case of a firm that invests in a tangible asset and qualifies to benefit from a tax incentive. Period-by-period, the model observes the stream of tax revenues, depreciation of capital, tax deductions and tax payments that result from the investment and the benefit of a tax incentive. In each period, the GloBE ETR is calculated and Top-up Tax is applied where the GloBE ETR falls below 15%. The additional Top-up Tax increases the total amount of taxes paid by the firm and consequently the cost of undertaking the investment once the GloBE Rules have been implemented. The measure that summarises the taxes paid by the firm on a profitable project is the EATR, which calculates in net present value terms the impact of the path of taxes paid in respect of a profitable investment. As is the case in Hanappi and González Cabral (2020[60]), the model also accounts for the fact that the GloBE Rules only apply to excess profits. GloBE Income equivalent to 5% of the value of capital stock in each period is still taxed under domestic laws as a proxy for the SBIE. The calculation of the SBIE is then relaxed and calibrated to industry-specific patterns. Importantly, it is assumed that the CIT base is equal to GloBE Income and no adjustments are required to arrive at GloBE Income from domestic CIT profits.

affect tax incentives, in particular those geared towards affecting the location of investments such as income-based tax incentives to attract FDI.

[26] The EATR considers a profitable investment and is a key indicator informing discrete investment decisions, e.g. the location of investment (2003[13]). To evaluate how taxation affects the scale of investment, the relevant rate is the effective marginal tax rate. Hanappi and González Cabral (2020[60]) evaluate the impact of Pillar One and Pillar Two on MNE's investment costs using both rates which feeds into the analysis of investment responses based on Millot et al. (2020[90]) as part of the OECD Economic Impact Assessment (OECD, 2020[8]).

Tax incentives modelled and assumptions used in the calibration

Tax incentives may be more or less affected depending on whether they reduce or adjust Covered Taxes or increase GloBE Income according to the GloBE Rules (Table 1). In this section, the model is stylised and is not calibrated to the case of a specific jurisdiction, although the tax incentives modelled reflect tax incentive designs observed across jurisdictions. Four types of tax instruments are compared: reduced tax rates, tax allowances, tax credits and accelerated depreciation provisions. The first three instruments are chosen and calibrated to provide a comparable EATR pre-GloBE to the firm of 5%. This means that the firm is assumed to receive the same level of subsidy through each different tax instrument. Accelerated depreciation provisions are treated separately as such instruments only contribute to deferral of taxation to a later period.[27] Note that the goal of this exercise is to illustrate the impact of the GloBE Rules on types of tax incentive instruments and does not claim an equivalence between such instruments beyond what is needed to perform the exercise. Even though income-based and expenditure-based incentives can be made 'seemingly equivalent', firms may react differently to these types of tax incentives and the effectiveness and distributional consequences of both may be markedly different (PCT, 2015[60]; Zwick and Mahon, 2017[36]).

The assumptions used regarding the tax incentives are as follows. The jurisdiction is assumed to have a statutory tax rate of 15%. Two further assumptions are made for the purposes of concentrating the analysis on the effect of the GloBE Rules. The first is that firms can depreciate assets for fiscal purposes at their economic depreciation rate and the second is that inflation is assumed to be zero. The relevance of these choices is as follows. If economic depreciation matches tax depreciation, the choice of depreciation rules does not matter. The EATR that the firm faces is simply the STR. This provides a baseline and a setting that abstracts the estimation from macroeconomic effects. Otherwise, the comparisons of the different tax instruments would be a combination of the effect of the tax incentives, baseline provisions and the impact of macroeconomic parameters. The benefit from making this assumption is that all effects in the EATR across tax incentives are due solely to the interaction with the GloBE Rules. Annex C relaxes the assumption of zero inflation and shows that similar patterns arise in the case where inflation rates are above zero. The investment is assumed to be financed with retained earnings. In cases where an investment is debt financed, the model would result in generally lower EATRs pre-GloBE compared to the retained earnings case

Note: Annex B contains details on the methodology and empirical calibration and Annex C additional results including the period-by-period operation of the model.
Source: OECD.

5.1. The GloBE ETR calculation and the tax incentive instrument

54. **The impact of the GloBE Rules on a given tax incentive instrument will depend on the extent to which the instrument contributes to a reduction in the GloBE ETR.** The lower the GloBE ETR is relative to the minimum rate of 15%, the larger the Top-up Tax for which the firm will be liable. An important consideration is how tax incentives are treated for the purposes of computing the GloBE ETR. In this regard, tax incentives can usefully be classified into two categories: those that permanently reduce taxes paid by firms and those that defer tax payments into the future. These two types of incentives lead to

[27] The GloBE's deferred tax accounting mechanism accounts for these timing differences by recognising a deferred tax liability which means that accelerated depreciation provisions are generally not expected to give rise to top-up tax under the GloBE Rules.

permanent and temporary book-tax differences, which will face a different tax treatment under the GloBE Rules (see Section 3). As discussed above, the extent of the impact of the GloBE Rules on tax incentives depends on whether the tax incentive: (i) reduces the numerator – Covered Taxes; (ii) increases the denominator – GloBE Income; or (iii) is adjusted to ensure a neutral effect on the GloBE ETR. Adjustments occur where a tax incentive generates timing differences for certain assets. Table 1 provides a first overview of the impact of the GloBE Rules on different types of tax instruments.[28] By displaying how different tax instruments would interact with the GloBE Rules, it highlights the likely extent to which the GloBE ETR calculation will affect the different tax incentive instruments, holding other factors equal. In reality, the extent to which particular tax incentives or investors would be affected needs to account for a wide range of factors that may limit or intensify the impact of the GloBE Rules (as discussed in Section 4). This section discusses the different tax instruments in turn from those most likely to least likely affected.

5.1.1. Tax incentive instruments most likely to be affected

55. Tax incentives are more likely to be affected where they are treated as reductions in Covered Taxes in the GloBE ETR calculation. Tax incentives in this group include the majority of income-based and expenditure-based tax instruments; including preferential CIT rates (through either reduced rates or exemptions) or investment tax allowances or credits that seek to reduce taxable income or the tax liability on certain investments.

56. **For the most part, the GloBE Rules apply in the same way to different tax incentives regardless of the policy goal, the type of tax instrument and whether it is income or expenditure-based.** Figure 10 considers the effect of the application of the GloBE Rules to a firm, considering three different tax incentive instruments. Each instrument would reduce the EATR over the life of an investment from 15% to 5%. The instruments considered are: (i) a reduced tax rate; (ii) a tax allowance that allows the firm to deduct more than 100% of the value of depreciation in each period; and (iii) a tax credit that is calculated based on depreciation allowances. The use of those tax incentives brings the EATR over different periods of the investment below 15%. The chart compares firms that are in-scope of the GloBE Rules to those that are out-of-scope. In all cases, out-of-scope firms can still maintain the reduced 5% rate in a post-GloBE environment, leaving tax incentives unaffected. For in-scope firms, Top-up Tax would be due where the EATR in a given period falls below 15%. In order to illustrate the similar treatment of the GloBE Rules on tax instrument types, Panel A considers the case where the firm does not benefit from the SBIE, which would otherwise lower profits to which Top-up Tax applies. Independent of the tax instrument used, the firm is subject to Top-up Taxes that take the firm EATR to 15% post-GloBE. This shows that, in most instances, the GloBE Rules are agnostic as to how low ETRs are delivered. Whether these low ETRs are provided by income or expenditure-based incentives, by credits, allowances, reduced rates or holidays, the GloBE Rules will raise rates to 15% in every period with the overall EATR being equal to 15% in each period.

[28] See UNCTAD's World Investment Report (2022[18]) for some indications of examples of tax incentives falling in some of these categories.

Table 1. Mapping the impact of tax incentive instrument design in the GloBE ETR calculation

The intensity of the colour reflects the likelihood with which the benefit of the tax incentives may be affected by the GloBE ETR calculation

Nature of relief	Type of instrument		Tax benefits affected by the GloBE ETR calculation (intensity of the colour indicates intensity of effect)	Effect on GloBE ETR	
				Numerator	Denominator
Income-based incentives		Full exemption	More likely	↓	
		Partial exemption	More likely	↓	
		Reduced rates	More likely	↓	
Expenditure-based incentives	Tax deductions[1]	Tax allowances[3]	More likely	↓	
		Immediate expensing and accelerated depreciation	Less likely	Adjusted for timing differences	
		For tangible assets: machinery, equipment, buildings	Unaffected	No recapturing applies	
		For short-lived intangibles	Less likely	Recapturing may apply	
		Other assets	More likely	Recapturing may apply	
	Tax credits	Qualifying refundable tax credits	Less likely	[2]	↑
		Other tax credits	More likely	↓	

Note: This table considers the likelihood of certain types of tax instruments of being affected due to the way in which they are treated for the GloBE ETR computation. The actual effect on tax incentives will depend on other design elements of tax incentives (scope, targeting, limitations, etc.) and other dimensions such as the types of taxpayer utilising the tax incentives or the standard tax system in the jurisdiction as discussed in Section 4. In addition, adjustments to taxable income to arrive at GloBE Income will also be required to compute the jurisdiction GloBE ETR as discussed in Section 3.3. and 4.1.

[1] Tax deductions include any tax provisions that reduce taxable income; while tax credits reduce the firms' tax liability. Tax incentives may apply to current or capital expenses; and when referring to capital they can target the acquisition cost or depreciation expense.

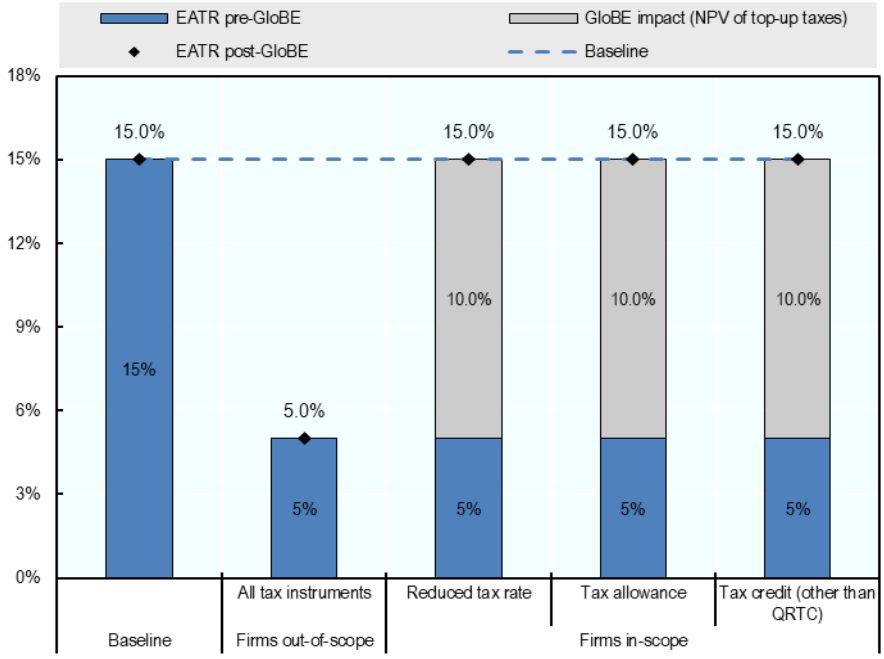
[2] QRTCs are shown as affecting the denominator since they are treated as GloBE Income. Technically, the adjustment would be done to the numerator or denominator based on the treatment of such tax credits in financial accounts. For instance, if the tax credit is reflected in the financial accounts as a reduction to the income tax expense, then such reduction should be removed from the amount of Adjusted Covered Tax increasing it accordingly. The amount of the credit should be added to GloBE Income. In any event, the outcome is that it should be considered as GloBE Income.

[3] Tax allowances are a tax deduction that is granted by a jurisdiction to the extent that it exceeds the expenditure to which it relates. For example, where a taxpayer is entitled to depreciate 120% of the acquisition cost of the asset, then the additional 20% is considered a tax allowance.

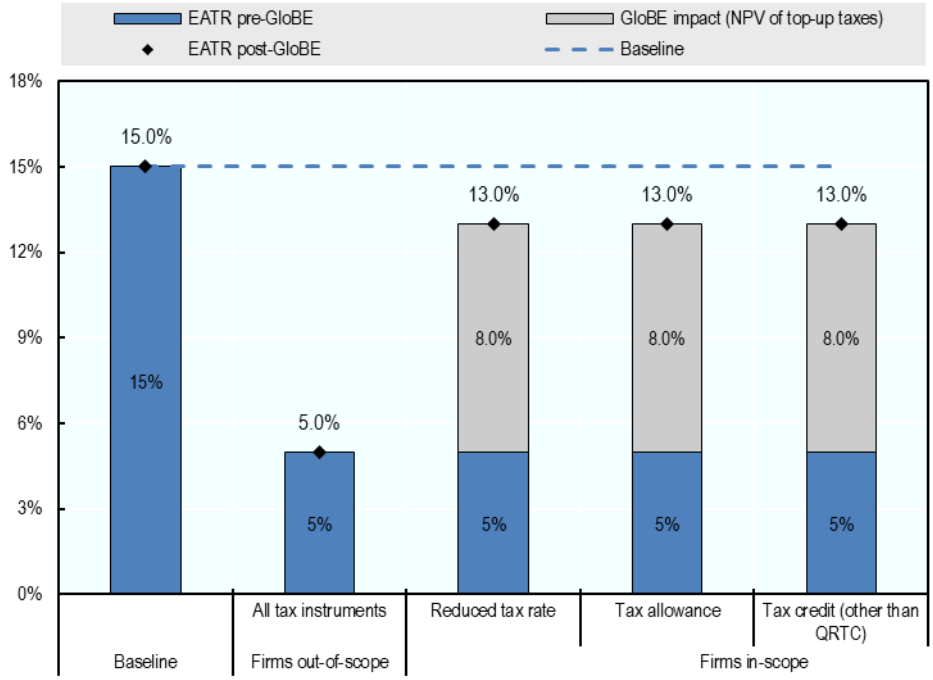
Source: OECD.

Figure 10. EATR pre- and post-GloBE using alternative tax instruments

Panel A: SBIE equals zero, upper bound case – GloBE nullifies the effect of the tax incentive



Panel B: SBIE equals 5% of tangible capital stock – GloBE curtails the effectiveness of the incentive



Note: All tax incentives are calibrated to yield the same EATR pre-GloBE of 5%. Differences in the EATR post-GloBE of the different tax incentives can be traced back solely to the operation of the GloBE Rules. Annex B provides further details on the methodology and calibration and Annex C reproduces this result using an alternative assumption on inflation.
Source: OECD.

57. **The SBIE plays a key role in determining the impact of the GloBE rules on tax incentives.** In the case of Panel A (assuming for the sake of illustration no SBIE), the GloBE Rules imply that post-GloBE, the firm will be subject to a 15% EATR. The GloBE Rules neutralise the effect of the tax incentive and bring the firm back to the baseline rate in the jurisdiction of 15%. GloBE renders the tax incentive ineffective for in-scope firms. Panel B assumes that 17% of profits are excluded from the GloBE tax base by the SBIE in every period.[29] Top-up tax is still due on the remainder of profits, but given that a share of profits is not in-scope for GloBE, the EATR post-GloBE only increases to 13% (instead of 15% in the case without the SBIE). This means that the tax incentive still provides a tax advantage compared to the baseline case of 2 percentage points in this calibration. The tax incentive's effectiveness is significantly limited, but not nullified for in-scope firms. This highlights a design question to be considered by jurisdictions in the design of their tax incentives. Consistent with the intended outcomes under the GloBE Rules, if investments have high levels of substance or low levels of profit, they may be more or less protected from the application of the GloBE Rules. Policymakers therefore need to consider carefully, in designing their tax incentives, whether and to what extent their tax incentives encourage a high amount of substance in the jurisdiction relative to GloBE Income. This will be discussed further in Section 6.

58. **The extent to which tax incentives will be impacted by the GloBE Rules will also depend on other design elements that affect the generosity of tax support.** As discussed in Section 2.2 certain design features may limit the generosity of tax support. For instance, tax incentives that apply only to new investment would apply to a lower incremental base than volume-based incentives applying to old and new investment. Similarly, targeted provisions to certain types of income such as export income or IP income will have a lower impact on firms' ETRs than permanent reduced rates or tax holidays applying to the full income of the firm. Ceilings that bound the maximum amount of relief or investments that can qualify for support or thresholds that establish minimum investment requirements, act to affect the ultimate tax benefits firms can obtain. This means that similar tax instruments can deliver very different ETR outcomes depending on the details of their design features. A consideration of which tax incentives might be more likely affected by the GloBE Rules should account for all of these design features.

5.1.2. Tax instruments unaffected or less likely to be affected

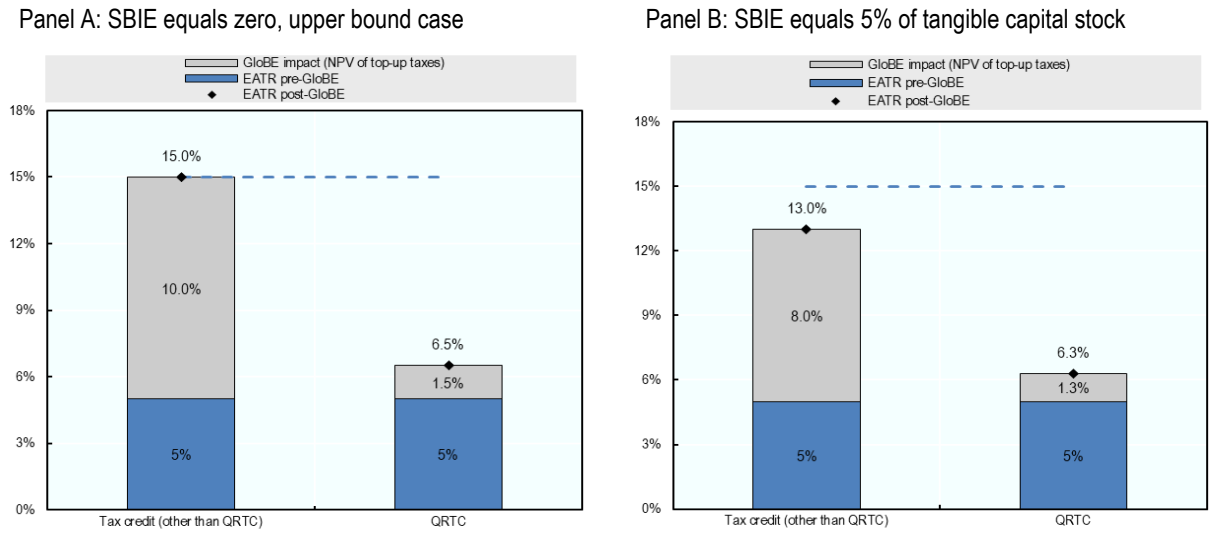
59. **Certain refundable tax credits are generally less affected by the GloBE Rules than non-refundable tax credits**. As noted in Section 3, the GloBE Rules generally follow financial accounting in treating grants and qualified refundable credits as income of the recipient rather than a reduction in taxes. Accordingly, the provision of a grant or qualifying refundable tax credit will increase GloBE income instead of reducing Covered Taxes in line with its financial accounting treatment. A QRTC will still affect the GloBE ETR, but in a different way. Figure 11 considers the effect of the application of the GloBE Rules to a firm, which can reduce the EATR from 15% to 5% by using either a QRTC or a non-qualified refundable credit. Again, Panel A models the case without the SBIE, while Panel B models the case with the SBIE. The QRTC is treated as income while other tax credits are treated as reducing Covered Taxes. In the example below, this implies that the Top-up Tax that the firm needs to pay in every period equals 1.5% if the tax credit is considered as a QRTC and 10% if not. In a post-GloBE environment, the firm will be able to achieve a relatively low EATR if the credit is considered a QRTC. This will be equal to 6.5% on its profit in

[29] The ratio of SBIE to GloBE Income is constant in this example due the fact that inflation is assumed away. In the model GloBE Income is a function of the pre-tax rate of return, economic depreciation and inflation. The SBIE is a function of the evolution of capital stock which is a function of economic depreciation alone. All of these parameters are calibrated as shown in Annex B, which underpins the 17% figure. Since inflation is set to zero for ease of exposition, the ratio of SBIE to GloBE Income is constant over time. A positive inflation rate would make the SBIE to GloBE Income ratio vary over time. This is because in that case revenues would capture the increase in prices over time while the SBIE is would be based only on the nominal value of tangible assets.

Panel A (the non-SBIE case) or 6.3% in Panel B (with the SBIE). This highlights that different incentive designs may be treated differently under the GloBE Rules.

60. **Tax incentives that defer tax payments into the future are generally unlikely to generate Top-up Taxes under the GloBE Rules.** Tax incentives such as accelerated depreciation provide benefits to firms by allowing the firm to deduct the cost of assets from the tax base at a faster rate than those assets are consumed in the income earning process and in advance of when those costs would be recognised for financial accounting purposes. Because they allow the firm to deduct these costs over a shorter period than their economic life, they lead to a reduction of taxable income in earlier years and therefore a deferral of taxation and thus to a timing benefit.[30] However, as noted in Section 3 above, the GloBE Rules incorporate certain deferred tax adjustments into the calculation of Covered Taxes in order to take account of differences between book and tax in the recognition of income and expenses. The effect of these deferred tax accounting adjustments is that, under a moderate tax rate and assuming no recapture is required,[31] tax incentives such as accelerated depreciation and immediate expensing, will generally on their own not give rise to additional tax liability under the GloBE Rules absent any other base narrowing provisions.

Figure 11. EATR pre- and post-GloBE for QRTCs and other tax credits



Note: The tax incentive modelled provides a 15% tax credit on the depreciation of the asset. Panel A assumes no SBIE applies as a way of outlining its impact. The EATR post-GloBE equals 15% as inflation is assumed away and economic equals fiscal depreciation. This leads to the result that there is no effect of time and the tax system acts as a tax on rents. At higher inflation rates, the EATR of the investment increases due to the effect of time (unrelated to GloBE) (see Annex C). In Panel B, the SBIE is calibrated to be 5% of the value of the capital stock, which in this example is related to the evolution of the capital stock for the new capital investment made. Given the assumed profitability and capital decay, an SBIE of 5% represents 17% of the GloBE Income of the firm in this example. Annex B provides further details on the methodology and calibration and Figure C.2 that provides a representation of total taxes paid pre and post-GloBE including the calculation of the GloBE ETR for both other credits and QRTCs. Annex C reproduces this result using an alternative assumption on inflation.
Source: OECD.

[30] Accelerated depreciation provisions and immediate expensing only allow a faster write-off of the value of the investment, by definition they do not allow more than 100% of the acquisition cost to be deducted. Tax incentives such as investment tax allowances can go beyond the 100% of acquisition cost, for example by allowing firms to deduct 150% of the value of the investment, which is what is meant by 'enhancement'.

[31] Recapturing exceptions are discussed further below.

61. **For assets other than tangible assets, where the temporary differences last longer than five years, the GloBE Rules may affect the tax incentive.** While the GloBE Rules allow for temporary timing differences, where these differences are maintained over a period of more than five years a recapturing mechanism may apply. The recapture mechanism does not apply to accelerated depreciation on tangible assets, immediate expensing of certain items and a number of other defined classes of expenditure or assets. Where the recapture mechanism applies, the firm needs to regularise Top-up Taxes that should have been paid if the firm has not adjusted for the timing difference within the prescribed period.[32] Figure 12 shows the case of an acquired intangible asset that can be amortised at a faster rate for tax purposes than for book purposes. In this case, since the book-tax difference does not revert within five years, Top-up Tax needs to be recaptured. In this example, the EATR faced by the investor is less favourable post-GloBE if the tax incentive is used compared to the baseline. This is because the use of the tax incentive leads to Top-up Taxes in the earlier years where the accelerated depreciation provisions decrease the tax base to a greater extent. This decrease in taxation is not compensated in later years where tax payments increase.

62. **For tangible assets, tax incentives that provide for immediate expensing or accelerate the cost recovery of investment are unaffected by the GloBE Rules.** Accelerated depreciation provisions are key incentives that are used in both developed and developing countries to promote investment in infrastructure and tangible capital, key to build the economic structure. Incentives that result in temporary timing differences are treated as an exception to the recapturing mechanism discussed above. This means that any tax incentives that result in temporary differences and which are targeted to the cost recovery of tangible assets are unaffected by the GloBE Rules. In the example in Figure 12, post-GloBE, the firm can still benefit from the accelerated depreciation on tangible assets achieving an EATR of 14.3%. This suggests that immediate expensing or accelerated depreciation provisions could be a means for jurisdictions to continue to attract investment after the implementation of the GloBE Rules. The benefits provided by these provisions may not deliver the kinds of low ETRs that may be provided by tax holidays for example. In the case of timing-based incentives, the only benefit provided to the taxpayer concerns the timing of taxes due over the life of the investment, which in many cases can mean that the benefits are more modest than other kinds of incentives.[33]

5.2. The impact of economic substance on GloBE outcomes

63. **Aside from the GloBE ETR, the SBIE also plays a key role in affecting the use of tax incentives in a post-GloBE environment.** The previous section concluded that tax incentives would be more or less affected depending on their impact on the GloBE ETR. At the same time, the SBIE also plays a key role in determining the extent to which tax incentives will be affected by the GloBE Rules. As discussed in Sections 3.3 and Section 4, the extent of the increase in effective taxation due to GloBE depends on the degree of economic substance—payroll and tangible assets— that firms have in a given jurisdiction, which is tightly linked to the nature of the entity's activities. This is because Top-up Tax would only apply to profits in excess of the SBIE. To illustrate this point further, Figure 13 reproduces the example in Figure 10 but considers the impact of the MNE having different levels of substance in the jurisdiction (i.e. as measured by the SBIE to GloBE Income ratio). Pre-GloBE the EATR equals 5%. After GloBE, the EATR depends on the ratio of SBIE to GloBE Income of the investing MNE.[34] The greater the SBIE to

[32] As discussed in Section 3, GloBE adjusts Covered Taxes to account for the difference between book and tax depreciation. By doing so, the GloBE ETR will be unaffected as GloBE accounts for the fact that taxes will be due at a later stage.

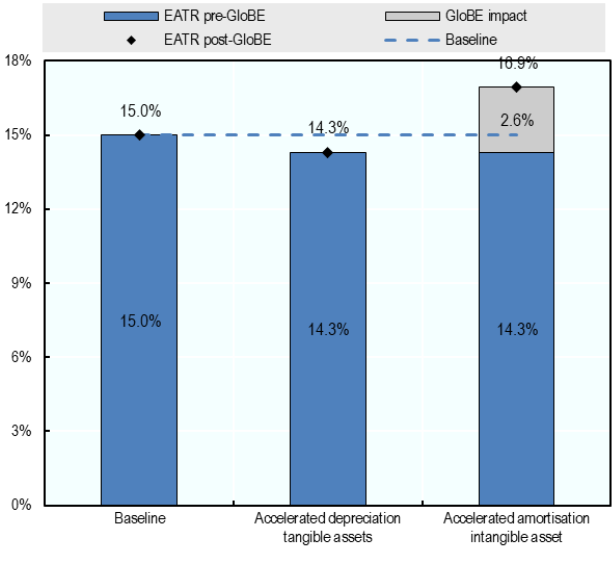
[33] This relative generosity varies with the rate of return of the investment.

[34] Investors facing the same GloBE Income and GloBE ETR in the jurisdiction could observe a different level of Top-up Taxes, and hence a different increase in effective taxation, solely based on the level of economic substance.

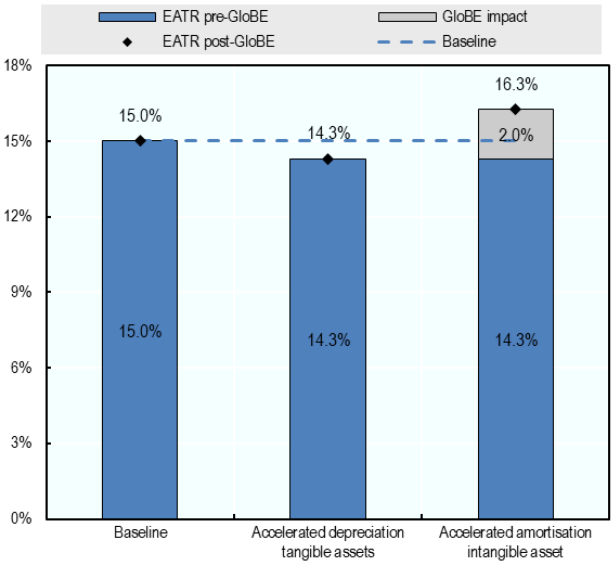
GloBE Income ratio, the lower the increase in effective taxation. Analysing how tax incentives may be affected in a given jurisdiction therefore also requires accounting for the level of substance that firms have in the jurisdiction due to their activities.

Figure 12. EATR pre- and post-GloBE for accelerated depreciation provisions for tangible assets may be less affected by the GloBE Rules

Panel A: SBIE equals zero, upper bound case



Panel B: SBIE at 5% of the value of tangible capital stock

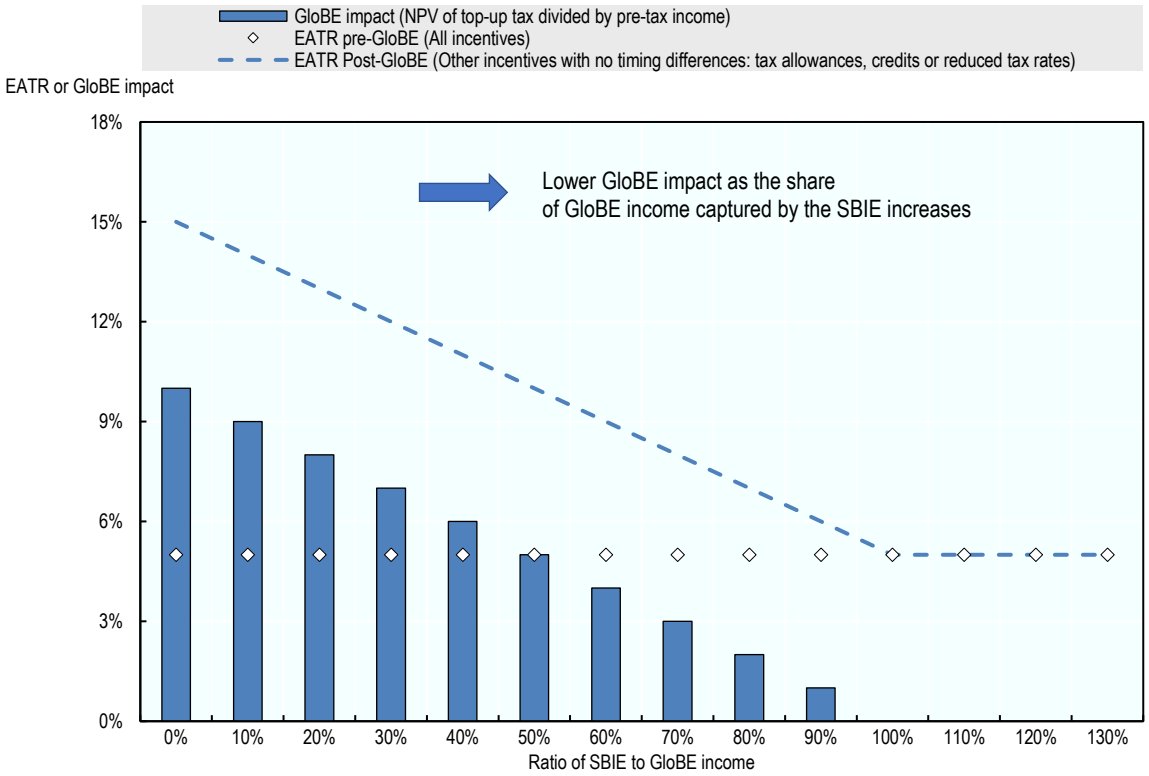


Note: The figure considers a tangible asset that can be depreciated at twice the baseline rate of 20% declining balance. Figure B.3 illustrates the mechanism through which the GloBE Rules adjust for temporary differences and the impact it has on total taxes paid and the GloBE ETR. To illustrate the differential consideration of tangible vs intangible assets, the same treatment is assumed for an intangible asset that shares the same characteristics as the tangible asset modelled. In the second case, since the increase in the capital stock is intangible, the same ratio of SBIE to GloBE is assumed as for a tangible asset. The higher EATR for the intangible asset stems from the fact that as the temporary difference is not compensated, which in turn means that Top-up Taxes arise in the first three years of the investment in this example (see Figure C.4 in Annex C). Annex B provides further details on the methodology and calibration and Annex C reproduces this result using an alternative assumption on inflation.
Source: OECD.

64. **The SBIE has three important implications that cause variation in the extent to which certain tax incentives for investors and jurisdictions may be affected in a post-GloBE environment.** First, at the jurisdiction level, jurisdictions with higher levels of substance will be on average less extensively affected. Second, firms and particularly those performing activities or operating in sectors that require a greater level of substance in the jurisdiction may be less affected. Third, tax incentives, where the scale of tax relief is more tightly associated with the amount of economic substance, may be less affected. These implications highlight the crucial need for policymakers to consider the level of substance, the nature of activities undertaken by various MNEs and the tax incentives used in the jurisdiction when considering tax incentive reform. These three implications are discussed further below.

Figure 13. The GloBE Rules have less of an impact where substance to profit ratios are high

EATR pre- and post-Globe for a tax incentive that reduces the EATR to 5%, at different levels of SBIE to GloBE Income



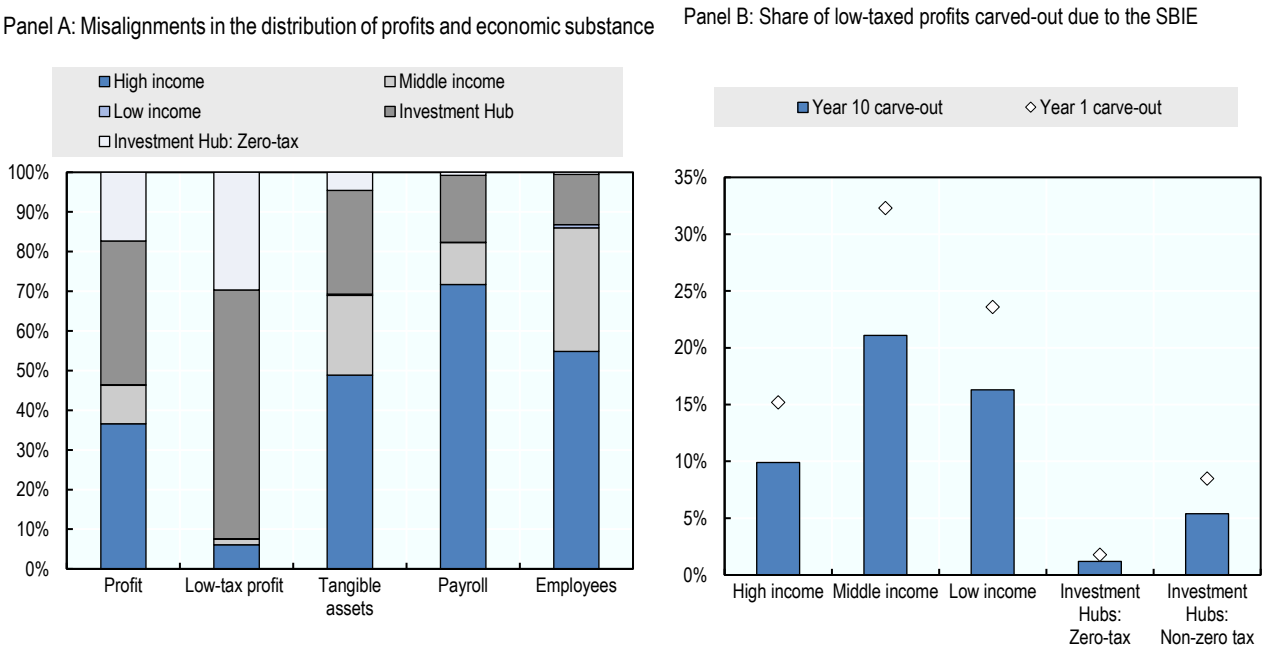
Note: The tax incentive modelled is a reduced tax rate of 5%. The EATR pre- and post-Globe is compared for different levels of the SBIE to GloBE Income ratio. The greater the amount of substance, the lower the share of profits to which Top-up Tax would apply.
Source: OECD.

65. **First, the GloBE Rules will have a greater effect on the use of tax incentives in jurisdictions where economic substance – tangible assets and payroll – is high compared to the profits booked.** Whereas low-tax profits tend to be disproportionally located in investment hubs that have on average a weighted ETR of 9%, tangible assets and payroll are typically located in high and middle income jurisdictions where the average weighted ETR is of 16% and 19% respectively (Figure 13, Panel A).[35] This implies that the SBIE will carve-out more low-tax profits in high and middle income jurisdictions, leaving most of the profits in-scope for Top-up Tax particularly in zero-tax investment hubs (Figure 13, Panel B) (OECD, 2020[8]). High, middle and low income jurisdictions will therefore likely see their tax incentives less affected compared to investment hubs.[36]

[35] The ETR for each jurisdiction is calculated as the profit-weighted average of the ETR that foreign affiliates face in that jurisdiction using 2018 CbCR data. The weighted ETR across income groups is likewise profit weighted.

[36] The disconnect between economic activity and profit may be the result of profit shifting. The SBIE will make profit shifting less appealing as the investor would not benefit from the SBIE in the jurisdiction to which profits are shifted facing higher Top-up Taxes than if profits where not shifted. Other possible causes are the fact that intangible assets are not accounted for in the SBIE. A large profit to SBIE ratio may result of large intangible asset stocks.

Figure 14. MNE's activities and economic substance



Note: The underlying data represent 222x222 matrices that reflect the location of profits and economic activity of MNEs above the EUR 750 million threshold. The methodology to construct these matrices is outlined in the EIA (2020[8]).
Source: OECD, based on 2017 CbCR data, Orbis and other macroeconomic sources.

66. **Second, tax incentives that pertain to capital or labour costs will be less affected, all else equal**. In the OECD ITID, all tax incentives offered by covered developing economies had a sector condition (see Section 2.2for a further discussion). As discussed in Section 3, the SBIE exempts a share of GloBE income from top-up taxation equal to 5% of payroll and tangible assets, with higher rates during the transitional period (Section 3.5). This rule functions to ensure that only Excess Profits, that is profits in excess of a routine return, come within the scope of the GloBE Rules. This routine return is calculated with respect to depreciation and payroll. Accordingly, industries that typically have only a routine return in a jurisdiction by virtue of a more intensive use of payroll or tangible assets may be less affected, holding other factors equal (see Figure 15). Tax incentives targeted toward activities with greater ties to economic substance in the jurisdiction are generally more protected by the SBIE than activities that rely on intangible factors or are otherwise highly profitable. The extent to which the SBIE reduces the impact of the GloBE Rules on certain tax incentives is only partial and dependent on the profitability of the activities the firm performs. This is because at the end of the transitional period, the SBIE percentage is limited to 5%.[37]

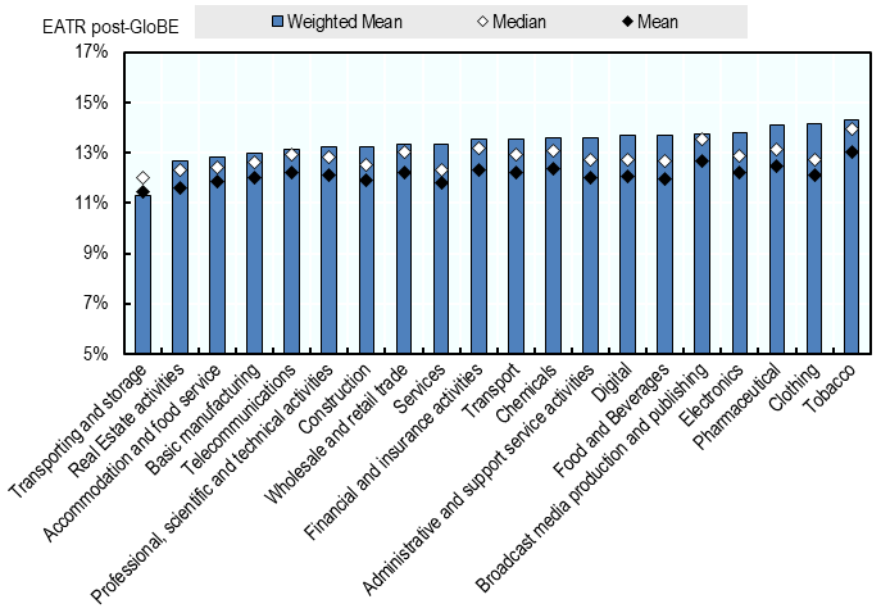
67. **Firms with higher levels of tangible assets and payroll may be affected differently by the GloBE Rules and may retain lower ETRs post-GloBE.** To illustrate this point, consider a simple example. Consider two firms that each belong to an MNE group above the EUR 750 m threshold. Both firms operate in the same jurisdiction but perform different activities. Firm A operates in the hotel industry and Firm B provides digital services. The jurisdiction offers a 10% CIT rate for newly established firms in an underdeveloped area, a rate that falls below the minimum tax rate. Both Firm A and Firm B have profits

[37] In a transition period of 10 years, the amount of income excluded by the SBIE will start at 8% of the carrying value of tangible assets and 10% of payroll, declining annually by 0.2 percentage points for the first five years, and by 0.4 percentage points for tangible assets and by 0.8 percentage points for payroll for the last five years until reaching 5% of both the carrying value of tangible assets and payroll.

(equal to GloBE Income) of USD 100 m. Because of the nature of its activity, Firm A has tangible assets and payroll equivalent to USD 440 m and Firm B has tangible assets and payroll equivalent to USD 260 m. When calculating the amount of excess profits, the differences in the tangible assets and payroll expenses that each firm has in the jurisdiction would lead to a different level of Top-up Tax being payable. This means that for Firm A excess profits would be equal to USD 78 m (USD 100 m – 5%*USD 440m) which would lead to Top-up Tax of USD 3.9 m (USD 78 m * 5%) and Firm B would have excess profits of USD 87 m (USD 100-5%*USD 260) leading to Top-up Tax of USD 4.35 m (USD 87 m * 5%). The total tax liability of Firm A equals USD 13.9 m (USD 10 m in tax plus USD 3.9 m in Top-up Tax), while that of Firm B equals USD 14.35 m (USD 10 m in tax plus USD 4.35 m in Top-up Tax). As a result of the SBIE, Firm A faces a 13.9% ETR post-GloBE while Firm B faces a 14.35% post-GloBE due to differences in the tangible assets and payroll expenses of the firms in the jurisdiction.[38]

Figure 15. Illustrating variation at the sectoral level: EATR post-GloBE with SBIE to GloBE Income ratio calibrated at the industry level

EATR pre-GloBE equals 5%, industries are ranked from lower to higher GloBE impact due solely to the SBIE, for firms with SBIE to GloBE Income ratio less than one



Note: This chart reproduces Figure 13 for various industry-specific ratios of SBIE to GloBE Income. It considers a tax incentive that reduces the EATR pre-GloBE to 5% (hence the start of the y-axis at 5%). Post-GloBE the degree of SBIE to GloBE Income is calibrated to the mean, median and the profit-weighted mean observed by broad industry groups excluding firms for which the SBIE to GloBE Income ratio is greater than one and would hence be out-of-scope. These data are calibrated using well-covered countries in Orbis data for the years 2017 and 2018 restricted to MNEs above the EUR 750 million threshold (OECD, 2020[8]). For subsidiaries present across the two years, an average SBIE to GloBE Income is calculated. Industries are ranked by greatest GloBE impact based on weighted mean. The x-axis situates the least affected industries to the left and the most affected to the right based on the weighted mean of the SBIE to GloBE Income ratio in Orbis. This chart seeks to identify between-industry variation in GloBE impacts due to differences in economic substance for firms that could be in-scope of Top-up Tax. The figure refers to the SBIE to GloBE Income for firms for which the SBIE does not exhaust profits, i.e., the data excludes subsidiaries for which the SBIE exhaust profits and Top-up Tax would not be due. Certain industries are not captured due to low number of subsidiaries operating therein. In addition, financial insurance excludes holding companies.
Source: OECD.

[38] The example is empirically calibrated to match the weighted mean SBIE to profit ratio of the corresponding industry as outlined in Annex B.

68. **Third, while no explicit distinction is made in the rules, the SBIE can be expected to have a more favourable impact on expenditure-based tax incentives than income-based tax incentives.** On its face, the SBIE does not distinguish between tax incentive instruments. The GloBE Rules treat expenditure-based incentives (e.g. allowances and credits) the same as income-based incentives (e.g. holidays), imposing Top-up Tax based on the GloBE ETR regardless of whether the ETR is a result of a tax holiday or an equivalent tax credit (Section 5.1).[39] However, the SBIE will more likely accrue in cases where expenditure-based incentives are used to promote investment in tangible assets, including infrastructure, and labour in the jurisdiction. Such cases could include, e.g., investment allowances, training allowances or R&D tax incentives, which typically target current expenditures, including labour costs in particular. These types of tax incentives, which are tightly linked to activity in the jurisdiction, have been proven the most effective in promoting investment in the jurisdiction and may help developing countries in particular to spur economic development and achieve the SDGs. This suggests that jurisdictions whose tax incentive mix relies most strongly on expenditure-based incentives are likely to be comparatively less affected by the introduction of the GloBE Rules.

[39] With the exceptions of the treatment of QRTCs and certain tax incentives that defer taxation into the future as discussed in Section 5.1above.

6 Options for policymakers

69. **This section provides an outline for jurisdictions wishing to reassess their tax policies in light of GloBE implementation.** Section 2 of this report has highlighted the varied use, design and impact of tax incentives across developed and developing economies, potentially leading to substantial revenue forgone and have discussed the factors that may impede tax incentive reform, including competitive pressures, lack of transparency, and challenging governance arrangements. Sections 3, 4 and 5, have discussed the GloBE Rules and how they will affect tax incentive designs differently. These sections highlighted the need to consider a variety of factors that will mediate how the GloBE Rules might affect the ability to provide certain tax incentives in different countries.

70. **This section provides several key pieces of policy advice to developing and emerging economies as they prepare for GloBE.** First, governments should not stand still; they should reassess their tax incentive environment. Pillar Two can present an opportunity to reconsider and reform tax incentives, in particular those that may be wasteful and inefficient. Second, tax reform proposals should be considered carefully, as the impact of GloBE Rules will vary from jurisdiction to jurisdiction and so will the appropriate policy response.[40] Jurisdictions will need to carefully assess their tax policies, economic structures and business environments as they reconsider the tax incentives offered. Third, jurisdictions should bear in mind that under the GloBE Rules there remain opportunities to continue to use tax incentives to attract investment, but they need to be carefully designed. Fourth, tax reform may take time, but there are actions that jurisdictions should take in the immediate term, including exercising caution before introducing any new tax incentives or entering into any new tax stabilisation agreements and investment agreements, without assessing the potential implications for the introduction of the GloBE Rules. As a rapid response, jurisdictions should also consider the introduction of a QDMT, to ensure that they collect Top-up Taxes on low-taxed profit in their jurisdiction that would otherwise be collected by other jurisdictions under the GloBE Rules (via the IIR and the UTPR). Fifth, jurisdictions need to consider whether other broader aspects of their tax policy landscape are in need of reform to prepare for the implementation of the GloBE Rules; including by strengthening or streamlining their anti-avoidance rules where appropriate, and by continuing to invest in their tax capacity (OECD, 2022[63])

6.1. Time to reconsider and revisit tax incentives

71. **Pillar Two and the GloBE Rules in particular should empower governments to pursue tax reform and remove tax incentives where the costs outweigh the benefits from such incentives.** An evaluation of whether tax incentives remain efficient and effective in a jurisdiction in a post-GloBE environment will be necessary to ensure that any future tax reform is evidence-based. Tax incentive reform can be a slow and difficult process. Some tax incentives even though costly and inefficient may be difficult to remove for a range of reasons: they may have been in place for some time, or different tax incentives may be offered under the auspices of multiple government agencies making reform challenging. At times, tax incentives may persist due to the strong lobbying efforts of those businesses that benefit from these

[40] This evaluation should not be static as other countries' responses and MNE behavioural responses need to be considered.

provisions. As the effectiveness of certain tax incentives will be significantly curtailed by the GloBE Rules, governments may find that the implementation of Pillar Two could present an opportunity to remove ineffective and often wasteful tax incentives. A case in point is that of tax holidays which face an extensive use among developing countries (Section 2 and discussion in Section 6.3 below).

72. **Given the global character of Pillar Two, inaction would only lead to forgone revenues.** In the absence of any reform, low-taxed profits arising from the use of certain tax incentives would likely be taxed by other jurisdictions under the IIR or the UTPR. Under such a scenario, the jurisdiction granting the tax incentive could potentially lose twice. First from having to administer a tax incentive that no longer delivers the intended benefits to the investor who would be subject to Top-up Tax that would curtail, if not completely counteract, the effect of the incentive. Second, by failing to collect the Top-up Tax itself, it would see this revenue collected by some other jurisdiction, at its expense. Tax incentive reform can thus allow the jurisdiction to maximise the value of any incentives offered, while retaining the revenues arising in its jurisdiction that would be subject to Top-up Tax under the GloBE Rules. Other mechanisms such as QDMTs are discussed in Section 83

73. **There is no 'one-size-fits-all' conclusion on how GloBE could affect tax incentive use.** As described in Section 4 and Section 5, not all jurisdictions, investors and tax incentives are affected by the rules to the same extent. Certain tax instruments are impacted less in a post-GloBE environment. Through the SBIE, GloBE may have less of an impact on certain taxpayers and certain incentive designs compared to others. The overall impact of GloBE on a jurisdiction's use of tax incentives therefore is heterogeneous and will depend on the type of MNE, the activities they perform, the level of substance, the types and design of tax incentives offered, the uptake of tax incentives and the overall CIT system in the jurisdiction and the CIT systems of investor jurisdictions. Therefore, comprehensive reform will generally take time and will need to be undertaken carefully.

6.2. Tax reform strategies

74. **Tax reform should build on an in-depth jurisdiction-specific analysis of the impact of GloBE Rules that can help establish reform priorities.** Given that the GloBE Rules deliver effects that are jurisdiction-, MNE-, investor- and tax incentive-specific, a granular jurisdiction-specific assessment is essential to drive an informed tax reform process tailored to the jurisdiction. Tax reform may be more or less extensive depending on the circumstances of the jurisdiction. Box 3 identifies some broad steps jurisdictions can consider in their reform process, and Section 6.3summarises how the design of the GloBE Rules may influence optimal designs in the future. Jurisdictions should identify which tax incentives in their jurisdiction are most at risk of being affected by the GloBE Rules based on the principles highlighted in Section 6 and establish an order of priorities that considers first the tax incentives that are most used by in-scope taxpayers and that result in the largest amounts of tax expenditures.[41]

75. **Tax reform should build on sound economic principles, be evidence-based and contribute to enhanced transparency of tax design.** Tax reform should be guided by economic principles that lead

[41] At times, the uptake of tax incentives is low due to weak investment climates, high compliance costs or lack of awareness among other reasons (Cui, Hicks and Xing, 2022[47]). The lack of tax expenditure reporting and documentation collected by the tax administration about the activity of the taxpayer may give the impression that tax incentives that are affected are very precious to taxpayers when in reality they may be underutilised. Appelt et al. (2019[22]) show that while some correlation exists between the most generous R&D tax incentives and the average subsidies observed by firms, there is not a one-to-one relationship with differing uptake being one of the reasons behind such discrepancies. In a review of Special Economic Zones, UNCTAD (2019[82]; 2021[83]) shows that in some instances these provisions are underutilised. Improved tax expenditure reporting can help discern these patterns and assist jurisdictions in the simplification of the tax incentives offered which will improve signalling for investors, reduce redundancy and administrative costs.

to well-designed tax incentives which maximise additionality, minimise windfall gains, and ensure that their benefits outweigh their costs (PCT, 2015[64]; OECD, 2015[65]). Simply reforming tax incentives to become less affected by the GloBE Rules may lead to ineffective incentives being retained and may have unintended consequences and lead to undesirable outcomes. For example, changing a tax credit to fit the definition of a qualifying refundable tax credit may lessen the impact of the GloBE Rules on the incentive, but this could also lead to substantial revenue losses. This could be particularly damaging, especially for jurisdictions with limited fiscal space, as the credits would need to be paid-out to firms with insufficient tax liability.

76. **Policymakers should strengthen efforts to improve tax expenditure reporting.** Tax expenditure reporting is key to fiscal management and can contribute to increasing accountability and transparency but the uptake of comprehensive tax reporting practices is mixed across countries (Heady and Mansour, 2019[66]; Redonda and Neubig, 2018[67]; Redonda, von Haldenwang and Aliu, 2021[68]). Regularly accounting for and reporting on the fiscal costs of tax incentive provisions also provides a valuable evidence base that will support the systematic evaluation of tax incentives to ensure they are fit-for-purpose.

77. **Jurisdictions may wish to use the opportunity presented by Pillar Two to engage in a deeper reconsideration of the use of tax incentives, beyond those directly affected by the GloBE Rules.** The reform process does not need to stop at the doorstep of tax incentives directly affected by the GloBE Rules. Even if the tax incentives most affected by the GloBE Rules may be the most urgent priorities, jurisdictions, in particular those in developing and emerging economies, may wish to use the momentum to reassess the tax incentives offered more broadly. Better tax policy can help mobilise resources by removing redundant and inefficient incentives, reducing distortions and improve signalling for investors.

78. **Policymakers should consult widely amongst their stakeholders when considering reforms.** The complex governance of tax incentives means that tax policymakers should engage with investment promotion agencies and governing bodies of special economic zones to ensure coordination across government. The impacts of the GloBE rules on tax incentive use may be complex, and awareness outside of the tax policy making community may not be high in many jurisdictions. There is, therefore, a need to engage widely, including beyond the tax policy community (UNCTAD, 2022[18]).

Box 3. Steps for a first screening of GloBE impacts in a jurisdiction

Assess whether the jurisdiction is at high, medium of low-risk of being affected by the GloBE Rules.

- Assess whether there are currently investors in-scope in the jurisdiction and the activities they perform in the jurisdiction.
- Estimate the distribution of ETRs that firms pay in the jurisdiction as a marker for risk.
- Assess whether in-scope entities in the jurisdiction with low ETRs have high levels of substance.

Evaluate tax incentives offered in the jurisdiction against the impact of the GloBE Rules:

- Consider whether tax incentives are targeted to out-of-scope income.
- Assess whether the tax incentive instrument is more or less affected by GloBE.
- Consider whether tax incentives have features that effectively limit the extent of tax benefits firms can obtain and how material they are.
- Evaluate whether tax incentives are targeted to activities that are capital or labour intensive.

- Determine whether there are additional pre-conditions or post-conditions on a certain level of economic substance and the level of substance required.

Evaluate the uptake of tax incentives and revenue forgone from the different tax incentives and rank them to establish an order of priority for reform

- Assess whether a tax incentive accrues to in-scope MNEs.
- Estimate the extent of forgone revenues.
- Evaluate the level of economic activity of in-scope MNEs in the jurisdiction against the profits made as a proxy for excess profits if approximating GloBE Income is not a possibility.

Establish a ranking of tax incentives based on the risk of Top-up Taxes being paid to establish reform priorities. This exercise should be based on the ETRs and levels of substance of in-scope MNEs, and the interactions of specific tax designs with the GloBE Rules.

Assess the impact of any proposed changes in light of existing bilateral investment treaties investment agreements and any fiscal stabilisation arrangements.

Evaluate the efficiency and effectiveness of tax incentives post-GloBE, by performing a cost-benefit analysis of tax incentives to inform future reform priorities.

Note: This box highlights in broad strokes the key steps in the analytical process that jurisdictions may wish to take. Jurisdictions may differ in the availability of data and analytical capacity to perform an in-depth assessment.
Source: OECD.

6.3. Use of tax incentives after the implementation of the GloBE Rules

79. **As discussed in Section 5, the GloBE Rules will curtail the effectiveness of some tax incentives in some jurisdictions, which will influence the optimal tax incentives mix in these jurisdictions.** Certain tax incentives may be less affected, either through their treatment in the calculation of the GloBE ETR or as a result of the SBIE. Importantly, even though the GloBE Rules affect certain tax incentive instruments more than others, other aspects of tax incentive design such as targeting also matter when estimating the material impact of the GloBE Rules. Jurisdictions should consider these interactions when assessing and designing tax incentives going forward. In a post-GloBE environment:

- **Where existing tax incentives are effective, jurisdictions may continue to provide these incentives to out-of-scope firms or out-of-scope income, without them being affected by the GloBE Rules**:
  - Tax incentives targeted to SMEs, young firms, start-ups that are standalone or not part of an in-scope group are not affected by the GloBE Rules. Similarly, tax incentives can still be used for smaller MNEs not in scope.
  - Tax incentives targeted to income that is out-of-scope, e.g. shipping income will also be unaffected (with some limitations) by the GloBE Rules.[42]
- **The value of providing tax holidays to in-scope firms is likely to be strongly affected by the implementation of the GloBE Rules, which should prompt a re-assessment of the use of these types of incentives.** Tax holidays, which are widespread across developing countries, are among the tax incentive instruments that carry the strongest risks for countries. This is particularly the case for tax holidays that target all of the income from a given firm, as opposed to certain categories of income. Tax holidays have been found to be poor instruments in promoting investment and often

[42] The GloBE Rules establish that Qualified Ancillary International Shipping Income aggregated for all CEs in a given jurisdiction cannot surpass 50% of those CE's International Shipping Income (as discussed in Section 3).

attract footloose investment with limited spillover investment effects in the jurisdiction (Klemm and Van Parys, 2012[6]). They are costly as all CIT revenues are forgone, can distort against long-lived or capital intensive investments and raise base erosion concerns (Tanzi and Zee, 2001[69]; Botman, Klemm and Baqir, 2008[26]; Klemm, 2010[70]).

- **Tax incentives that are narrowly targeted to certain categories of income or expenditure or that have design features that effectively limit tax benefits are likely to be less affected, all else equal**. Tax incentives targeted to specific types of income, such as IP or export income, effectively limit the share of total income of a given firm that is subject to preferential tax treatment. Their impact on a firm's GloBE ETR, which is calculated at a jurisdictional level, is likely to be smaller holding other factors equal. Reduced tax rates offered on the full income of the firm, by contrast, will take a greater toll as no blending opportunities arise. Where ceilings or thresholds to determine qualifying expenditure or income are in place, such design features effectively limit the generosity of tax incentives and should also mean that these incentives are less likely to be strongly impacted by the GloBE Rules. Note that to the extent certain types of cross-border income are subject to a nominal tax rate of less than 9%, the cross-border payment generating such income may be subject to source taxation under the STTR, depending upon the final design of that rule.
- **Expenditure-based tax incentives are favoured in a post-GloBE environment.** It has often been argued that expenditure-based tax incentives are more desirable than income-based incentives from an effectiveness perspective. However, for a variety of reasons they may also be less impacted by the GloBE Rules.
    - Expenditure-based tax incentives that allow the immediate expensing or that accelerate the cost recovery of tangible assets and certain short-lived intangibles will be less affected than other types of incentives under the GloBE Rules, as discussed in Section 5.1.
    - Expenditure-based tax incentives targeted to provide relief on payroll costs such as R&D tax incentives or training expenses or to incentivise investment in tangible assets such as investment in infrastructure or machinery will induce investment in substantive activities that will increase the value of the SBIE. The link with income-based tax incentives is by contrast more indirect: while income-based incentives may also support investment in tangible assets and payroll, they provide a relatively greater degree of support to high-profit-to-substance investment projects that will be less protected by the SBIE.
    - **Tax incentives that encourage capital- or labour-intensive investment would be less affected, all else equal.** These tax incentives will benefit more from the SBIE, which is an important consideration for developing countries seeking to attract FDI to pursue the development of their productive capacity.
    - **Tax incentives that require a certain level of investment or employment in the jurisdiction would be less affected, all else equal.** Tax incentives in developing countries often include additional clauses that require a certain level of economic substance (such as investment or employment) ensuring links to the local community either as a pre-condition to obtain relief or as a goal to be met by the completion of the relief period (Section 2.2). The extent to which these provisions will reduce the impact of the GloBE Rules on an incentive would depend on their stringency. For example, among the tax incentives including investment size conditions in the OECD ITID, in 50% of cases the minimum investment value is relatively low (at or below EUR 1 million).
    - **QRTCs are treated in the same manner as cash grants consistent with their treatment for financial accounting purposes.** Refundable tax credits imply a cash payment to firms that are not able to fully utilise the tax incentive and are treated as income for financial accounting purposes. Such provisions can carry substantial revenue consequences for jurisdictions if implemented as they imply a refund to taxpayers. If refundable credits are subject to ceilings or caps on refundability, the non-refundable portion may be treated as a tax credit that is not a QRTC. Where

ceilings to refundability are in place, the gap between the effects of QRTCs compared to other tax credits is further reduced.

80. **The above analysis suggests that while it will remain possible to use tax incentives to incentivise investment after the implementation of the GloBE Rules, the extent to which different incentives will be affected varies strongly.** It is important to account for the interaction of various tax incentives, as it is often the accumulation of tax incentives that can give rise to low ETRs. Reform will be a particular priority in those jurisdictions relying heavily on income-based incentives with few associated conditions and where the incentives are associated with little tangible investment or employment but significant profits. Developing countries may be particularly at risk as they frequently rely on income-based incentives such as tax holidays in particular. On the other hand, developing countries on average have higher levels of substance relative to profitability in their jurisdictions when compared to low-tax jurisdictions, suggesting that they may receive considerable benefit from the SBIE. In addition, developing countries are likely to have a small share of resident MNEs above EUR 750 million in revenue, suggesting domestic groups may be less affected. Regardless, countries seeking to retain incentives for in-scope MNEs may wish to consider shifting from income-based to expenditure-based tax incentives, or consider introducing or increasing the stringency of tangible asset investment or employment requirements. Overall, the economic literature supports a greater use of expenditure-based than income-based tax incentives. Economic literature also supports better targeting tax incentives to activities that maximise spillovers and strengthen the link between tax incentives and substance in the jurisdiction. This suggests that the GloBE Rules are likely to increase the quality of tax incentives offered more generally (PCT, 2015[64]).

6.4. Short-term action

81. **Given that comprehensive tax incentive reform may take time and will require careful consideration, more immediate policy actions could be considered in the interim.** Many jurisdictions are currently engaged in consultative processes with key stakeholders and will need time to carry out the required analysis, and to consider the political economy challenges of reforming tax incentives especially where governance arrangements are complex. Policymakers may assess that the need for wide-ranging tax reform may be limited, perhaps given high levels of substance of low-taxed MNEs or because incentives may be largely offered to small MNEs outside the scope of the GloBE Rules. However, there are more immediate actions that policymakers can and should take to ensure that their tax base is protected in the context of the impending implementation of the GloBE Rules. In particular, during or in advance of commencing a process of tax incentive reform, jurisdictions may wish to consider the introduction of a QDMT.

82. **In the run-up to the implementation of the GloBE Rules, policymakers in developing and emerging economies, should exercise care in introducing new tax incentives and entering into new investment agreements and investment contracts, particularly those including stabilisation arrangements without considering the impact of these measures for GloBE.** Jurisdictions should prioritise assessing the extent to which current tax incentives may remain suitable before implementing new tax incentives. The introduction of stabilisation clauses in investment contracts or national investment laws may lock in certain tax treatments that can impair the effective rollout of the GloBE Rules. Once included, the renegotiation of such clauses may prove difficult to achieve and may be resource intensive. Similarly, when making changes to its domestic tax laws in response to the GloBE Rules (such as changes to the design of tax incentives or the introduction of a QDMT) jurisdictions may wish to consider any potential interactions with existing investment treaties or investment contracts containing stabilisation clauses.

83. **The introduction of a QDMT may allow jurisdictions to collect Top-Up Tax under the GloBE Rules in priority to the GloBE Rules in other countries.** Whenever the ETRs of in-scope firms fall below

15%, due for example to the use of a particular tax incentive or combination of tax incentives, Top-up Tax should be payable under the GloBE Rules. Through a QDMT the jurisdiction granting the tax incentive would be entitled to collect Top-up Tax on such low-taxed profits before other jurisdictions apply the GloBE Rules. The option of introducing a QDMT is particularly relevant for many developing countries, as it will allow the jurisdiction where the activity is performed and where the tax incentives are granted to impose the Top-up Tax first, which will lead to an increase in much-needed tax revenues. Introducing such provisions would not result in any additional loss of competitiveness, as any additional Top-up Tax collected by the domestic jurisdiction would otherwise be collected by other jurisdictions in the absence of a QDMT.

84. **QDMTs can complement longer-term tax incentive reform efforts.** QDMTs can act as a safety net, but the potential benefits of the QDMT should be weighed against the administrative costs. As evidenced in Section 2.2, the governance of tax incentives can be very complex, which slows the reform process. Jurisdictions may consider introducing QDMTs as a first step in order to retain any tax revenues arising from low-tax incentives in jurisdictions prior to tax incentive reform. However, QDMTs should not be treated as a substitute to in-depth tax reform. Failure to reform ineffective tax incentives will lead to additional administrative costs for governments to maintain such incentives while also adding to the complexity of the investment environment for investors, who may be left with a menu of tax incentives that they may not end up being able to utilise.

85. **Jurisdictions may wish to balance the potential revenue gains against the administrative costs of introducing a QDMT.** Calculation of the GloBE tax base and covered taxes is complex for MNEs and may result in a certain administrative cost for jurisdictions. In the absence of significant risk of low-taxed outcomes, jurisdictions may not wish to implement the GloBE Rules in their jurisdiction at this stage as costs may outweigh benefits.

86. **QDMTs are more attractive relative to other forms of domestic minimum taxes due to their more favourable treatment under the GloBE Rules.** A QDMT allows a jurisdiction the ability to levy a top-up tax with respect to its own low-tax outcomes. Because it has the same tax base and tax calculation, the amount of tax levied under the QDMT is equivalent to that which would otherwise be payable under the GloBE rules. Other non-qualifying minimum corporate income taxes will be treated as Covered Taxes under the GloBE Rules. This means that credit will not be given for non-qualifying minimum taxes paid on profits excluded under the SBIE for the purposes of calculating the GloBE ETR. However, taxes paid under a QDMT are credited against GloBE liability.

6.5. Strengthening government capacities and supporting revenue mobilisation

87. **Jurisdictions should ensure that they benefit from the post-Pillar Two environment by considering opportunities for tax reform beyond tax incentives.** Pillar Two contributes to an international tax agreement that is fit-for-purpose in a globalised world and reduces incentives to shift profits, strengthening the fight against tax avoidance. Profit shifting takes a greater toll in developing countries where capacity is low, the contribution of MNEs to certain economic sectors is large and the need for revenues high. The introduction of a minimum level of effective taxation will reduce incentives to shift profits which may help improve perceptions of fairness, increasing tax morale and may in turn lead to broader taxpayer compliance (Luttmer and Singhal, 2014[71]).

88. **Jurisdictions should also consider the implications of Pillar Two for anti-avoidance measures.** In a post-GloBE environment, jurisdictions may consider revising certain existing anti-tax avoidance rules, creating greater efficiencies and streamlined compliance for business (OECD, 2022[61]). However, reform of anti-avoidance measures will require careful consideration on a case-by-case basis. Some profit-shifting risks may remain for developing countries. For example, since GloBE only applies to large MNEs, measures may remain necessary to ensure MNEs out of the scope of GloBE do not engage in harmful tax planning (OECD, 2021[73]).

89. **Governments considering lowering the threshold for the application of the IIR to capture a wider number of groups should weigh the costs and benefits of adopting such an approach, particularly when first implementing.** Lowering the threshold would allow jurisdictions to extend the need to comply with a minimum level of effective taxation beyond the large MNEs. While desirable to ensure a backstop to low ETRs and to extend the rules to large MNEs that in developing countries may not reach the proposed threshold, such approach deserves careful consideration. First, if most countries decide to follow the EUR 750 million threshold, in line with CbCR reporting, this move could place the jurisdiction at a disadvantage, losing competitiveness with respect to other jurisdictions. Imposing IIR on smaller MNEs may also trigger corporate inversions, as in this case the UTPR cannot act as a backstop to the IIR on thresholds below EUR 750 million. Second, the compliance cost of calculating GloBE tax liability could be considerable for smaller MNEs. Compliance costs are typically regressive in size. Third, the costs of administration will likewise increase for governments as the pool of MNEs in-scope also increases. Capacity or resource-constrained jurisdictions should not disregard the resources needed to administer and audit firms if the IIR is extended to a larger population of firms. Given that the GloBE Rules represent an unprecedented reform, jurisdictions may consider delaying such decisions until the rules have been rolled-out for the largest MNEs and the tax administration and MNEs become more acquainted with the rules.

90. **Jurisdictions may wish to consider reforming domestic minimum taxes that may not be considered Covered Taxes under the GloBE Rules.** Some low and lower middle-income countries make use of domestic minimum taxes, including turnover- or asset-based taxes, to ensure a minimum level of effective taxation is paid in the jurisdiction (Aslam and Delgado Coelho, 2021[74]). Such taxes are used as a way to protect the revenue base where administrative capacity is low or there is a lack of enforcement placing jurisdictions at risk of BEPS activity. Depending on the extent to which the jurisdiction may be affected by the GloBE rules, consideration could be given to the reform of any such taxes in light of the GloBE rules. As discussed in Section 3, minimum taxes are only considered to be Covered Taxes for GloBE purposes if they are considered to be 'in lieu' of a CIT. As noted above, QDMTs may be more attractive relative to other forms of domestic minimum taxes due to their more favourable treatment under the GloBE Rules.

91. **Increasing tax administration capacity will not only support the implementation of the two-pillar solution but also provide the right tools for governments to continue closing loopholes and fighting tax avoidance.** 'The best tax policy in the world is worth little if it cannot be implemented effectively' (Bird, 2014[75]). Improved monitoring, tax administration and compliance will help increase fiscal capacity in developing countries and foster economic development. The need for building tax capacity and stronger tax administration and tax systems has long been recognised by the international community as key to maximising revenue potential to mobilise resources for development which is actively providing technical assistance and developing capacity across the globe (PCT, 2016[76]; Addis Tax Initiative, n.d.[77]).

92. **Revenues raised through better tax policy and stronger tax administration can help maximise the mobilisation of government revenues especially for developing and emerging economies.** The mobilisation of domestic revenues is central to the pursuit of the SDGs and are key to financing public services and to improving health, environmental, societal, and economic outcomes. An effective use of resources can help improve the investment climate through non-tax factors such as infrastructure or skills that will become even more relevant for investors in a post-GloBE environment (OECD, 2020[8]).

7 Conclusion

93. **This report has analysed how the GloBE Rules may affect tax incentives worldwide.** In doing so, the report has highlighted that not all jurisdictions, MNEs and tax incentive designs are equally affected by the GloBE Rules. Tax incentives may contain design features that make them less affected by the GloBE Rules. Jurisdictions should consider whether there are elements of their domestic tax system that may make firms more likely to be subject to low tax rates, the nature of the entities operating in their jurisdiction, and the activities they undertake as well as the tax incentives that are prominently offered to such taxpayers and their design. Country-specific analysis is crucial to inform the next steps in preparing for GloBE implementation.

94. **Tax reform and the introduction of QDMTs may be an important first step, in preparing for the implementation of Pillar Two. In particular, in developing and emerging economies these measures could help raise much needed tax revenues for domestic revenue mobilisation**. Jurisdictions should consider preparing for the implementation of the GloBE Rules early. Such preparations should include caution before introducing new tax incentives, or entering into investment agreements or contracts, particularly those that include stabilisation clauses without proper assessment of their implications in the context of the implementation of the GloBE Rules. Tax reform should be seriously considered, prioritising those tax incentives that carry the greatest risk of MNEs being liable for Top-up Taxes under the GloBE Rules and that result in the largest revenue forgone. However, reform efforts can be extended to a more comprehensive reconsideration of the use of tax incentives. Although tax reform can be slow and often politically and administratively difficult, the introduction of the GloBE Rules can empower governments to pursue such reforms, as the extent to which generous incentives can effectively reduce MNEs' ETRs is limited by the introduction of the GloBE Rules. In the short term, QDMTs can help jurisdictions secure revenues on those low-tax profits arising in their jurisdiction. Such revenues can be reinvested to mobilise much needed domestic revenues.

95. **The OECD stands ready to support developing and emerging economies as they prepare to implement and reform their tax systems in light of Pillar Two.** The OECD is launching a programme of technical assistance to assist developing jurisdictions in their tax reform process and as they implement the GloBE Rules. The OECD stands ready to help jurisdictions to continue implementing anti-BEPS measures as certain BEPS risks remain and to build tax capacity to prepare jurisdictions to implement the two-pillar solution.

References

Addis Tax Initiative (n.d.), *Addis Tax Initiative Tax Declaration 2025*, https://www.addistaxinitiative.net/sites/default/files/resources/ATI%20Declaration%202025.pdf (accessed on 5 September 2022). [75]

Appelt, S. et al. (2016), "R&D Tax Incentives: Evidence on design, incidence and impacts", in *OECD Science, Technology and Industry Policy Papers*, OECD Publishing, Paris, https://doi.org/10.1787/5jlr8fldqk7j-en. [42]

Appelt, S., F. Galindo-Rueda and A. González Cabral (2019), "Measuring R&D tax support: Findings from the new OECD R&D Tax Incentives Database", *OECD Science, Technology and Industry Working Papers*, No. 2019/06, OECD Publishing, Paris, https://dx.doi.org/10.1787/d16e6072-en. [21]

Appelt, S., A. González Cabral and T. Hanappi (2022), "Income-based tax incentives for R&D and innovation: Measures of tax expenditure and uptake", *OECD Science, Technology and Innovation Working Paper series*. [26]

Aslam, A. and M. Delgado Coelho (2021), *A Firm Lower Bound: Characteristics and Impact of Corporate Minimum Taxation*, A Firm Lower Bound: Characteristics and Impact of Corporate Minimum Taxation, https://www.imf.org/en/Publications/WP/Issues/2021/06/08/A-Firm-Lower-Bound-Characteristics-and-Impact-of-Corporate-Minimum-Taxation-49886 (accessed on 22 July 2022). [72]

Beer, S., R. Mooij and L. Liu (2020), "International Corporate Tax Avoidance: A review of the channels, magnitudes and blind spots", *Journal of Economic Surveys*, Vol. 34/3, pp. 660-688, https://doi.org/10.1111/joes.12305. [76]

Besley, T. and T. Persson (2013), "Taxation and Development", *Handbook of Public Economics*, Vol. 5, pp. 51-110, https://doi.org/10.1016/B978-0-444-53759-1.00002-9. [33]

Bilicka, K. (2019), "Comparing UK Tax Returns of Foreign Multinationals to Matched Domestic Firms", *American Economic Review*, Vol. 109/8, pp. 2921-2953, https://doi.org/10.1257/aer.20180496. [10]

Bird, R. (2014), "Administrative Dimensions of Tax Reform", *ANNALS OF ECONOMICS AND FINANCE*, Vol. 15/2, pp. 269-304. [73]

Bird, R. (2008), "Tax Challenges Facing Developing Countries", *International Studies Program Working Paper 08-02*, http://isp-aysps.gsu.edu (accessed on 2 August 2022). [30]

Bösenberg, S. and P. Egger (2017), "R&D tax incentives and the emergence and trade of ideas", [85]

Economic Policy, Vol. 32/89, pp. 39-80, https://doi.org/10.1093/epolic/eiw017.

Botman, D., A. Klemm and R. Baqir (2008), "Investment Incentives and Effective Tax Rates in the Philippines: A Comparison With Neighboring Countries". [25]

Bratta, B., V. Santomartino and P. Acciari (2021), "Assessing profit shifting using Country-by-Country Reports: a non-linear response to tax rate differentials", *Dipartimento delle Finanze WP n.11*, http://www.finanze.it/opencms/it/il-dipartimento/documentazione/Collana-di-lavori-e- (accessed on 1 August 2022). [82]

Canh, N. et al. (2013), "Measuring the Effectiveness of Corporate Income Tax Investment Incentives for Domestic Companies in Vietnam", *Journal of Emerging Issues in Economics, Finance and Banking*, Vol. 1/1. [51]

Celani, A., L. Dressler and T. Hanappi (forthcoming), *Assessing tax relief from targeted investment tax incentives through corporate effective tax rates*. [22]

Celani, A., L. Dressler and T. Hanappi (n.d.), *Corporate Effective Tax Rates in the presence of Investment Tax Incentives*, OECD Publishing, Paris. [79]

Celani, A., L. Dressler and M. Wermelinger (2022), "Building an Investment Tax Incentives database: Methodology and initial findings for 36 developing countries", *OECD Working Papers on International Investment*, https://doi.org/10.1787/62e075a9-en. [11]

Chai, J. and R. Goyal (2008), "Tax Concessions and Foreign Direct Investment in the Eastern Caribbean Currency Union"*, IMF Working Papers*, No. 2008/257, International Monetary Fund. [34]

Cohen, D. and J. Cummins (2006), *A retrospective evaluation of the effects of temporary partial expensing*, Board of Governors of the Federal Reserve System (U.S.). [38]

Crivelli, E., R. De Mooij and M. Keen (2015), *Base Erosion, Profit Shifting and Developing Countries Prepared by*. [78]

Cui, W., J. Hicks and J. Xing (2022), "Cash on the table? Imperfect take-up of tax incentives and firm investment behavior", *Journal of Public Economics*, Vol. 208, p. 104632, https://doi.org/10.1016/J.JPUBECO.2022.104632. [46]

Devereux, M. and R. Griffith (2003), "Evaluating Tax Policy for Location Decisions", *International Tax and Public Finance*, Vol. 10/2, pp. 107-126, https://doi.org/10.1023/A:1023364421914. [12]

Devereux, M. et al. (2002), "Corporate Income Tax Reforms and International Tax Competition", *Economic Policy*, Vol. 17/35, https://www.jstor.org/stable/1344772 (accessed on 29 December 2021). [7]

Devereux, M., B. Lockwood and M. Redoano (2008), "Do countries compete over corporate tax rates?", *Journal of Public Economics*, Vol. 92/5-6, pp. 1210-1235, https://doi.org/10.1016/J.JPUBECO.2007.09.005. [5]

Fuest, C., F. Hugger and F. Neumeier (2022), *Grenzüberschreitende Geschäftsbeziehungen innerhalb von Unternehmensgruppen – Ausmaß und Reformoptionen*, Studie im Auftrag des Bundesministeriums der Finanzen, https://www.ifo.de/en/publikationen/2022/monograph-authorship/grenzuberschreitende-geschaftsbeziehungen (accessed on 2 August 2022). [83]

Gaessler, F., B. Hall and D. Harhoff (2018), *Should There Be Lower Taxes on Patent Income?*, [43]

National Bureau of Economic Research, Cambridge, MA, https://doi.org/10.3386/w24843.

González Cabral, A., S. Appelt and T. Hanappi (2021), "Corporate Effectives Tax Rates for R&D: The case of expenditure-based tax incentives", *OECD Taxation Working Papers*, No. 54, OECD Publishing, Paris, https://dx.doi.org/10.1787/ff9a104f-en. [20]

González Cabral, A., S. Appelt and T. Hanappi (forthcoming), "Income-based tax incentives for R&D and innovation: A description of design features", *OECD Taxation Working Paper*. [18]

Gordon, K. and J. Pohl (2015), "Investment Treaties over Time - Treaty Practice and Interpretation in a Changing World", *OECD Working Papers on International Investment*, OECD Publishing, Paris. [56]

Guceri, I. and M. Liu (2017), "Effectiveness of fiscal incentives for R&D: Quasi-experimental evidence", in *IMF Working Paper Series*, IMF. [40]

Hall, B. (2019), *Tax Policy for Innovation*, National Bureau of Economic Research, Cambridge, MA, https://doi.org/10.3386/w25773. [39]

Hanappi, T. (2018), "Corporate Effective Tax Rates: Model Description and Results from 36 OECD and Non-OECD Countries", *OECD Taxation Working Papers*, No. 38, OECD Publishing, Paris, https://dx.doi.org/10.1787/a07f9958-en. [13]

Hanappi, T. and A. González Cabral (2020), "The impact of the Pillar One and Pillar Two proposals on MNE's investment costs: An analysis using forward-looking effective tax rates", *OECD Taxation Working Papers*, No. 50, OECD Publishing, Paris, https://dx.doi.org/10.1787/b0876dcf-en. [59]

Harrison, A. and A. Rodríguez-Clare (2010), "Trade, Foreign Investment, and Industrial Policy for Developing Countries*", *Handbook of Development Economics*, Vol. 5/C, pp. 4039-4214, https://doi.org/10.1016/B978-0-444-52944-2.00001-X. [3]

Heady, C. and M. Mansour (2019), *Tax Expenditure and Their Use in Fiscal Management: A Guide to Developing Countries*, International Monetary Fund, https://www.imf.org/~/media/Files/Publications/HowToNotes/HTNEA2019002.ashx (accessed on 21 July 2022). [64]

House, C. and M. Shapiro (2008), "Temporary Investment Tax Incentives: Theory with Evidence from Bonus Depreciation", *American Economic Review*, Vol. 98/3, pp. 737-68, https://doi.org/10.1257/aer.98.3.737. [37]

IGF-OECD (2018), "Tax incentives in mining: Minimising risks to revenue", http://igfmining.org/tax-avoidance-guidance-document/ (accessed on 3 August 2022). [84]

IMF (2021), *Tax Avoidance in Sub-Saharan Africa's Mining Sector*, Departmental Paper No 2021/022, https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2021/09/27/Tax-Avoidance-in-Sub-Saharan-Africas-Mining-Sector-464850 (accessed on 17 July 2022). [32]

IMF OECD UN World Bank (2015), *Options for Low Income Countries' Effective and Efficient Use of Tax Incentives for Investment*, A report to the G-20 Development Working Group, https://www.oecd.org/tax/options-for-low-income-countries-effective-and-efficient-use-of-tax-incentives-for-investment.htm. [28]

IMF-OECD (2017), *Tax certainty*, IMF/OECD Report for the G20 Finance Ministers. [50]

IMF-OECD-UN-World Bank (2015), *Options for Low Income Countries' Effective and Efficient Use of Tax Incentives for Investment*, A report prepared for the G-20 Development Working Group by the IMF, OECD, UN and World Bank., http://www.imf.org/external/pp/ppindex.aspx. [53]

James, S. (2013), "Effectiveness of Tax and Non-Tax Incentives and Investments: Evidence and Policy Implications", *SSRN Electronic Journal*, https://doi.org/10.2139/SSRN.2401905. [15]

Jedlicka, H. and Y. Sabha (2017), *Lessons from Five Years of Helping Governments Foster Incentives Transparency*, Private Sector Development Blog: World Bank Blogs, https://blogs.worldbank.org/psd/lessons-five-years-helping-governments-foster-incentives-transparency (accessed on 27 July 2021). [52]

Klemm, A. (2010), "Causes, benefits, and risks of business tax incentives", *Int Tax Public Finance*, Vol. 17, pp. 315-336, https://doi.org/10.1007/s10797-010-9135-y. [68]

Klemm, A. (2008), *Effective Average Tax Rates for Permanent Investment*, Working Paper No. 08/56, https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Effective-Average-Tax-Rates-for-Permanent-Investment-21757 (accessed on 23 March 2021). [24]

Klemm, A. and S. Van Parys (2012), "Empirical evidence on the effects of tax incentives", *International Tax and Public Finance*, Vol. 12, pp. 393–423, https://doi.org/10.1007/s10797-011-9194-8. [6]

Knoll, B. et al. (2021), "Cross-border effects of R&D tax incentives", *Research Policy*, Vol. 50/9, p. 104326, https://doi.org/10.1016/J.RESPOL.2021.104326. [44]

Luttmer, E. and M. Singhal (2014), "Tax Morale", *Journal of Economic Perspectives*, Vol. 28, https://doi.org/10.1257/jep.28.4.149. [69]

Maffini, G., J. Xing and M. Devereux (2019), "The Impact of Investment Incentives: Evidence from UK Corporation Tax Returns", *American Economic Journal: Economic Policy*, Vol. 11, pp. 361-89, https://doi.org/10.1257/pol.20170254. [35]

Millot, V. et al. (2020), "Corporate taxation and investment of multinational firms: Evidence from firm-level data", *OECD Taxation Working Papers*, No. 51, OECD Publishing, Paris, https://dx.doi.org/10.1787/9c6f9f2e-en. [87]

Mooij, R. and L. Liu (2018), "At A Cost: the Real Effects of Transfer Pricing Regulations", *IMF Working Papers*, https://www.imf.org/en/Publications/WP/Issues/2018/03/23/At-A-Cost-the-Real-Effects-of-Transfer-Pricing-Regulations-45734 (accessed on 5 August 2022). [70]

Nicodème, G. (2007), "Comparing Effective Corporate Tax Rates", *Frontiers in Finance and Economics*, Vol. 4/2, pp. 102-131. [86]

OECD (2022), *FDI Qualities Policy Toolkit*, OECD Publishing, Paris, https://dx.doi.org/10.1787/7ba74100-en. [1]

OECD (2022), *OECD R&D tax incentives database*, https://www.oecd.org/sti/rd-tax-stats.htm (accessed on 7 January 2021). [16]

OECD (2022), *Recommendation of the Council on Foreign Direct Investment Qualities for Sustainable Development*, OECD/LEGAL/0476, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0476 (accessed on [29]

5 September 2022).

OECD (2022), *Tax Challenges Arising from the Digitalisation of the Economy – Commentary to the Global Anti-Base Erosion Model Rules (Pillar Two)*, OECD, Paris, https://www.oecd.org/tax/beps/tax-challenges-arising-from-the-digitalisation-of-the-economy-global-anti-base-erosion-model-rules-pillar-two-commentary.pdf. [58]

OECD (2022), *Tax Co-operation for the 21st Century: OECD Report for the G7 Finance Ministers and Central Bank Governors*. [61]

OECD (2021), *Corporate Tax Statistics Database*, https://oe.cd/corporate-tax-stats. [14]

OECD (2021), "OECD R&D tax incentives database, 2021 edition", https://www.oecd.org/sti/rd-tax-stats-database.pdf (accessed on 18 July 2022). [23]

OECD (2021), "OECD/G20 Inclusive Framework on BEPS: Progress report July 2020 - September 2021". [71]

OECD (2021), *Tax Challenges Arising from the Digitalisation of the Economy – Global Anti-Base Erosion Model Rules (Pillar Two): Inclusive Framework on BEPS*, OECD, Paris, https://www.oecd.org/tax/beps/tax-challenges-arising-from-the-digitalisation-of-the-economy-global-anti-base-erosion-model-rules-pillar-two.pdf. [57]

OECD (2020), *Tax and fiscal policy in response to the Coronavirus crisis: Strengthening confidence and resilience*, https://read.oecd-ilibrary.org/view/?ref=128_128575-o6raktc0aa&title=Tax-and-Fiscal-Policy-in-Response-to-the-Coronavirus-Crisis (accessed on 2 August 2022). [2]

OECD (2020), *Tax Challenges Arising from Digitalisation – Economic Impact Assessment: Inclusive Framework on BEPS*, OECD/G20 Base Erosion and Profit Shifting Project, OECD Publishing, Paris, https://dx.doi.org/10.1787/0e3cc2d4-en. [8]

OECD (2020), "The effects of R&D tax incentives and their role in the innovation policy mix: Findings from the OECD microBeRD project, 2016-19", *OECD Science, Technology and Industry Policy Papers*, No. No. 92, OECD Publishing, Paris, https://doi.org/10.1787/65234003-en (accessed on 15 October 2020). [41]

OECD (2015), *Countering Harmful Tax Practices More Effectively, Taking into Account Transparency and Substance, Action 5 - 2015 Final Report*, OECD/G20 Base Erosion and Profit Shifting Project, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264241190-en. [19]

OECD (2015), *Policy Framework for Investment, 2015 Edition*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264208667-en. [63]

OECD (2007), *Tax Effects on Foreign Direct Investment: Recent Evidence and Policy Analysis*, OECD Tax Policy Studies, No. 17, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264038387-en. [47]

Parys, S. et al. (2010), "The effectiveness of tax incentives in attracting investment: panel data evidence from the CFA Franc zone", *International Tax and Public Finance 2010 17:4*, Vol. 17/4, pp. 400-429, https://doi.org/10.1007/S10797-010-9140-1. [48]

PCT (2016), "Enhancing the Effectiveness of External Support in Building Tax Capacity in Developing Countries Prepared for Submission to G20 Finance Ministers". [74]

PCT (2015), “Options for Low Income Countries’ Effective and Efficient Use of Tax Incentives for Investment”, https://www.tax-platform.org/sites/pct/files/publications/100756-Tax-incentives-Main-report-options-PUBLIC_0.pdf (accessed on 22 July 2022). [62]

PCT (2015), “Options for Low Income Countries’ Effective and Efficient Use of Tax Incentives for Investment: Background paper”. [60]

Redonda, A. and T. Neubig (2018), “Assessing Tax Expenditure Reporting in G20 and OECD Economies”, *CEP working paper*, https://www.cepweb.org/wp-content/uploads/2018/11/Redonda-and-Neubig-2018.-Assessing-Tax-Expenditure-Reporting.pdf (accessed on 21 July 2022). [65]

Redonda, A., C. von Haldenwang and F. Aliu (2021), *The Global Tax Expenditures Database (GTED). Companion Paper*, GTED, https://gted.net/2021/05/the-global-tax-expenditures-database-companion-paper/ (accessed on 21 July 2022). [66]

Redonda and Neubig (2018), *Assessing Tax Expenditure Reporting in G20 and OECD Economies*, Council on Economic Policies. [27]

Sorbe, S. and Å. Johansson (2017), “International tax planning, competition and market structure”, *OECD Economics Department Working Papers*, No. 1358, OECD Publishing, Paris, https://dx.doi.org/10.1787/e9c35474-en. [9]

Tanzi, V. and H. Zee (2001), “Tax Policy for Developing Countries”, *Economic Issues* 27, https://www.imf.org/external/pubs/ft/issues/issues27/ (accessed on 26 July 2022). [67]

Tørsløv, T., L. Wier and G. Zucman (2018), *The Missing Profits of Nations*, National Bureau of Economic Research, Cambridge, MA, https://doi.org/10.3386/w24701. [77]

UNCTAD (2022), “Facts on Investor-State Arbitrations in 2021: With a Special Focus on Tax-related ISDS Cases”, *IIA Issues Note*, https://unctad.org/system/files/official-document/diaepcbinf2022d4_en.pdf (accessed on 26 September 2022). [55]

UNCTAD (2022), “World Investment Report 2022: International tax reforms and sustainable investment”. [17]

UNCTAD (2021), “Handbook on Special Economic Zones in Africa”, https://unctad.org/system/files/official-document/diaeia2021d3_en.pdf (accessed on 18 July 2022). [81]

UNCTAD (2021), “International Agreements and their implications for tax measures: What Tax Policymakers need to know”, https://unctad.org/system/files/official-document/diaepcbinf2021d3_en.pdf (accessed on 18 July 2022). [54]

UNCTAD (2019), “World Investment Report 2019 - Special Economic Zones”, https://unctad.org/system/files/official-document/WIR2019_CH4.pdf (accessed on 18 July 2022). [80]

UNIDO (2013), *Africa Investor Survey*, United Nations Industrial Development Organization, https://doi.org/978-92-1-106450-6. [49]

Van Parys, S. and S. James (2009), “Why Tax Incentives may be an ineffective tool to encouraging Investment?-The role of Investment Climate”, http://ssrn.com/abstract=1568296Electroniccopyavailableat:https://ssrn.com/abstract=1568296 [45]

Electroniccopyavailableat:http://ssrn.com/abstract=1568296 (accessed on 24 July 2022).

World Bank (2017), *Global Investment Competitiveness Report 2017/2018: Foreign Investor Perspectives and Policy Implications*, The World Bank, https://doi.org/10.1596/978-1-4648-1175-3. [4]

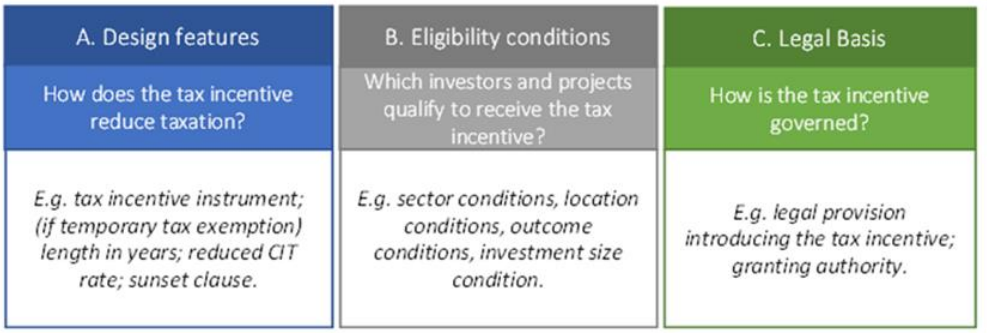
Zee, H., J. Stotsky and E. Ley (2002), "Tax Incentives for Business Investment: A Primer for Policy Makers in Developing Countries", *World Development*, Vol. 30/9, pp. 1497-1516, https://doi.org/10.1016/S0305-750X(02)00050-5. [31]

Zwick, E. and J. Mahon (2017), "Tax Policy and Heterogeneous Investment Behavior", *American Economic Review*, Vol. 107/1, pp. 217–248, https://doi.org/10.1257/aer.20140855. [36]

Annex A. OECD ITID

96. The OECD Investment Tax Incentives Database (ITID) systematically compiles quantitative and qualitative information on the design and targeting of CIT incentives across developing and emerging economies, using a consistent data collection methodology. For each tax incentive, it includes information along three dimensions (Figure A.1): instrument-specific design features, eligibility conditions and legal basis. As of July 2022, the database covers 48 developing and emerging economies in Eurasia, Latin America & the Caribbean, the Middle East, North Africa, Southeast Asia, and Sub-Saharan Africa (Table A.1).

Figure A.1. Key dimensions of the OECD Investment Tax Incentives database



Source: Celani, Dressler and Wermelinger (2022[12]).

97. Celani, Dressler and Wermelinger (2022[12]) presents the methodology and key classifications underlying the OECD ITID and provide first descriptive statistics based on information from 36 countries: Tax incentive designs are multi-dimensional, complex, and often specific to a certain sector, region or investor within a country. Complex features may be a sign of countries adjusting tax incentive designs to specific contexts, which may improve policymaking, for example by improving the effectiveness of incentives or limiting revenue forgone. However, complexity also reduces transparency and can create unintended effects.

98. Effective tax rate (ETR) analysis can help make complex features of tax incentives comparable and evaluate them jointly with standard tax system features. Standard tax systems vary across countries and importantly affect the generosity of tax incentives. New OECD work develops ETR analysis under tax incentives based on detailed information from the OECD ITID with the objective to evaluate incentives' effect on providing tax relief as an additional step towards developing policy guidance (Celani, Dressler and Hanappi, forthcoming[23]).

Table A.1. Covered countries in the OECD ITID as of July 2022

Region group	Country code	Country name	World Bank income group (2021)	Inclusive Framework member	Data collection date
Europe & Central Asia	ARM	Armenia	Upper middle income	Yes	February 2020
	AZE	Azerbaijan	Upper middle income	No	February 2020
	GEO	Georgia	Upper middle income	Yes	February 2020
	MDA	Moldova	Lower middle income	No	February 2020
	UKR	Ukraine	Lower middle income	Yes	November 2021
Latin America & Caribbean	JAM	Jamaica	Upper middle income	Yes	December 2021
Middle East & North Africa	EGY	Egypt, Arab Rep.	Lower middle income	Yes	December 2020
	JOR	Jordan	Upper middle income	Yes	December 2020
	MAR	Morocco	Lower middle income	Yes	December 2020
	TUN	Tunisia	Lower middle income	Yes	December 2020
	PSE	West Bank and Gaza	Lower middle income	No	January 2022
Southeast Asia	KHM	Cambodia	Upper middle income	No	February 2021
	CHN	China	Lower middle income	Yes	January 2022
	IND	India	Lower middle income	Yes	January 2022
	IDN	Indonesia	Lower middle income	Yes	April 2020
	LAO	Lao PDR	Lower middle income	No	April 2021
	MYS	Malaysia	Lower middle income	Yes	April 2021
	MMR	Myanmar	Upper middle income	No	January 2021
	PHL	Philippines	Lower middle income	No	July 2021
	THA	Thailand	Upper middle income	Yes	January 2021
	VNM	Vietnam	Lower middle income	Yes	March 2021
Sub-Saharan Africa	AGO	Angola	Lower middle income	Yes	March 2022
	BWA	Botswana	Upper middle income	Yes	July 2020
	CMR	Cameroon	Lower middle income	Yes	August 2021
	COM	Comoros	Lower middle income	No	December 2021
	COD	Congo, Dem. Rep.	Lower middle income	Yes	October 2021
	CIV	Côte d'Ivoire	Lower middle income	Yes	September 2020
	SWZ	Eswatini	Low income	Yes	December 2020
	ETH	Ethiopia	Upper middle income	No	August 2020
	GAB	Gabon	Lower middle income	Yes	October 2021
	GMB	Gambia, The	Low income	No	August 2021
	GHA	Ghana	Lower middle income	No	August 2020
	KEN	Kenya	Low income	Yes	January 2021
	LSO	Lesotho	Lower middle income	No	December 2020
	LBR	Liberia	Low income	Yes	December 2021
	MDG	Madagascar	Low income	No	August 2020
	MWI	Malawi	Upper middle income	No	November 2020
	MUS	Mauritius	Low income	Yes	August 2020
	MOZ	Mozambique	Upper middle income	No	July 2020
	NAM	Namibia	Lower middle income	Yes	August 2020
	NGA	Nigeria	Low income	Yes	August 2020
	RWA	Rwanda	Lower middle income	No	November 2020
	SEN	Senegal	Low income	Yes	September 2020
	SLE	Sierra Leone	Lower middle income	Yes	August 2021
	ZAF	South Africa	Low income	Yes	July 2020
	TZA	Tanzania	Upper middle income	No	October 2020
	ZMB	Zambia	Lower middle income	Yes	September 2020
	ZWE	Zimbabwe	Lower middle income	No	October 2020

Source: OECD Investment Tax Incentives database, July 2022 version.

Annex B. Methodology

Using a forward-looking ETR framework

99. **The model used in Section 5 of this report is based on a forward-looking ETR framework to analyse the impact of GloBE on firms' ETRs in the presence of tax incentives.** The model builds on the work of Devereux and Griffith (2003[13]) as extended by Klemm (2008[25]) to flexibly capture time-varying tax incentives design features.[43] The model considers the case of an entity that is part of an MNE group that is (i) in-scope of the GloBE Rules, (ii) that invests in a given jurisdiction, and (iii) can benefit from preferential tax treatment for its investment. To capture the operation of the GloBE Rules, the model is extended to account for: (i) the treatment of alternative tax incentives for the computation of the GloBE ETR; (ii) the calculation of excess profits, i.e. accounting for the SBIE; (iii) the calculation of Top-up Tax.

100. **In this application, the model is stylised to better illustrate some of the features of the GloBE Rules that may cause variation in the impact of tax incentives.** The model is calibrated to match key design features of investment tax incentives and outlines the impact of GloBE on their effectiveness by comparing the EATR that firms face pre- and post-GloBE. For this report, the examples are illustrative but calibration to jurisdiction-specific tax incentives is possible in this framework and can be pursued as future work. Similarly, the model does not seek to estimate GloBE impacts on MNE's investment costs (as in Hanappi and González Cabral (2020[60]) did using a similar cross-country calibrated model).[44] Instead, the focus is on setting up a framework that can subsequently be calibrated to match jurisdiction-specific features.

The model

101. The section first covers the baseline case where GloBE Rules do not apply, before incorporating the GloBE Rules. Mapping the steps in Section 3 of the report, this annex shows how excess profits are calculated, assuming that the income for CIT purposes equals GloBE Income. Since it is the baseline case, no further adjustments to GloBE Income or to ETRs are needed. The section then discusses how the calculation of GloBE Income and GloBE ETR are adapted to model the impact of tax incentives. This report uses the EATR as it represents an average tax rate on profitable investments that bears a similarity to the calculation of the GloBE ETR. Similar expressions for the effective marginal tax rate (EMTR) can be derived. The comparison of the EATR pre-GloBE to that post-GloBE when tax incentives are modelled allows for the estimation of the increase in investment costs related to Top-up Taxes. The model does not consider financing decisions nor personal income taxation for simplicity.

---

[43] A similar model underpins the OECD forward-looking ETRs model that has been used in a variety of policy areas (Hanappi, 2018[14]; Hanappi and González Cabral, 2020[60]; González Cabral, Appelt and Hanappi, 2021[21]; Celani, Dressler and Hanappi, forthcoming[23]) .

[44] Both marginal and average ETRs are of relevance to study investment effects at the intensive and extensive margin. Hanappi and González Cabral (2020[60]) show the effects of Pillar One and Two on firms' EATR and EMTRs as part of their analysis of discuss investment impacts. The model accounts for profit shifting possibilities of MNEs and models the impact of both Pillar One and Pillar Two. UNCTAD (2022[18]) uses a backward-looking approach based on FDI weighted ETRs to estimate the impact of Pillar Two on FDI.

Baseline case

102. The EATR of a given entity j investing in jurisdiction k can be estimated using the difference of the before tax (R^*_{jk}) and after-tax economic profit (R_{ij}) divided by the net present value of net income flows (NI_{jk}) over the lifetime over the lifetime of the investment as shown in Equation 1. Equation 2 provides the expressions for R^*_{ij} and NI_{jk}, where p represents the pre-tax rate of return, δ is the economic depreciation rate and r the real interest rate, which is related to the nominal interest rate i and inflation π by the Fisher equation. Table B.1 provides a summary of variables underpinning the estimates.

$$EATR_{jk} = \frac{R^*_{jk} - R_{jk}}{NI_{jk}} \tag{1}$$

$$R^*_{jk} = \frac{p - r}{r + \delta};\ NI_{jk} = \frac{p}{r + \delta} \tag{2}$$

Table B.1. Variable definitions

Variable	Definitions
p	Pre-tax rate of return
δ	Economic depreciation rate of the asset
φ	Declining balance depreciation rate of the asset
r	Real interest rate
i	Nominal interest rate
π	Inflation
τ^*_s	Tax rate applicable to profits in year s
Z	NPV of depreciation
A^*	NPV of total tax deductions

Source: OECD.

103. Equation (3) provides a general expression of the post-tax profits of the firm prior to the application of GloBE, R^{BG}_{jkt}.[45] The first term represents the NPV of net revenues. The term in brackets represents the sum of all tax components T^{BG}. The first and second terms in brackets represent, respectively, the total tax deductions, $A_{t+s} = \tau^* Z_{t+s}$ where Z_{t+s} represents the value of depreciation deductions, and income taxation over the lifetime of the investment. The last term represents the value of investment, which simply takes the value of 1 as $I_{t+s} = 0\ \forall s > 0$.

$$R^{BG}_{jk} = \sum_{s=d+1}^{\infty} \frac{Q_{t+s}}{(1+i)^s} + \sum_{s=0}^{\infty} \left[A_{t+s} - \frac{(p+\delta)(1-\delta)^{s-1}\tau^*_{t+s}}{(1+r)^s} \right] - \sum_{s=0}^{\infty} I_{t+s} = \tag{3}$$

$$\sum_{s=1}^{\infty} \frac{(p+\delta)(1-\delta)^{s-1}}{(1+r)^s} + \sum_{s=0}^{\infty} T^{BG}_{t+s} - \sum_{s=0}^{\infty} I_t = \frac{p+\delta}{r+\delta} + \left[A - \frac{(p+\delta)\tau^*}{r+\delta} \right] + [T^{BG}] - 1$$

[45] Although the expression is not provided in this Annex, the cost of capital can be derived by setting the $R = 0$ and solving for the value of p that makes the investment just break-even.

GloBE calculation: Calculation of excess profits

104. The GloBE Rules allow for a SBIE that excludes a share of GloBE Income based on the value of tangible assets and payroll from Top-up Taxation. The difference between GloBE Income (taxable income for GloBE purposes) and the SBIE is excess profits to which Top-up Tax would apply. In this model, income for CIT purposes equals GloBE Income and can be approximated by the first three terms in Equation (4). Note that some adjustments to GloBE Income may be needed if refundable tax credits are in place (see the below subsection: adjustments due to tax incentives). In this model, the SBIE can be approximated using the evolution of the capital stock equation, however this assumption is later relaxed.[46] If it is assumed that K_{jkt} represents the value of the capital stock for firm i in jurisdiction j at time t, then SBIE income for that firm in a given period is given by ζK_t where $\zeta = 5\%$ is a policy parameter outlined in the GloBE Rules.[47] Equation 4 presents an expression of excess profits for the firm EP_{ijt}. Note that revenues are a function of the pre-tax rate of return and decline over time with the economic depreciation of the asset δ. This is expressed as $Q_t = \mathrm{f}(p, \delta)$ as shown in equation (4). Given that SBIE is independent of the profitability of the investment, the calculation of excess profits can be simplified. The ratio of SBIE to GloBE Income (x_t) determines the share of income not affected by the GloBE calculation in each period. The remaining income,$1 - x_t$, equals excess profit to which the Top-up Tax would apply.[48]

$$\begin{aligned} \mathrm{EP}_{jk} = GI_{jk} - SBIE_{jk} &= \left[\sum_{s=1}^{\infty}\left(\frac{Q_{t+s}}{(1+i)^s} + Z_{t+s}\right) - \sum_{s=0}^{\infty}\frac{I_{t+s}}{(1+i)^s}\right] - \sum_{s=1}^{\infty}\frac{\zeta K_{t+s}}{(1+i)^s} \\ &= \sum_{s=1}^{\infty}(1 - x_{t+s})\left(\frac{Q_{t+s}}{(1+i)^s} + Z_{t+s} - 1\right) \end{aligned} \tag{4}$$

105. Note that the greater the profitability of the investment, the larger the denominator of the fraction x_{jkt} and hence the less income that will be sheltered by the SBIE. In other words, for the same level of substance, highly profitable projects will benefit less from the SBIE.

GloBE ETR calculation and Top-up Taxes due

106. Period-by-period the GloBE ETR needs to be calculated by dividing Covered Taxes,T_t^{BG-adj}, by GloBE Income which may need to be adjusted following the GloBE Rules, GI_t^{adj}. Since this is the baseline case, total taxes paid $T_t^{BG-adj} = T_t^{BG}$ and GloBE Income $GI_t^{adj} = GI_t$ are as in Equation 4. No other adjustments are needed to the numerator or denominator of the GloBE ETR calculation. If in a given period the GloBE ETR falls below $\bar{\tau}$ =15%, Top-up Taxes would be due. TT_{jk} represents the net present value of total Top-up Taxes due for entity j in jurisdiction k.

$$\mathrm{TT}_{jk} = \sum_{s=1}^{\infty}\max(15\% - \text{GloBE ETR}, 0) * \mathrm{EP}_{\mathrm{t+s}} = \sum_{s=1}^{\infty}\max\left(15\% - \frac{T_{t+s}^{BG-adj}}{GI_{t+s}^{adj}}, 0\right) * \mathrm{EP}_{\mathrm{t+s}} \tag{5}$$

107. In essence, what this entails is that *in every period* the firm faces a weighted rate between the average ETR that it was facing in the period prior to GloBE, ETR_t^{BG}, and the minimum tax, where it is binding. The shares of SBIE to GloBE Income in each period act as the weights.

---

[46] This assumption is later relaxed to calibrate the SBIE exogenously to match industry or firm characteristics.

[47] This value would be higher in the early years of GloBE implementation.

[48] Given that the SBIE is a function of all the operations of the firm and does not refer solely to the incremental change in the capital stock, this parameter can be made exogenous and is calibrated for example for Figure 15 to match industry patterns.

$$ETR_t^{AG} = (1 - x_t) * max(15\%, ETR^{BG}{}_t) + x_t ETR^{BG}{}_t \quad (6)$$

EATR pre- and post-GloBE

108. Equation (3) can be rewritten to provide an expression of post-tax economic profit accounting for any Top-up Taxes due.

$$R_{jk}^{AG} = \frac{p+\delta}{r+\delta} + \left[T_{jk}^{BG} + TT_{jk}\right] - 1 = \frac{p+\delta}{r+\delta} + \left[T_{jk}^{AG}\right] - 1 \quad (7)$$

109. Equations (3) and (7) can be used to calculate the EATR pre- and post-GloBE by plugging them into Equation (1). The difference between the two rates is the NPV of total Top-up Taxes due, TT_{jk}, normalised by the NPV of net income given by equation (3).

$$EATR_{jk}^{AG} = EATR_{jk}{}^{BG} + \left(TT_{jk}/NI_{jk}\right) \quad (8)$$

Incorporating tax incentives

110. Expenditure-based and income-based tax incentives can be modelled into the forward-looking ETR framework.[49] The design of tax incentives can be very complex and heterogeneous. For the purpose of illustration, the results shown in Section 5 of the report display some typical design features of tax incentives. This section provides the formulae to reproduce these.[50] Expenditure-based tax incentives affect the NPV of total deductions, while income-based tax incentives mostly affect the taxation of economic profits. The expressions in Equations 9a-9f can be plugged into Equation 3 to consider the case where preferential tax treatment exists. Similarly, Equations 10 and 10a can be used instead of Equation 3 to consider the case of income-based tax incentives.

Baseline tax treatment

111. Assuming an asset with a declining-balance depreciation pattern, the total value of tax deductions over the lifetime of the asset would be given by the NPV of depreciation allowances, Z, times the statutory tax rate, τ:

$$A = \tau Z = \tau \frac{\varphi}{\varphi + i} \quad (9a)$$

Accelerated depreciation

112. Assuming that there is an accelerated depreciation scheme means that $k^{acc} > 1$. Acceleration in this case is with respect to other similar assets, not with respect to economic depreciation.

$$A^{acc} = \tau Z^{acc} = \tau \frac{k^{acc}\varphi}{k^{acc}\varphi + i};\ k^{acc} > 1 \quad (9b)$$

---

[49] See Klemm (2008[25]), Botman et al. (2008[26]), Bösenberg and Egger (2017[88])

[50] These formulae are based on González Cabral et al. (2021[21]) and Celani et al. (n.d.[81]). These sources provide further details on the design features and modelling of expenditure-based and income-based tax incentives.

Immediate expensing

113. Assuming an asset with a declining-balance depreciation pattern, the total value of tax deductions over the lifetime of the asset would be given by the NPV of depreciation allowances, Z, times the statutory tax rate, τ:

$$A^{IE} = \varphi_0 \tau + (1 - \varphi_0)\tau Z \quad (9c)$$

Where $\varphi_0 = 1$ if there is full immediate expensing, and $\varphi_0 < 1$ if partial immediate expensing, such as 50% bonus depreciation.

Tax allowance

114. A tax allowance decreases the tax base and hence the total value of tax deductions is given by the tax allowance rate a times the statutory tax rate:

$$A^{TA} = \tau Z(1 + a) \quad (9d)$$

Tax credit

115. A tax credit decreases the tax liability and hence the total value of tax deductions is given by the tax allowance rate c times the statutory tax rate. For simplicity, it is assumed that the tax credit is given with respect to the depreciation allowances rather than on the acquisition cost.

$$A^{TC} = (\tau + c)Z \quad (9e)$$

Exemptions (partial/full) or reduced tax rates

116. Income-based tax incentives apply a reduction to the taxation of the income stream (i.e., the first term in equation (13)), typically through a partial or full exemption of the relevant income or the application of a reduced tax rate. Calling λ the exemption rate, the applicable reduced tax rate can be calculated as per equation (14). For full exemptions, $\lambda = 1$ and hence $\tau^* = \tau^{RR} = 0$.[51]

$$R_{jk} = \frac{(p + \delta)(1 - \tau^{RR})}{(1 + r)^d (r + \delta)} + A^* - 1 \quad (10)$$

$$\tau^{RR} = (1 - \theta)\tau;\ \theta < 1 \quad (10a)$$

117. Income-based tax incentives typically operate for a finite number of years but for simplicity, it is assumed to apply indefinitely. It is assumed that the reduced tax rate would also affect the value of expenditure-based tax provisions and hence $A^* = A^{RR} = \tau^{RR} * Z$.

Adjustments to the GloBE calculation due to tax incentives

118. Tax incentives can either reduce or increase Covered Taxes leading to $T_t^{BG-adj} \neq T_t^{BG}$ or increase GloBE Income $GI_t^{adj} > GI_t$, as was outlined in Table 1 of the report. Depending on how they are treated, the GloBE ETR may be more or less reduced or completely unaffected. The lower the ETR, the higher Top-up Taxes and the more affected tax incentives would be. From greater to lower effects on GloBE ETR,

[51] See Celani et al. (forthcoming[23]) for a graphical representation of the period-by-period illustration of how these incentives are modelled in this framework.

the tax incentives above are classified according to how the GloBE ETR in Equation 5 needs to be adjusted.

Reduce Covered Taxes: Out of all cases considered, the tax allowance, tax credit (other than QRTCs) and reduced tax rates all reduce Covered Taxes. In this case, no changes are needed to adjust the GloBE ETR, which will follow the formulae in Equation 5.

Increase GloBE Income: QRTCs increase GloBE Income. In this case, an adjustment is needed. $T_{jk}^{BG-adj} = T_{jk}^{BG} - cZ$ as in this modelling it is accounted for as a reduction in taxes paid, and added back to GloBE Income, $GI_{jk}^{adj} = GI_{jk} + cZ$. As a result, the effect of QRTCs is lesser than for other tax credits

Adjust Covered Taxes: Temporary book-tax differences arising from immediate expensing and accelerated depreciation for tangible assets or short-lived intangibles are adjusted for GloBE purpose by creating a deferred tax asset (DTA).[52] In this model, in NPV terms the DTA is given by $DTA_{jk} = Z^{acc} - (\delta/\delta + i)$ as it is assumed that book accounting matches economic deprecation for simplicity. $GI_{jk}^{adj} = GI_{jk} + DTA_{jk}$. The DTA_{jk} will become positive and then negative as the temporary difference reverts.

119. A last adjustment that is to be mentioned is for temporary differences that do not revert within five years. If no DTA is created for these assets, the treatment is as for the first case where Covered Taxes are reduced. If, however a DTA is created and the temporary difference does not revert within five years and the DTA are not subject to a recapturing exception accrual such as in cases where the timing difference is associated with an investment in tangible assets, recapturing is required. In this case, the Top-up Tax needs to be recalculated for the prior years where the DTA was provisioned. This means that in year 6, Top-up Taxes due from year 1 need to be paid and the same applies for the rest of years. The calculation in this case is the same as for the first group, except that Top-up Taxes which arise in this example in years 1 and 2 are paid 5 years later, which allows a deferral of Top-up Tax payments.

Table B.2. Calibration parameters

Variable	Calibration value	Definitions
p	30%	Pre-tax rate of return
δ	20%	Economic depreciation rate of the asset
φ	20%	Declining balance depreciation rate of the asset
r	3%	Real interest rate
i	3%	Nominal interest rate
π	0%*	Inflation
τ	15%	Statutory tax rate

Note: These parameters underpin the results in the main text from Section 5.1 and 5.2. * Alternative inflation assumptions can be found in Annex C.
Source: OECD.

[52] As discussed in Section 3, GloBE adjusts Covered Taxes to account for tax incentives that are based on timing differences. This is done by including the deferred tax asset that arises due to the difference between book and tax depreciation. By doing so, the GloBE ETR will be unaffected as GloBE accounts for the fact that taxes will be due at a later stage. Failure to constitute such DTA may mean that firms could be subject to Top-up Taxes in the earlier years where they can depreciate the asset faster and not in later years when the timing difference reverts. Constituting the DTA and adding that to Covered Taxes adjusts Covered Taxes such that these timing differences are ignored. However, as discussed in this paragraph, it may be the case that the firm constituted the DTA but after a five year period, the associated timing difference did not revert. In such cases, in year 6 the firm would need to calculate the amount of Top-up Taxes due in year 1 if the DTA had not been constituted and pay Top-up Tax accordingly, and follow a similar approach for the intervening five years.

SBIE

120. In Figure 13, the share of SBIE to GloBE Income is assumed to be exogenously determined and is calibrated to match the average SBIE to GloBE Income ratio of subsidiaries of in-scope MNEs operating in different sectors. Table B.3 reflects summary statistics used in that calibration.

Table B.3. Summary Statistics of SBIE to profits by sector

Industry	N	Mean	Median	Weighted Mean
Transporting and storage	4991	35.452%	29.868%	37.099%
Real Estate activities	6038	33.738%	27.019%	23.033%
Accommodation and food service	1105	31.529%	25.621%	21.952%
Basic manufacturing	6108	30.037%	23.683%	19.951%
Telecommunications	1331	28.001%	20.685%	18.753%
Professional, scientific and technical activities	23213	28.967%	21.771%	17.665%
Construction	6355	31.049%	24.623%	17.442%
Wholesale and retail trade	15258	27.613%	19.777%	16.614%
Services	82	31.996%	27.064%	16.393%
Financial and insurance activities	4147	26.883%	18.289%	14.529%
Transport	3788	28.042%	20.583%	14.447%
Chemicals	3889	26.216%	19.249%	14.179%
Administrative and support service activities	7977	30.034%	22.505%	13.895%
Digital	6853	29.444%	22.579%	13.180%
Food and Beverages	3230	30.278%	23.433%	12.980%
Broadcast media production and publishing	716	23.491%	14.358%	12.519%
Electronics	5892	27.975%	21.083%	11.931%
Pharmaceutical	2189	25.478%	18.694%	9.107%
Clothing	1147	28.728%	22.561%	8.457%
Tobacco	203	19.791%	10.740%	6.729%

Note: These summary statistics are constructed from well-covered countries in Orbis data for the years 2017 and 2018 restricted to MNEs above the EUR 750 million threshold. The SBIE is calculated as 5% of the value of tangible assets and payroll and profit before taxes are used as a proxy for GloBE Income. For subsidiaries present across the two years, first an average SBIE to GloBE Income is calculated. The mean, median and the profit-weighted mean observed by broad industry groups are calculated.
Source: OECD.

Equalising tax instruments

For the purposes of comparing different tax instruments, the model is calibrated so that the reduced tax rate, the tax credit and tax allowances yield the same EATR pre-GloBE based on the parameters outlined in Table B.4. The pathways of tax payments are not the same for the three cases, when inflation assumptions are adjusted. Therefore, for ease of exposition, inflation is assumed zero so that the EATRs pre-GloBE are equalised for each tax incentive design.

Table B.4. Tax incentives parameters

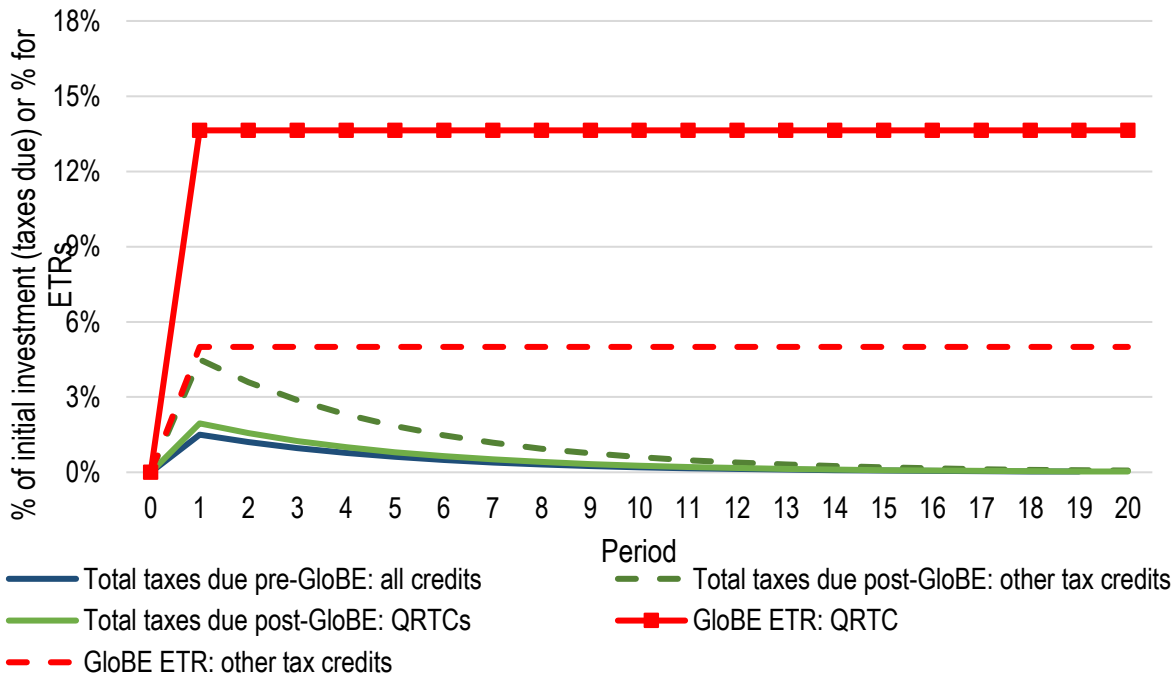
Parameter	Value	Description
k_{acc}	2	Accelerated depreciation: Multiplier for acceleration for declining balance
τ^{RR}	5%	Permanent reduced tax rate or partial exemption of 66% of the CIT rate
a	100%	Enhanced tax allowance on the depreciation of the asset, i.e., the firm can deduct depreciation expenses twice
c	15%	Tax credit on the depreciation of the asset

Note: These parameters are used to produce the main results in the report in Section 5.1 and 5.2. They are calibrated so that given the parameters in Table B.2, the tax allowance, credit, and reduced tax rate provide the same benefits to the investor in net present value terms. The accelerated depreciation cannot be compared as benefits are accelerated but do not exceed the initial cost of the investment.
Source: OECD.

Annex C. Additional charts

Supporting charts for main results in Section 5

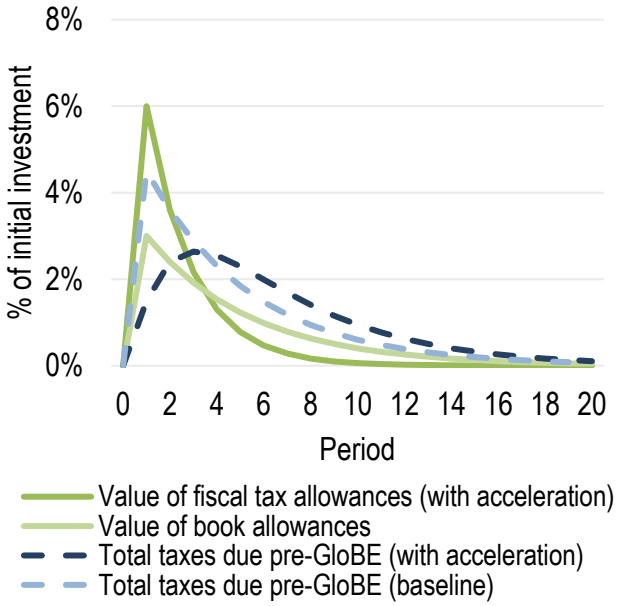
Figure C.1. Period-by-period total taxes due and GloBE ETR



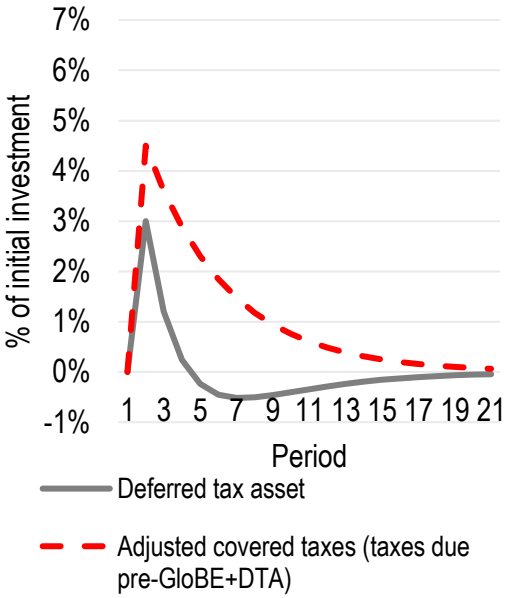
Note: Total taxes due pre-GloBE is T_{ijt+s}^{BG} and total taxes due post-GloBE is T_{ijt+s}^{AG}. The GloBE ETR is as defined in Equation 5. The tax credit equals 15% of the depreciation expense. The parameters used in the calibration are listed in Table B.2 and B.4.
Source: OECD.

Figure C.2. Accelerated depreciation or immediate expensing provisions for tangible assets

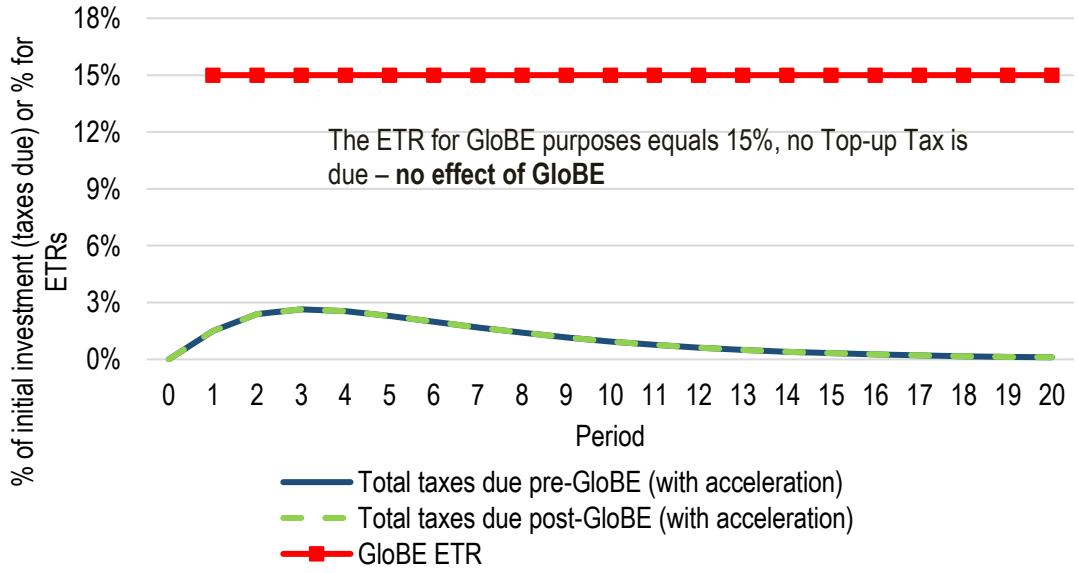
Panel A: Period-by-period taxes due pre-GloBE and value of allowances, with and without accelerated depreciation



Panel B: Taxes paid for GloBE purposes and value of DTAs

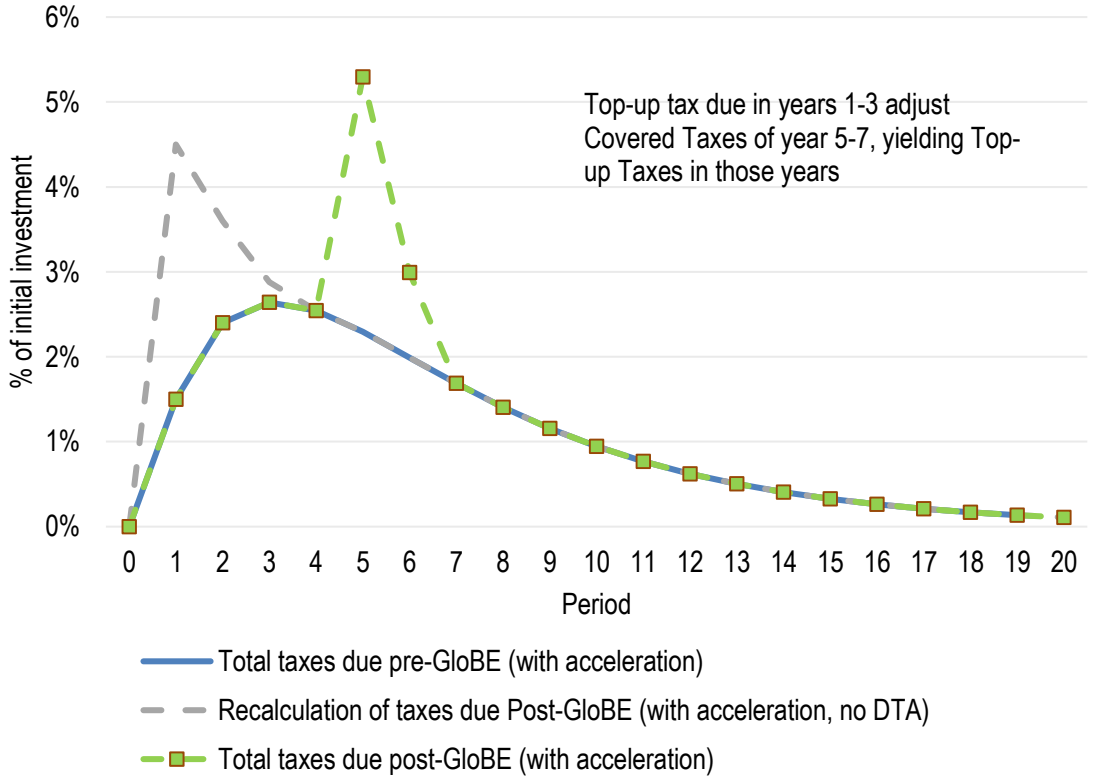


Panel C: Period-by-period total taxes due and GloBE ETR: Accelerated depreciation for tangible assets



Note: In Panel A and C Total taxes due pre-GloBE is T_{ijt+s}^{BG} and in Panel C total taxes due post-GloBE is T_{ijt+s}^{AG}. The GloBE ETR is as defined in Equation 5. This figure underpins the result of Figure 12 using the parameters in Table B.2 and B.4.
Source: OECD.

Figure C.3. Accelerated depreciation for intangible assets for temporary differences that do not revert within five years

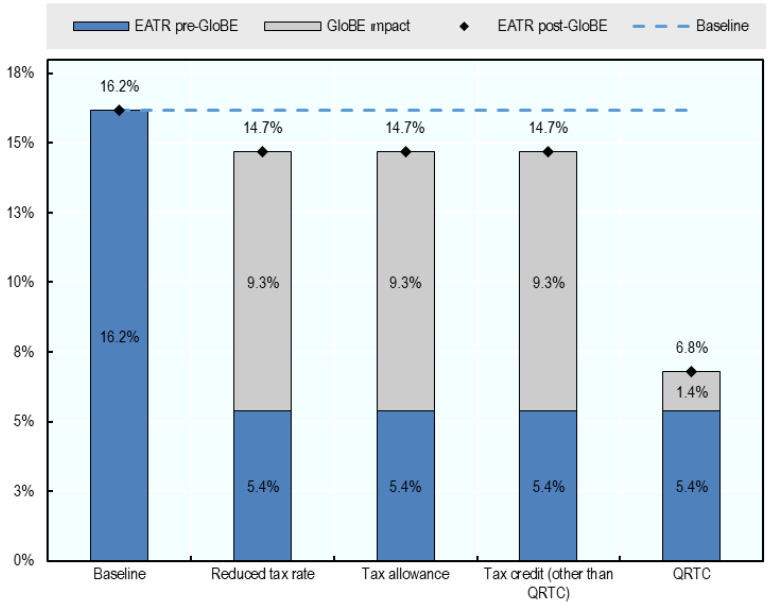


Note: Total taxes due pre-GloBE is T_{ijt+s}^{BG} and total taxes due post-GloBE is T_{ijt+s}^{AG}. This result underpins Figure 12.
Source: OECD.

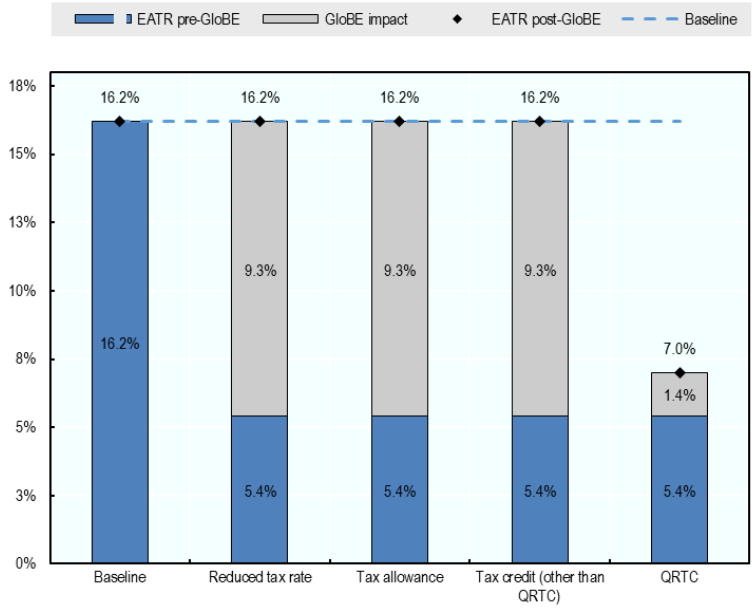
Alternative inflation assumptions

Figure C.4. EATR pre- and post-GloBE using alternative tax instruments

Panel A: SBIE equals zero, upper bound case – GloBE nullifies the effect of the tax incentive



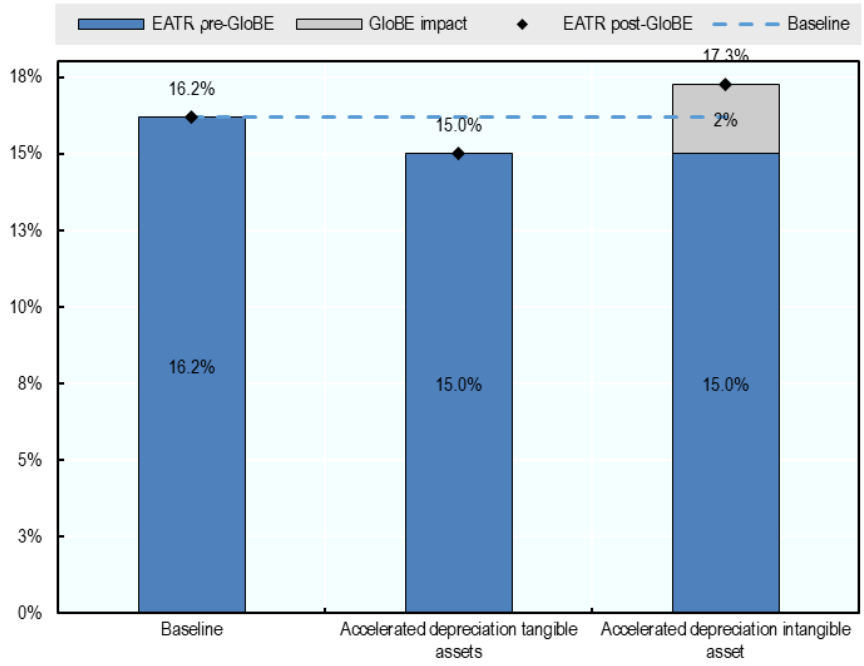
Panel B: SBIE equals 5% of tangible capital stock – GloBE curtails the effectiveness of the incentive



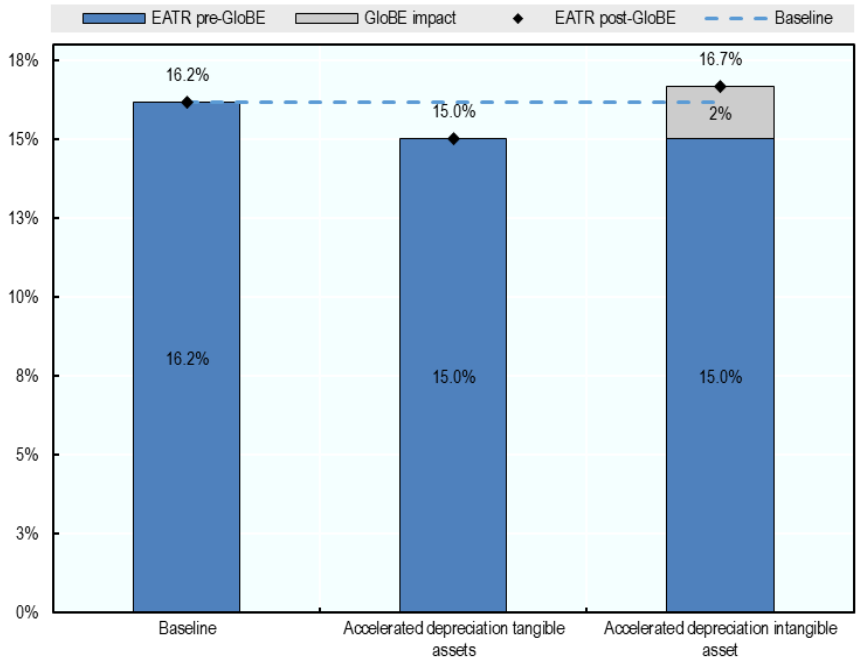
Note: This chart reproduces Figure 10 and Figure 11 assuming a positive inflation rate. The calibration parameters used to produce the EATR in this chart are based on Table B.2. Inflation is set to 3% which is the average 2017-21 of inflation rates observed in the 72 countries covered in OECD Corporate Tax Statistics (OECD, 2021[15]). The nominal interest rate is then equal to 6%. The tax instruments considered include a 5% reduced tax rate that yields an EATR pre-GloBE to 5.39%, capturing the fact that allowances in the future are worth less as they are assumed not to be inflation adjusted (rare case). An equivalent tax allowance of 122% on the depreciation of the asset and a tax credit of 18.4% on the depreciation of the asset that yields the same EATR pre-GloBE. Compared to the figures in the chart, the EATR increases due to the effect of inflation, which makes deductions, obtained in the future less valuable. The same patterns for the effect of GloBE are observed.
Source: OECD.

Figure C.5. EATR pre- and post-GloBE for accelerated depreciation provisions

Panel A: SBIE equals zero, upper bound case



Panel B: SBIE equals 5% of tangible capital stock



Note: This chart reproduces Figure 12 assuming a positive inflation rate. The calibration parameters used to produce the EATR in this chart are based on Table B.2. Inflation is set to 3% which is the average 2017-21 of inflation rates observed in the 72 countries covered in OECD Corporate Tax Statistics (OECD, 2021[15]). The nominal interest rate is then equal to 6%. Accelerated depreciation is still modelled as shown in Table B.4 as twice as fast the baseline rate. The patterns and effect of the GloBE Rules are as shown in the main text. Where recapturing provisions apply, inflation makes Top-up Taxes that need to be paid five years down the line also less expensive to the firm. The EATR in the case of recapturing is lower in this case than under no inflation as assumed in the main text.
Source: OECD.

Tax Incentives and the Global Minimum Corporate Tax

RECONSIDERING TAX INCENTIVES AFTER THE GLOBE RULES

In October 2021, the international community agreed a landmark deal on the two-pillar solution to the tax challenges arising from the digitalisation and the globalisation of the economy. As part of this plan, Pillar Two establishes a global minimum effective corporate tax rate of 15% for large multinational enterprises (MNEs) which has important implications for the use of tax incentives around the world. This report, prepared at the request of the Indonesian G20 Presidency, provides a number of concrete considerations for countries to take into account as they prepare for the implementation of Pillar Two. Wherever tax incentives drive an MNE's effective tax rate in a jurisdiction below 15%, the MNE would potentially be subject to top-up taxes under the GloBE Rules, a core component of Pillar Two. These rules may have an impact on the effectiveness of certain tax incentives. Therefore, the design of tax incentives will require careful reconsideration in a post-Pillar Two environment. The report considers the existing use of tax incentives in developed and developing countries, analyses key provisions of the GloBE Rules and shows how they may impact different types of tax incentives differently. The report concludes with policy considerations for countries.

OECD
BETTER POLICIES FOR BETTER LIVES

For more information:

ctp.contact@oecd.org

https://oe.cd/beps

@OECDtax

OECD Tax