165 Research Paper
4 October 2022

Evaluating the Impact of Pillars One and Two

Suranjali Tandon and Chetan Rao

SOUTH CENTRE

RESEARCH PAPER

165

EVALUATING THE IMPACT OF PILLARS ONE AND TWO

By Suranjali Tandon[+] and Chetan Rao[*]

SOUTH CENTRE

4 OCTOBER 2022

+ Assistant Professor, National Institute of Public Finance and Policy, suranjali.tando@nipfp.org.in
* Officer of Indian Revenue Service, cpsrao@gmail.com
Views expressed in this paper are personal and do not represent the view of the organisations.

SOUTH CENTRE

In August 1995, the South Centre was established as a permanent intergovernmental organization. It is composed of and accountable to developing country Member States. It conducts policy-oriented research on key policy development issues and supports developing countries to effectively participate in international negotiating processes that are relevant to the achievement of the Sustainable Development Goals (SDGs). The Centre also provides technical assistance and capacity building in areas covered by its work program. On the understanding that achieving the SDGs, particularly poverty eradication, requires national policies and an international regime that supports and does not undermine development efforts, the Centre promotes the unity of the South while recognizing the diversity of national interests and priorities.

NOTE

The views contained in this paper are attributable to the author/s and do not represent the institutional views of the South Centre or its Member States. Any mistake or omission in this study is the sole responsibility of the author/s.

Any comments on this paper or the content of this paper will be highly appreciated. Please contact:

South Centre
International Environment House 2
Chemin de Balexert 7–9
POB 228, 1211 Geneva 19
Switzerland
Tel. (41) 022 791 80 50
south@southcentre.int
www.southcentre.int

Follow the South Centre's Twitter: South_Centre

ABSTRACT

The proposed OECD Pillar One and Two reforms mark a significant shift in the way large multinational enterprises are taxed on their global incomes. However, while considering the reform at the proposed scale tax administrators must be able to compare the revenue gains with alternatives. This paper uses open-source data to provide tentative estimates of the impact of Pillars One and Two. The methodology has been detailed so that administrators can replicate it for comparison. Further, the paper provides an assessment from the perspective of developing countries of some of the key design elements of the proposals so as to understand whether they are administrable and to foresee possible challenges.

Les réformes proposées par l'OCDE dans les piliers Un et Deux marquent un changement important dans la manière dont les revenus mondiaux des grandes entreprises multinationales sont imposés. Cependant, considérant la réforme dans sa forme actuelle, les administrations fiscales doivent être en mesure de comparer les gains de revenus avec d'autres alternatives. Ce document utilise des données à accès libre pour fournir des estimations provisoires de l'impact des piliers Un et Deux. La méthodologie a été détaillée afin que les administrations fiscales puissent la reproduire à des fins de comparaison. En outre, le document fournit une évaluation, du point de vue des pays en développement, de certains des principaux aspects de la réforme afin de comprendre si ils sont administrables et d'anticiper les défis éventuels.

Las reformas propuestas del primer y segundo pilar de la OCDE suponen un cambio significativo en la forma en que las grandes empresas multinacionales tributan por sus ingresos globales. Sin embargo, al considerar la reforma a la escala propuesta, los administradores fiscales deben ser capaces de comparar las ganancias de ingresos con las alternativas. Este documento utiliza datos de libre acceso para ofrecer estimaciones provisionales del impacto de los pilares uno y dos. La metodología se ha detallado para que los administradores puedan reproducirla para comparar. Además, el documento ofrece una evaluación, desde la perspectiva de los países en desarrollo, de algunos de los elementos clave del diseño de las propuestas, con el fin de comprender si son administrables y prever posibles desafíos.

TABLE OF CONTENTS

1. INTRODUCTION

Digitalisation and globalisation have impacted the nature and processes of economic activity, which have challenged the rules of international taxation prevailing since more than a hundred years[1]. The current international taxation rules, that were designed in the early 20th century, have been rendered obsolete and there is a need to revise them, especially those governing nexus and profit allocation. The need for the reform was underscored during the work on tax challenges arising from digitalisation under Base Erosion and Profit Shifting (BEPS) project.

The Organisation for Economic Co-operation and Development (OECD)/Group of Twenty (G20) Inclusive Framework (IF) on BEPS, presently consisting of 141 jurisdictions, has been working on finding a solution to address the tax challenges arising from digitalisation of the economy under the mandate of the G20 leaders. In this process, three important characteristics of digital companies that contrast with traditional business models have been identified: the ability of a company to acquire scale without mass, heavy reliance on intangible assets and data and user participation[2]. As a result of these features, existing nexus rules based on physical presence are rendered inadequate as enterprises can now participate in the economic life of a country without having a physical presence[3]. Another important consideration is that in case of a cross-border enterprise, where demand and supply are spread across different jurisdictions, a 'virtuous cycle'[4] can be maintained only by a just and fair allocation of taxing rights to relevant States in a manner that does not lead to double taxation[5]. This would mark a fundamental shift in the way tax rules applied, i.e. markets are among the key source of profits.

As will be discussed in the following sections, the agenda to tax digitalised businesses now aims to tackle the taxation of large multinational enterprises (MNEs) and issues of tax competition. As the new proposed international tax rules depart from the traditional approach, it is important to assess whether they will bring the desired increase in revenues. Therefore, this paper evaluates the impact of the ongoing work under OECD/G20 Inclusive Framework on BEPS on the tax revenues of developing countries, particularly South Centre member countries and compares them with select developed countries. This paper begins by providing a broad overview of the OECD proposal (Section 1) so as to help understand the detailed steps followed in the calculation of profits attributable under Pillar One and the

---

[1] Organisation for Economic Co-operation and Development (OECD), "Two Pillar Solution to Address the Tax Challenges Arising from Digitalisation", OECD/G20 Base Erosion and Profit Shifting Project (October 2021), p. 3. Available from https://www.oecd.org/tax/beps/brochure-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-october-2021.pdf.

[2] OECD, *Tax Challenges Arising from Digitalisation – Interim Report 2018: Inclusive Framework on BEP*S, OECD/G20 Base Erosion and Profit Shifting Project (Paris, OECD Publishing, 2018).

[3] Comments of the Group of Twenty-four (G-24) in 2019 on the OECD public consultation document "Addressing the Tax Challenges of the Digitalisation of the Economy".

[4] If the taxing rights are restricted only to the country where the supply chain is located (as proposed by the OECD approach) , the market country would lose tax revenue and will need to recover it from the local enterprises, thereby putting them at a tax disadvantage vis-à-vis the foreign enterprises. This would, on one hand, reduce the former's competitiveness and adversely impact them, and on the other hand, adversely impact the economic development of the country, including through a reduction of the demand that may adversely impact as well the profits of the foreign enterprises in the long run. This 'vicious cycle' will thus adversely impact all stakeholders including the foreign enterprises and, hence, cannot be considered sustainable.

[5] Central Board of Direct Taxes, Govt. of India, Public Consultation on the Proposal of Rules for Profit Attribution to Permanent Establishment (April 2019), para 94. Available from https://www.incometaxindia.gov.in/hindi/Lists/Latest%20News/Attachments/261/Report_of_the_Committee_on_Profit_Attribution_to_PE_in_India_18_4_19.pdf.

additional tax generated from Pillar Two. In Section 2, the elements of Pillars One and Two are simplified and the feedback received from recent public consultations is discussed briefly. This helps to understand the main areas of concern which may need to be carefully negotiated. Section 3 presents empirical estimates of revenue gains and helps build a framework from publicly available information for understanding the net benefit from Pillars One and Two. The paper concludes with a summary of the findings in Section 4.

2. Design of the Two Pillar Solution

The Two Pillar Solution, which now forms the basis of the ongoing work of the IF was proposed in the Policy Note approved by the G20/OECD in January 2019[6]. It marked a departure from previous work. The first Pillar proposes to address the broader challenges of the digitalised economy and focus on the allocation of taxing rights, and the second Pillar explores the basis for taxing rights that would strengthen the ability of jurisdictions to tax profits where the other jurisdiction with taxing rights applies a low effective rate of tax to those profits.

The Two Pillar approach recognises that the digitalisation of the economy is pervasive, raises broader issues, and is most relevant in, but not limited to, highly digitalised large businesses. It raises questions of where tax should be paid and if so in what amount in a world where enterprises can effectively be heavily involved in the economic life of different jurisdictions without any significant physical presence. It also recognises that the features of the digital economy[7] exacerbate the BEPS risks, and enabled corporate structures that shift profits to entities that escape taxation or are taxed at only very low rates. It, therefore, proposes a solution to cover the overall allocation of taxing rights through revised profit allocation rules and revised nexus rules, as well as anti-BEPS rules.

The IF remained committed to a consensus-based framework and over time the work continued. The onset of the economic shocks from COVID-19 and related lockdowns compelled countries to re-examine their tax systems. There was an increased push to raise taxes and this proved propitious for the OECD work. In April 2021, the Biden administration proposed a comprehensive scope[8] beyond the automated digital services and consumer facing businesses as initially discussed for Pillar One and included in the Inclusive Framework October 2020 Report on Pillar One Blueprint[9].

On 1st July, 2021, the OECD/G20 IF issued a Statement agreed upon by 131 members (later increased to 134 members) on the Two-Pillar Solution to address the tax challenges arising from digitalisation[10]. The July Statement was based on the two-pillar package. Pillar One aims to ensure a fairer distribution of profits and taxing rights among countries with respect to the largest MNEs. This proposal focusses on the allocation of taxing rights and a coherent and concurrent review of the profit allocation and nexus rules. Pillar Two seeks to put a floor on tax competition with respect to corporate income tax through the introduction of a global minimum corporate tax that countries can use to protect their tax bases. Pillar Two does not eliminate tax competition, but it does set multilaterally agreed limitations on it[11]. It also includes a "Subject to Tax Rule" (STTR) which aims to protect the right of developing

---

[6] OECD, "Addressing the Tax Challenges of the Digitalisation of the Economy – Policy Note", OECD/G20 Base Erosion and Profit Shifting Project (23 January 2019).
[7] The OECD/ G20 Inclusive Framework 2018 Interim Report on Tax Challenges Arising from Digitalisation identified that highly digitalised businesses exhibit three distinct characteristics which are cross-jurisdictional local scale without local mass, reliance on intangible assets, including intellectual property (IP) which supports the business models and data, user participation and their synergies with IP.
[8] Bjarke Smith *et al.*, "Washington widens digital tax push to target world's largest 100 companies", *Politico*, 8 April 2021. Available from https://www.politico.eu/article/washington-us-tax-digital-brussels-oecd/.
[9] OECD, *Tax Challenges Arising from Digitalisation – Report on Pillar One Blueprint: Inclusive Framework on BEPS*, OECD/G20 Base Erosion and Profit Shifting Project (Paris, OECD Publishing, 2020), para. 8.
[10] OECD, Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy, OECD/G20 Base Erosion and Profit Shifting Project, 1 July 2021.
[11] OECD, "Addressing the Tax Challenges Arising from the Digitalisation of the Economy", OECD/G20 Base Erosion and Profit Shifting Project (July 2021).

countries to tax certain base-eroding payments, like interest and royalties, when they are not taxed up to a minimum rate of 9%. The STTR is 'not premised'[12] on the concerns that the current allocation of taxing rights is not fair. Instead, it only applies where the income covered by the treaty is subject to low or no tax by the treaty partner[13].

The July 2021 IF Statement was a high-level political agreement and contained the elements on which there was broad consensus. It also marked a departure from the IF October 2020 package discussed in the Report on the Pillar One Blueprint[14] . The main change was the scope of Pillar One – the earlier scope of automated digital services[15] and consumer facing businesses was dropped for a comprehensive scope but restricted to a limited number of companies. Further, the narrative detailed in the IF January 2019 policy note shifted from addressing the tax challenges arising from digitalisation to providing stability and fairer distribution of profits and taxing rights among countries with respect to the largest MNEs.

On 8th October, 2021 the Inclusive Framework issued another Statement which was supported by 137 out of 141 IF members. The document[16] updated the July Statement and filled in the gaps previously left for negotiations and also provided a detailed implementation plan. The Annex to the Statement includes a detailed implementation plan which describes the work that is needed to implement the Two-Pillar Solution along with the timelines of the process, a proposal for bespoke capacity building, especially for developing countries, and the key milestones to achieve the ambitious goal of implementing the rules in 2023.

Pillar One is proposed to be implemented through a Multilateral Convention (MLC) which is proposed to be open for signatures in 2022 so that it can come into effect in 2023. However, the Cover Note released on 11 July 2022 and agreed by the IF pushes this deadline for the signing of the MLC to the first half of 2023[17]. The Global anti-Base Erosion Rules (GloBE rules) which are part of Pillar Two are proposed to be implemented through a common approach and the subject to tax rule (STTR) will be implemented through a Multilateral Instrument (MLI) as it requires changes in tax treaties.

While in 2021 the broad contours, which are a matter of political agreement, had been agreed to, the details of the proposal are in the process of being finalised. In July 2022 the OECD Secretariat released the Progress Report on Amount A of Pillar One[18] for public consultation, which includes a consolidated version of the operative provisions on Amount A (presented in the form of domestic model rules), reflecting the technical work completed thus far. This report does not include the rules on the administration of the new taxing right, including the tax certainty-related provisions, which are planned to be released before the Inclusive Framework meeting in October 2022. There are still moving parts to the proposal and it is imperative for countries to evaluate the costs of implementation of the detailed plan vis-à-vis the revenue gains.

---

[12] OECD, *Tax Challenges Arising from Digitalisation – Report on Pillar Two Blueprint: Inclusive Framework on BEPS*, OECD/G20 Base Erosion and Profit Shifting Project (Paris, OECD Publishing, 2020), para. 567.
[13] Ibid.
[14] OECD, *Tax Challenges Arising from Digitalisation – Report on Pillar One Blueprint: Inclusive Framework on BEPS*
[15] The United Nations (UN) Model article 12B is based on the automated digital services scope proposed as part of the Inclusive Framework October 2020 Report on Pillar One Blueprint.
[16] OECD, Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy, OECD/G20 Base Erosion and Profit Shifting Project, 8 October 2021.
[17] OECD, Cover Note by the Inclusive Framework to the Progress Report on Amount A of Pillar One (July 2022). Available from https://www.oecd.org/tax/beps/oecd-g20-inclusive-framework-on-beps-cover-note-to-the-progress-report-on-amount-a-of-pillar-one.pdf.
[18] OECD, "Progress Report on Amount A of Pillar One: Two-Pillar Solution to the Tax Challenges of the Digitalisation of the Economy", OECD/G20 Base Erosion and Profit Shifting Project (July 2022). Available from www.oecd.org/tax/beps/progress-report-on-amount-a-of-pillar-one-july-2022.pdf.

2.1 Overview of Pillars One and Two

A. Pillar One

Pillar One consists of Amount A, which is about the reallocation of taxation rights and Amount B, which is about a simplified application of the arm's length principle to in-country baseline marketing and distribution activities. The different elements of Amount A which is proposed to be implemented through a Multilateral Convention (MLC) are detailed as under:

- **Scope:** Article 1 of Progress Report on Amount A[19] defines a covered group that includes MNEs which have a global turnover above € 20 billion and pre-tax profit margin above 10% (i.e. profit before tax revenue) using an averaging mechanism[20]. These rules exclude extractives industries and the regulated financial services sector. The turnover threshold shall be reduced to €10 billion following a review after 7 years[21].
- **Taxable Nexus[22]**: The nexus threshold moves away from the traditional physical presence to base taxation on sales in a jurisdiction. A jurisdiction will qualify for additional profit allocation under Amount A if there is a sale of € 1 million in a year where the gross domestic product (GDP) of the jurisdiction is above € 40 billion or € 250,000 for all other jurisdictions . As per the information reported by the World Bank, in 2021 95 jurisdictions among 217 have GDP less than € 40 billion. This special purpose nexus, based on sales, is supposed to apply solely for the purpose of Amount A.
- **Quantum**: 25%[23] of adjusted profit before tax in excess of 10%. Adjusted profit before tax are the consolidated financial accounting profits adjusted for losses, dividends, capital gains and policy disallowed expenses among others[24]. Amount A will be allocated to market jurisdictions with nexus using a sales-based allocation key[25].
- **Revenue Sourcing**: Revenue is proposed to be sourced to the end market jurisdiction where the goods or services are used or consumed. The Draft Model Rules for Nexus and Revenue Sourcing were released for Public Consultation in February 2022[26] . The revenue sourcing rules have been designed to balance the need for accuracy with the need to limit compliance costs. The revenue sourcing rules provide a methodology for an in-scope MNE (*covered group*) to use available information to reliably identify the market jurisdiction based on a range of possible indicators, or, in cases where a back-stop is needed, based on an allocation key that is expected to provide a reasonable approximation of the market jurisdiction. A total of 60 public comments were received on

---

[19] The Progress Report on Amount A of Pillar One which was released for Public Consultation on 11th July, 2022 and is available at https://www.oecd.org/tax/beps/oecd-invites-public-input-on-the-progress-report-on-amount-a-of-pillar-one.htm.

[20] Averaging mechanism is to apply a two-pronged test i.e. "Average Test" - average across period and 4 preceding periods and "Prior Period Test" - whether group was in scope in two or more of the four immediately preceding periods.

[21] OECD, Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy, 1 July 2021.

[22] Article 3; technical details of Amount A available at https://www.oecd.org/tax/beps/progress-report-on-amount-a-of-pillar-one-july-2022.pdf.

[23] Article 6 of the July 2022 Progress Report on Amount A of Pillar One.

[24] Article 5 of the July 2022 Progress Report on Amount A of Pillar One.

[25] The profit to be allocated would be capped through marketing and distribution profits safe harbour (MDSH) which is primarily designed to address issues related to double counting which may occur if the MNE has residual profit through physical presence taxable under existing profit allocation rules in a market country. This effectively is a capping mechanism on Amount A allocation and is proposed to operate on a jurisdictional basis using quantitative metrics.

[26] OECD, "Pillar One – Amount A : Draft model Rules for Nexus and Revenue Sourcing", Public Consultation Document (18 February 2022).

the draft and they were published on the OECD website[27]. Most of the consultation responses expressed their concern on the complexity of the rules and the associated compliance cost to implement the rules. The general view was that it may be preferrable to use allocation keys than the indicators for revenue sourcing. Based on public consultation, the revenue sourcing rules were reviewed and the revised version was released as part of the Progress Report for public consultation[28].

- **Tax Base Determination**: The profit or loss of the in-scope MNE is determined by reference to financial accounts with a small number of adjustments. A public consultation document was released in February 2022 with respect to tax base determination[29]. Around 35 comments were received on all aspects of the tax base rules which form the foundation of the Amount A. The rules propose an earn-out approach to loss-carry forward and a cap on number of years for carry forward of pre-implementation losses and post implementation losses[30].
- **Segmentation**: While determining the profitability of the MNE group, segmentation has only been proposed for exceptional circumstances[31]. For scope rules it is proposed to consider the scope rule i.e. if a disclosed segment of a company meets the profitability and revenue threshold meaning the segment revenue is above € 20 billion and segment profitability above 10%, then the segment of the MNE will be considered in scope for Amount A purpose[32].
- **Marketing and Distribution Profits Safe Harbour**: To prevent double counting, a marketing and distribution profits safe harbour (MDSH) has been proposed which will cap the residual profits allocated to a jurisdiction through Amount A if residual profits are already being taxed in the market jurisdiction. The July 2022 Progress Report on Amount A has proposed this capping mechanism to follow the jurisdictional and quantitative approach used in connection with the elimination of double taxation[33]. This includes a formula to determine the precise amount of the reduction for each market country (where applicable), and quantitative criteria to identify residual profits already taxed in a market country (such as a Return on Depreciation and Payroll). Many aspects of the MDSH rule design, including specific metrics to identify residual profits in a market country, the portion of that residual profits that will offset (and reduce) Amount A allocations, and the interaction of this adjustment with the elimination of double taxation mechanism are still under discussion.
- **Elimination of Double Taxation**: Double taxation will be relieved from entity (or entities) that earn residual profits[34] using the exemption or credit method[35].

---

[27] Available at https://www.oecd.org/tax/beps/public-comments-received-on-the-draft-rules-for-nexus-and-revenue-sourcing-under-pillar-one-amount-a.htm.

[28] Revised revenue sourcing rules are included in Article 4 & Schedule E of the July 2022 Progress Report on Amount A of Pillar One.

[29] OECD, "Pillar One – Amount A : Draft model Rules for Nexus and Revenue Sourcing",

[30] Rules for allocation tax base are in Article 5 & Schedules F – H of the July 2022 Progress Report on Amount A of Pillar One.

[31] Article 1 of Title 1 (Scope) of the July 2022 Progress Report on Amount A of Pillar One.

[32] Due to data constraints, segmentation has not been considered for Amount A purposes. Such a rule may bring companies like Amazon which has a cloud computing segment in scope as it would meet the scope and profitability criteria but the group as a whole would not meet the profitability threshold.

[33] Paragraph 5 of Article 6 (Allocation of profit) of the July 2022 Progress Report on Amount A of Pillar One.

[34] The obligation to eliminate double taxation with respect to Amount A will be allocated among countries using a quantitative jurisdictional approach designed to ensure that the obligation is borne by the countries in which the MNE earns its residual profits. The countries will be categorised into tiers based on the MNE's profitability measured by reference to Return on Depreciation and Payroll (RODP) in each country relative to the overall profitability of the MNE, and double taxation would first be relieved by countries identified in the highest profit tiers. These rules are in Articles 7 – 11 & Schedule J of the July 2022 Progress Report on Amount A of Pillar One.

[35] The October 2020 Report of Pillar One Blueprint details a four-step approach to identify relieving entities by using a mix of qualitative and quantitative methodology. However, the work on this element of Amount A is still under progress.

- **Tax Certainty:** A mandatory and a binding early tax certainty mechanism based on panels for Amount A is part of the Pillar One Solution. Since Amount A will also have interactions with the existing tax rules, for in-scope MNEs a mandatory and binding dispute resolution mechanism has been proposed for issues relating to Amount A (e.g. transfer pricing and business profits). For developing economies who are eligible for deferral of BEPS Action 14 peer review[36] an elective binding dispute resolution mechanism has been proposed. The eligibility of a jurisdiction for the elective mechanism will be reviewed periodically and once jurisdiction is found ineligible it will remain so in subsequent periods for the elective mechanism. On 27 May 2022, the Task Force on the Digital Economy from the OECD published two public consultation documents on a Tax Certainty Framework and Tax Certainty for Issues Related to Amount A of Pillar One. The Amount A early tax certainty framework for Amount A based on panels aims for certainty for in-scope groups over all aspects of the new rules, including the elimination of double taxation. This eliminates the risk of uncoordinated compliance activity in potentially every jurisdiction where a MNE group has revenues, as well as a complex and time-consuming process to eliminate the resulting double taxation. A tax certainty process for issues related to Amount A will ensure that in-scope groups will benefit from dispute prevention and resolution mechanisms to avoid double taxation due to issues related to Amount A (e.g. transfer pricing and business profits disputes), in a mandatory and binding manner. An elective binding dispute resolution mechanism will be available only for issues related to Amount A for developing economies that are eligible for deferral of their BEPS Action 14 peer review and have no or low levels of Mutual Agreement Procedure (MAP) disputes[37].
- **Unilateral Measures**: The solution requires all parties to the agreement to remove all Digital Service Taxes (DSTs) and other relevant similar measures with respect to all companies and also commit not to introduce such measures in future. The October 2021 Statement calls for a standstill for introduction of any new DSTs and other similar relevant measures till 31.12.2023 and also includes proposed transitional arrangement for the existing measures[38]. In the July 2022 Progress Report on Amount A of Pillar One it is noted that the MLC will contain provisions for withdrawal of all existing DST and similar measures and will develop a definitive list of existing measures. The definition of 'similar relevant measures' is proposed to be part of the MLC. It will contain a commitment not to enact future measures that impose taxation based on market-based criteria, are ring-fenced to foreign and foreign-owned businesses, and are placed outside the income tax system and therefore outside the scope of tax treaty obligations. The potential consequences of the future imposition of DST or similar measures are also under consideration[39].
- **Administration**: There is a proposal for streamlined tax compliance mechanism to allow the in-scope MNEs to manage the process through a single entity.

Figure 1 summarises the steps involved in calculating Amount A, under Pillar One.

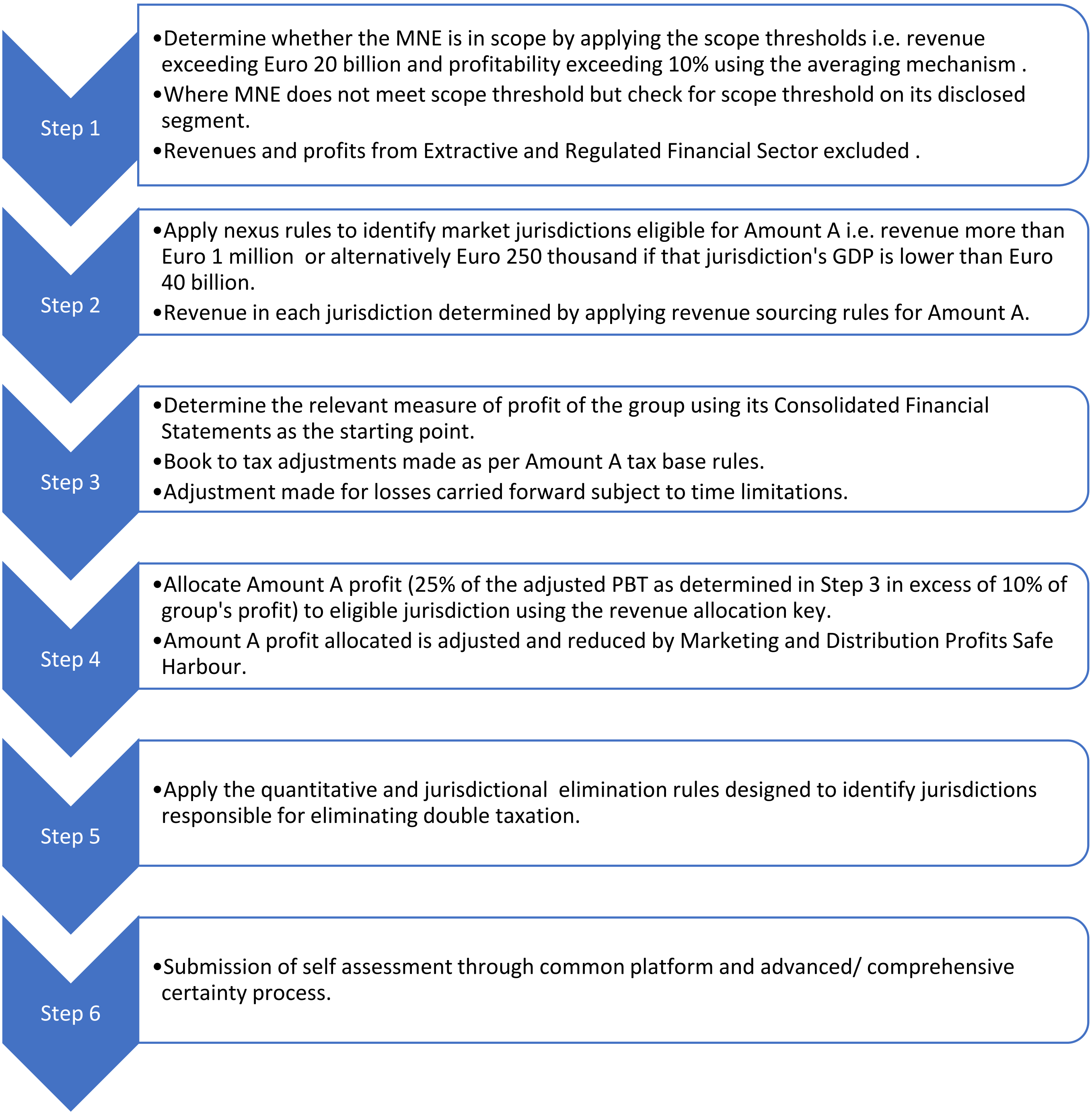
[36] The conditions for being eligible are available in paragraph 7 of BEPS Action 14 Assessment Methodology of the OECD 2016 Action 14 Peer Review documents. The details are available at the following link : https://www.oecd.org/tax/beps/beps-action-14-on-more-effective-dispute-resolution-peer-review-documents.pdf.

[37] Public consultation comments are available at https://www.oecd.org/tax/beps/public-comments-received-on-tax-certainty-aspects-under-amount-a-of-pillar-one.htm.

[38] In October and November 2021, United States Treasury reached agreement with Austria, France, Italy, Spain, United Kingdom, Turkey and India regarding the treatment of Digital Services Taxes (DSTs) and equalisation levy (mechanism of credit) during the interim period (consisting of two years) prior to full implementation of Pillar One.

[39] OECD, "Progress Report on Amount A of Pillar One: Two-Pillar Solution to the Tax Challenges of the Digitalisation of the Economy".

Figure 1 Overview of the process map for Amount A



Source: OECD Factsheet on Progress Report on Amount A of Pillar One (July 2022)

B. Pillar Two

- It consists of three rules: (i) Income Inclusion Rule (IIR), which imposes top-up tax on a parent entity in respect of the low taxed income of its constituent entity; and (ii) an Undertaxed Payment Rule (UTPR) which denies deductions or requires an equivalent adjustment to the extent the low taxed income of a constituent entity is not subject to tax under an IIR; and (iii) a treaty-based rule, the Subject to Tax Rule (STTR) that allows source jurisdictions to impose source taxation on certain payments if subjected to tax below a minimum rate by the jurisdiction where the recipient entity is located.
- The IIR and UTPR, also called GloBE rules (Global Anti Base Erosion rules) will have the status of 'common approach' which implies that IF members are not required to adopt the GloBE rules, but, if they choose to do so, they will implement and administer as per agreed rules[40].
- MNE Group and its Constituent Entities are in scope of the GloBE rules if the annual revenue in the Consolidated Financial Statements of the Ultimate Parent Entity (UPE) is €750 million or more for two out of the four fiscal years immediately preceding the tested Fiscal Year. The October Statement provides that jurisdictions are free to apply the IIR to groups headquartered in their jurisdictions without regard to the threshold.
- The minimum tax rate for the purpose of GloBE rules has been agreed to 15% to be calculated on a jurisdictional basis. Substance based carve outs are proposed to be provided to ensure that entities carrying on substantive economic activities are least impacted by the new rule[41].

  The Subject to tax rule (STTR) has been recognized as an integral part of the Pillar Two. The exact scope of the rule is under discussion and is supposed to apply to interests, royalties and a defined set of other payments (which are yet to be agreed**).** STTR will be limited to the difference between the minimum rate which has been agreed to be 9% and the tax rate on the payment. An IF country would have to implement STTR into its bilateral treaties with developing countries[42] upon request if its nominal corporate tax rate on the payments in the scope of STTR is below the minimum rate of 9%. The additional tax applicable under the STTR would be on gross payments but in order to avoid double taxation it is being considered that the rate for STTR is less than or similar to the minimum effective rate on IIR and UTPR[43]. The process of implementing a top up tax under Pillar 2 is summarised in Figure 2.

---

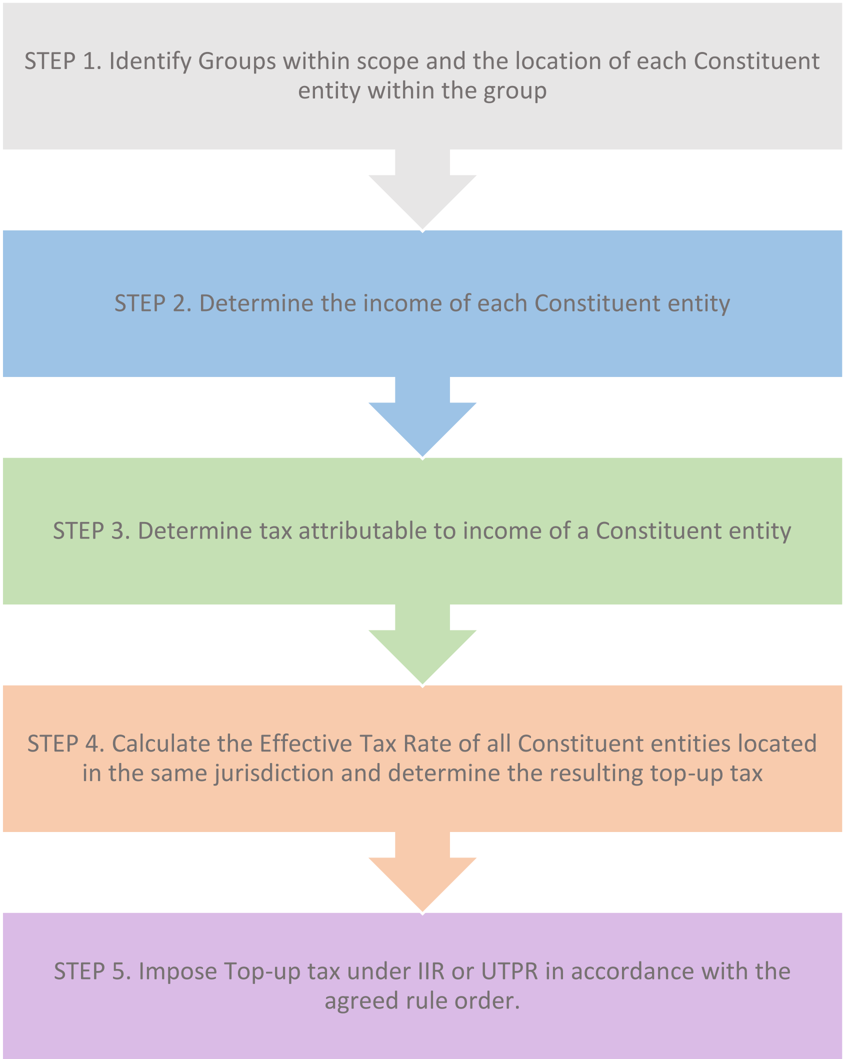
[40] The Pillar Two Model Rules were released by OECD on 20 December 2021 after their approval by the Inclusive Framework. On 14 March 2022, the Commentary to the Pillar Two Model Rules as agreed by IF was released. This provides detailed technical guidance on the operation and intended outcomes of the Model Rules and clarifies the meaning of certain terms. It also illustrates the application of the rules to various fact patterns. However, the conditions under which the US Global Intangible Low-Taxed Income (GILTI) regime will co-exist with the GloBE rules to ensure a level playing field, are still to be released.

[41] The rule is primarily targeted at tax havens and low tax jurisdictions.

[42] Developing countries are defined as those with a gross national income (GNI) per capita, calculated using the World Bank Atlas method, of USD 12,535 or less in 2019 as regularly updated by World Bank.

[43] OECD, *Tax Challenges Arising from Digitalisation – Report on Pillar Two Blueprint: Inclusive Framework on BEPS*, paras. 650-51.

Figure 2 Overview of the process map for GloBE Rules



Source: Pillar Two Model Rules in a Nutshell (OECD)

Pillar Two GLoBE Model Rules, as released in December 2021 and backed by a Commentary released in March 2022, have been designed to accommodate a diverse range of tax systems, including different tax consolidation rules, income allocation, entity classification rules etc., as well rules for specific business structures such as joint ventures and minority interests. Taxpayers in scope of the rules can calculate their effective tax rate (ETR) for each jurisdiction where they operate, and pay top-up tax for the difference between their effective tax rate per jurisdiction and the 15% minimum rate. Any resulting top-up tax is generally charged in the jurisdiction of the ultimate parent of the MNE. A de minimis exclusion applies where there is a relatively small amount of revenue and income in a jurisdiction. The Pillar Two Model Rules also contemplate the possibility that jurisdictions introduce their own domestic minimum top-up tax based on the GloBE mechanics, which is then fully creditable against any liability under GloBE, thereby preserving a jurisdiction's primary right of taxation over its own income[44].

The model rules provide for qualified domestic minimum top-up taxes (QDMTT) which is a tax that is applied to excess profits of the domestic in-scope entities and is incorporated into the domestic law of a jurisdiction. It computes profits and calculates any top-up tax due in the same way as the Pillar Two rules themselves. QDMTT in most cases will cancel out the top-up tax entirely, so by introducing a QDMTT a country collects the revenue that would otherwise have been collected by another country under Pillar Two through the Income Inclusion Rule (IIR) or the Undertaxed Payment Rule (UTPR). A country can introduce a QDMTT in order to ensure that the taxes due in its jurisdiction are not collected by another country.[45] Effectively, once the domestic minimum tax meets the QDMTT conditions as laid down in the model rules, any QDMTT paid by an entity will be fully creditable against any liability under Pillar Two rules. This increases the acceptability of the GloBE rules but at the same time it may vitiate the desired objective to reduce tax competition.

The substance based carveouts have an impact on the actual implementation of the rules. With the carveouts, GloBE income is reduced for any jurisdiction where eligible payroll costs or eligible tangible assets are present in that jurisdiction. GloBE rules will apply to income that is over and above 10% of the eligible payroll costs and 8% of the carrying value of eligible tangible assets. As mentioned in the October Statement, these rates will be reduced to 5% over a ten-year period. The effect of the substance based carveout is to incentivise substance-based activities in jurisdictions where substantial income is earned by a multinational group by rewarding the placement of people and tangible property. They also provide shelter for extractive industries, which typically invest significantly in tangible property in connection with their activities. Effectively, jurisdictional income exceeding a 5% return on payroll and tangible assets will be exposed to additional taxation, thus, GloBE tax is principally focused on excess returns to intangible assets and putting less burden of minimum taxation on payroll and tangible asset-heavy taxpayers.

The feedback on the Pillar Two GLoBE Model rules from the business has been mixed. While welcoming the Rules and Commentary, all have expressed concerns on their complexity. The Business at OECD (BIAC) published a letter in January 2022 [46] addressed to OECD Working Party 11, involved in the negotiations of Pillar Two. The letter identified major policy issues and one overarching technical issue which in their opinion would prevent the Model Rules from achieving their intended purpose. The policy issues identified by BIAC are: application of top-up tax in circumstances where there is no net GloBE income for a jurisdiction and deferred tax attributes being limited to minimum tax rate, even if jurisdiction has higher tax rate. The fundamental technical issue identified by BIAC is the complexity of the rules both in implementation and administration.

The next step in Pillar Two is the finalisation of the implementation framework, which will cover the final design of any safe harbours, as well as administrative procedures e.g., detailed filing obligations, multilateral review processes to facilitate both compliance by multinational groups and administration by tax authorities. The conditions for the United States Global Intangible Low-Taxed Income (GILTI) regime's co-existence with Pillar Two,

---

[44] OECD, "The Pillar Two Rules in a Nutshell", Tax Challenges Arising from Digitalisation – Global Anti-Base Erosion Model Rules (Pillar Two) (n.d.).

[45] Michael P. Devereux, John Vella and Heydon Wardell-Burrus, "Pillar 2: Rule Order, Incentives, and Tax Competition", Oxford University Centre for Business Taxation Policy Brief 2022 (January 14, 2022). Available from https://ssrn.com/abstract=4009002 or http://dx.doi.org/10.2139/ssrn.4009002.

[46] Available at https://biac.org/wp-content/uploads/2022/01/01-06-2022-Business-at-OECD-BIAC-6-Jan-Pillar-Two-Issues-Letter-1.pdf.

that in turn provides a level playing field, are also still under development. These are also dependent upon the final changes in GILTI that are passed by the US Senate. The public consultation on the implementation framework is expected to be released soon, meanwhile some countries such as United Kingdom and Switzerland have started public consultation on the implementation of Pillar Two Rules. UK has now launched a public consultation on draft legislation on top up tax on MNEs[47]. The draft legislation is aligned with the design of the Pillar Two and the report suggests that a domestic minimum tax are in the offing. Pillar Two will have an impact on both tax administrations and on MNEs. This will result in introduction of corporate taxes in some countries[48] and raising of tax in others[49]. Meanwhile Pillar Two rules will also induce behavioural changes in the MNEs.

---

[47] HM Revenue & Customs, Govt. of United Kingdom, “Multinational top-up tax: UK adoption of Organisation for Economic Co-operation and Development Pillar”, 20 July 2022. Available from https://www.gov.uk/government/publications/introduction-of-the-new-multinational-top-up-tax/multinational-top-up-tax-uk-adoption-of-organisation-for-economic-co-operation-and-development-pillar-2.

[48] In January 2022, the United Arab Emirates (UAE) announced that it will be introducing corporate income tax at the rate of 9% in 2023.

[49] Ireland has also expressed its intention to raise its tax rate from 12.5% to 15%.

3. EFFECT OF THE PROPOSALS ON TAX REVENUES AND ADMINISTRATION

As discussed earlier, Pillar One intends to expand the taxing rights of market jurisdictions where there is an active and sustained participation of a business in the economy of that jurisdiction through activities in, or remotely directed at, that jurisdiction[50]. As noted, Pillar One seeks to modernise the international tax system which is presently based on nexus rules anchored to physical presence. This is complemented by Pillar Two which proposes to address the remaining BEPS challenges and is designed to ensure that large international businesses pay a minimum level of tax regardless of where they are based.

In October 2020 along with the Reports on Pillar One and Pillar Two Blueprint, the OECD released the Economic Impact Assessment of the two-pillar solution[51]. The OECD Economic Impact Assessment is based on data available to the OECD including firm level data combined with the aggregated and anonymised Country-by-Country Report (CbCR) statistics. Briefly, it concludes that Pillar One and Pillar Two could increase the global corporate tax revenues by 1.9% to 3.2%. It was estimated that Pillar One would involve reallocation of profits of about $ 100 billion and would lead to a modest increase in global tax revenue as the low taxed income will be reallocated to high tax jurisdictions. This estimate was revised upward to $125 billion in the brochure released by OECD accompanying the OECD/G20 IF on the BEPS October Statement[52]. The primary revenue gains were estimated to come by the way of Pillar Two. As per the October 2021 brochure document, OECD has estimated that the global minimum tax which is part of Pillar Two, with a minimum rate of 15%, will generate around $ 150 billion in additional global tax revenue per year.

All these estimates come with a caveat that the precise revenue impact of the Pillars will depend on the extent of the implementation of the two-pillar solution and the nature and scale of reactions by MNEs and governments.

The OECD October 2020 economic impact assessment studies the effect of the two-pillar solution on investment and economic growth. It is estimated that the Pillar One and Two combined would lead to a relatively small increase in the average investment costs (post tax) for the MNEs. The impact of these increased costs is expected to be only on the highly profitable MNEs which would come under scope of the solution. However, the positive impact of the two Pillars in supporting global investment and growth through less quantifiable channels including secondary and tertiary effects are expected to partially or fully offset the small negative effect. It is articulated that the positive effects of the pillars are expected to come from tax certainty, reduction in global trade tensions from counterfactual and enhanced efficiency of global capital allocation by increasing the importance of non-tax factors[53]. The estimates in this paper are an alternative reflection based on publicly available information of what might be the impact of the two proposals, especially on developing countries.

[50] OECD, *Tax Challenges Arising from Digitalisation – Report on Pillar Two Blueprint: Inclusive Framework on BEPS*.
[51] Ibid.
[52] Organisation for Economic Co-operation and Development (OECD), "Two Pillar Solution to Address the Tax Challenges Arising from Digitalisation", OECD/G20 Base Erosion and Profit Shifting Project (October 2021), p. 16.
[53] OECD, "Tax Challenges Arising from Digitalisation – Economic Impact Assessment: Inclusive Framework on BEPS", OECD/G20 Base Erosion and Profit Shifting Project (2020).

3.1 Estimating the revenue gains from Pillar One

In order to accommodate the demands of a diverse set of countries, the drafted rules are complex and for many tax administrations the challenge will be in implementation of the package alongside the existing law which applies to out of scope corporations. As for any reform, of this proportion, it is imperative that the country compare the gains with the costs. In order to do so this paper estimates the gains that may arise from the application of the proposal.

At the very start, it is important to clarify that the main challenge in assessing the impact of the reforms of tax revenues was the lack of requisite data. Even though BEPS Action Point 11 was dedicated to measuring and monitoring BEPS, the lack of quality data has remained a challenge[54]. Nevertheless, there are studies that have assessed BEPS related impact across jurisdictions based on country specific information. As for Pillar One and Pillar Two, the kind of information necessary to implement each of the proposed elements will put compliance burdens on MNEs, as has been mentioned in public consultation draft comments. For example, in the previous section the revenue sourcing rules have been described in brief. It is observed that the implementation of these rules can be difficult if not impossible. Even where this is possible, it is difficult for the administrators to check for compliance, especially in cross border cases where specific data protection or privacy laws apply. For example, revenue from advertising services is treated as arising in that location when the location of the viewer is in that jurisdiction[55]. This would require validation of location, which can be challenging. The business commentators while commenting on the public consultation document on draft rules for nexus and revenue sourcing under Amount A of Pillar One released in February 2022[56] have proposed the use of allocation keys as proxies. To address these concerns the revenue sourcing rules were revised and released as part of the July 2022 Progress Report on Amount A of Pillar One[57]. This is an important consideration when computing Amount A allocable to a jurisdiction.

Some studies have tried to estimate the tentative size of tax revenue gains from the reforms. Devereux and Simmler (2021) estimate from Fortune500, Data Stream International and Orbis, the size of Amount A payments made by different companies. It is estimated that 78 companies among the top 500 would qualify and the Amount A re-allocable profits would be approximately $87 billion[58]. Further, these companies are predominantly headquartered in developed countries such as the United States (24.4%), UK (3.2%), Germany (4.4%) and France (3.1%). The authors find that a higher qualifying revenue threshold significantly lowers the number of companies. For example, a €20 billion threshold would impact 37 European companies and profits under Amount A would be $21.2 billion. On the other hand, if the revenue threshold were to be lowered to € 750 million, 334 European companies with profit to sales above 10% would be subject to Pillar One and $ 43.8 billion would be available under Amount A[59].

[54] OECD, *Measuring and Monitoring BEPS - Action 11: 2015 Final Report*, OECD/G20 Base Erosion and Profit Shifting Project (Paris, OECD Publishing, 2015).
[55] Paragraph 8 (b) of Article 4 of the July 2022 Progress Report on Amount A of Pillar One.
[56] Available at https://www.oecd.org/tax/beps/oecd-invites-public-input-on-the-draft-rules-for-nexus-and-revenue-sourcing-under-pillar-one-amount-a.htm.
[57] Article 4 and Schedule E of the July 2022 Progress Report on Amount A of Pillar One.
[58] Michael Devereux and Martin Simmler, "Who Will Pay Amount A?", EconPol Policy Brief No. 36, vol. 5, (July 2021), Oxford University Centre for Business Taxation, p. 3.
[59] Ibid,, p. 9.

The OECD's economic impact assessment is that revenue gains from Pillar One will be relatively small[60] as compared with Pillar Two. As per OECD, the gains from Pillar One are expected to be in the range of 0.2-0.5% of the global corporate income tax revenues or 5-12 billion dollars[61]. This figure was based on discussion in 2020 Pillar One Blueprint scope of Automated Digital Services (ADS) and Consumer Facing Businesses (CFB) and 20% reallocation percentage and thus is not a comparable figure for the present scope. In the same document, it was estimated that Pillar One would involve reallocation of profits of about $ 100 billion and would lead to a modest increase in global tax revenue as the low taxed income will be reallocated to high tax jurisdictions. The revenue gains under Pillar One are expected to be larger for low and middle-income countries[62]. The Tax Foundation cautions that OECD estimates suffer from limitations, particularly the use of CbCR information from 2016[63]. This estimate was revised upward to $125 billion in the brochure released by OECD accompanying the OECD/G20 Inclusive Framework on BEPS October 2021 Statement for the Two Pillar Solution to address the tax challenges arising from the digitalisation of the economy[64].

For developing countries to sign the proposal, the gains from the proposal must be enough to cover the administrative costs. Though it is difficult to compute the costs arising to administration from the complexity, the estimates consider the revenues received from adopting a simpler tax, as is made available for different countries. The main aim of this paper to provide an alternative estimate using publicly available information, so that it may be replicated by countries to make similar estimates of revenue gains from the proposal. For this purpose, we use Forbes 2000 list of top companies[65]. It is important to caution the users of this information that segments within large companies for example, as is observed to be the case of the cloud computing business segment of Amazon, which does not figure in the list but may qualify to be in scope of Amount A. Thus, the estimates in the paper represent the world's largest companies without taking into account the proposed exceptional segmentation rule.

As noted above in respect of the calculation of Amount A under Pillar One, the profits in excess of 10%, for MNE groups with global revenues more than €20 billion will be allocable to market jurisdictions. Note that the allocable profit under Amount A will be 25% of the estimated *excess profits*. For estimating these profits, the financial accounts will have to be prepared at the consolidated level. As discussed earlier, in July 2022, the OECD released the Progress Report on Amount A of Pillar One for public consultation. The Progress Report, a Secretariat document, contains the compilation of rules on Amount A which have stabilised from a technical point of view along with open issues in brackets for public consultation and *inter alia* include the tax base rules for Amount A of Pillar One. These draft model rules once finalized will form the basis for the substantive provisions of the Multilateral Convention (MLC), as well as a template for domestic legislation for the implementation of Amount A. The draft rules propose that the allocation tax base will determine the total profits of a

---

[60] OECD, "Tax Challenges Arising from Digitalisation – Economic Impact Assessment: Inclusive Framework on BEPS", p. 17.
[61] Ibid., p. 15.
[62] Ibid,, p. 17.
[63] Elke Asen, "Summary of the OECD's Impact Assessment on Pillar 1 and Pillar 2", Tax Foundation, 17 March 2020. Available from https://taxfoundation.org/summary-of-the-oecd-impact-assessment-on-pillar-1-and-pillar-2/#:~:text=Taking%20into%20account%20the%20Pillar%201%20revenue%20impacts,to%20account%20for%20about%20half%20of%20that%20increase.
[64] Organisation for Economic Co-operation and Development (OECD), "Two Pillar Solution to Address the Tax Challenges Arising from Digitalisation", OECD/G20 Base Erosion and Profit Shifting Project (October 2021), p. 17.
[65] Forbes, "The Global 2000" (2021). Available from https://www.kaggle.com/datasets/arjunprasadsarkhel/forbes-top-200020172021.

covered group to which the reallocation formula is applied under Amount A. The allocation tax base is the adjusted profit before tax (PBT) of an in-scope MNE group and it starts from the financial accounting profit (or loss), with specified book-to-tax adjustments and the deduction of net losses that are carried forward. In order to make these adjustments all financial details are necessary, however, the estimates herein do not take these into consideration. One possible way for future work is to take the book to tax profits ratio to assess a gross level of adjustment that may be carried out for all qualifying companies.

It is also mentioned that the starting point will be the audited consolidated financial statements prepared by the Ultimate Parent Entity (UPE) under a Qualifying Financial Accounting Standard (QFAS) in which the assets, liabilities, income, expenses and cash flows of the UPE and other group entities are presented as those of a single economic entity. The QFAS means the International Financial Reporting Standard (IFRS) and the Equivalent Financial Accounting Standards, which are the Generally Accepted Accounting Principles (GAAP) of some specified countries. The draft rules[66] provide a list of items of income and expense that are to be reversed from the group's financial accounting profit (or loss) as calculated under a QFAS: tax expense (or tax income), dividends, equity gain or loss[67], policy disallowed expenses[68], prior period errors and changes in accounting principles, financial accounting profit (or loss) of excluded entities, asset fair value of impairment adjustments[69], acquired equity basis adjustments[70] and asset gain (or loss) spreading adjustments.

The current draft rules include a cap on the restatement adjustment for of 0.5% of group revenues for the period. Net losses are the accounting losses, from eligible prior periods, exceeding the total financial accounting profits of the group after making book-to-tax adjustments. The calculation of unrelieved net losses from prior periods to be carried forward and deducted from the adjusted profit before tax are based on a three-step "earn-out'' mechanism. The losses are categorised into pre-implementation losses and post-implementation losses. The period of the carry forward of losses proposed in the July 2022 Progress Report on Amount A of Pillar One are 3-year loss recognition of pre-implementation loss and 10-year carry forward period for both pre and post implementation losses. Further, special rules apply when there are changes in the group structure. In the cases where a business combination or division occurred during a period, the net losses would also include any transfer of losses to or from the group, provided specified conditions are met. It is possible then for countries where mergers and acquisitions are widely prevalent for losses to be shifted through this mechanism.

Note that each of the steps detailed above require full financial details of each of the qualifying companies. The estimates in this paper, on the other hand, are based on net profits and sales reported by companies and do not allow for the detailed adjustments. The numbers in this paper therefore may represent an over-estimate of profits allocable under Amount A to the extent the available adjustments reduce profits.

---

[66] Details in Article 5 (Determination of the Adjusted Profit Before Tax of a Group) of the July 2022 Progress Report on Amount A of Pillar One.
[67] Defined as the net gain or loss arising from the disposition of an ownership interest, changes in the fair value of an ownership interest under fair value accounting.
[68] Defined as expenses for illegal payments (e.g., bribes and kickbacks), fines and penalties.
[69] In accordance with Schedule F (Asset Fair Value or Impairment Adjustments) of the July 2022 Progress Report on Amount A of Pillar One.
[70] In accordance with rules in Schedule J (Acquired Equity Basis Adjustments) of the July 2022 Progress Report on Amount A of Pillar One.

3.1.1. Methodology and estimates

Forbes 2000 reports net profits and, as mentioned, the Amount A calculation applies to pre-tax margin. While company level information of effective tax rates is not readily available, we take two estimates- net profit margin and compute gross profits using the available information on country wise average effective tax rates, reported by the OECD[71]. The ETR for a country is applied to the company net profits, based on the reported headquarter country.

Gross profit of company = Net profit/(1-AETR[72])

The results for Amount A based on net profits and gross profits are reported (extractive and regulated financial service sectors, as noted, are excluded). Therefore, for the purpose of this paper a triple criterion is used to identify qualifying companies - i.e.,

- The sales are greater than €20 billion
- profit margin is more than 10%, and
- the company is not in the financial or energy sector.

As was mentioned earlier for the purpose of selecting companies, an averaging mechanism is used. However, the manner in which averaging is to be undertaken is not final and therefore it has not been used while identifying companies under Pillar One. It is also observed in our sample that there are companies such as Amazon that do not qualify on the basis of this criteria for Amount A. To address such exclusions based on the selected criteria, segmentation is proposed to be applied in exceptional circumstances. As a result of the segmentation, groups like Amazon may qualify, subject to the segment meeting the functional profit ratio and sales criteria.

As already mentioned, such refinements were not possible to the data as it would require a company-by-company perusal of segmented financial accounts. While it is possible for administrations to carry out such assessment for US based companies using company level Securities and Exchange Commission (SEC) filings, the paper provides an overall estimate without corrections. As per the criteria applied, the number of qualifying companies can vary if the financial information in a particular year is selected or if an average of profit ratio and sales over time is taken. Therefore, it is expected that over the years the companies that will qualify for Amount A will vary. This can add to the existing complexity if companies may be in and out in a particular year. As per our estimate the number of qualifying companies is given in Table 1.

---

[71] Effective Tax Rates (available at https://stats.oecd.org/Index.aspx?DataSetCode=CTS_ETR).

[72] The composite Effective Average Tax Rate (EATR) is constructed as a weighted average across finance- and asset-specific EATRs. It is a synthetic tax policy indicator reflecting the average tax contribution a firm makes on an investment project earning above-zero economic profits. This indicator is used to analyse discrete investment decisions between two or more alternative projects (along the extensive margin).

Table 1 Number of companies qualifying under Pillar One

Year	Number of companies qualifying for Pillar one[73]
2017	50
2018	50
2019	69
2020	66
2021	68
Averaging of last five years	65

Source: Estimated from Forbes 2000 list for 2021

There is a further requirement that for the purpose of nexus, the company must report revenues either of €1 million with GDP of € 40 billion, or € 250,000 for countries with GDP of less than € 40 billion. Therefore, it is expected where an MNE group reports revenue lower than the suggested thresholds in the market, no profit will be allocable. After the nexus is established for a market jurisdiction, the profits are to be allocated as per the revenue sourcing rules. The jurisdiction wise sales are not available in public information; however, tax administrators can use the Forbes 2000 list to identify qualifying MNE groups and further see if there is nexus based on local sales reported by entities in their filings. For the purpose of this paper, we assume that the nexus exists in jurisdictions and allocate the profits based on multiple macroeconomic criteria.

In the Report on Pillar One Blueprint released in October 2020, these rules were to be a hierarchy of factors that would apply to purchasers and sellers and split 50:50 between the two in certain category of cases[74]. For the purchaser the factors include delivery address, billing address and geo-location. As for the seller, the principal place of business and where unavailable, IP address and geo-location are among the factors that will be considered. As per the July 2022 Progress Report on Amount A of Pillar One Revenue Sourcing rules there is more flexibility in the revenue sourcing rules by using the reliable indicator concept and the revenue must be sourced in a manner that accounts for differences among jurisdictions in the goods, content, property, products and services sold, licensed or otherwise alienated and provided by the Covered Group, their quantities and their prices.

Therefore, the company will have to undertake a detailed analysis of whether a particular transaction falls within a category as per its ordinary or predominant character[75]. Thereafter, the company will proceed to apply a reliable indicator. For the purpose of calculating the Amount A in this paper, such refinements are not possible. Instead, it is assumed that all market jurisdictions will qualify for an allocation based on a macroeconomic indicator that proxies market size.

In order to approximate the reliable indicators, we use multiple criteria for distributing the profits. These include the level of consumption in the economy, which includes private and

---

[73] Note that some of the companies are not accurately classified and for this reason the numbers may vary. The authors have tried to map the sector to a company, wherever possible. Note that there are diversified companies on the list and the predominant sector is ascribed to these companies in the dataset.

[74] "Revenue sourcing rules", in OECD, *Tax Challenges Arising from Digitalisation – Report on Pillar One Blueprint: Inclusive Framework on BEPS*.

[75] Revenue sourcing rules are included in Article 4 & Schedule E of the July 2022 Progress Report on Amount A of Pillar One

government final consumption expenditure. Using final consumption expenditure, such proxies can alleviate previously raised concerns of significant contribution from the government expenditures to the final consumption in certain economies[76].

In addition, two indicators of digitalisation - proportion of global internet users and proportion of global broadband connections - are also used for allocation. While these two can be useful approximates of digital presence in a market, it is expected that these may not be the most accurate given that Amount A now applies to companies that are not just large technology companies. Nevertheless, we use these to demonstrate the sensitivity of the estimates to the choice of indicators. For the sake of brevity, in this paper the profits are allocated for only one year – 2021 - and the company is selected by matching on the criteria for that year.

In the baseline scenario, where no corrections are made to net profits, it is estimated that for 68[77] companies in 2021, there will be 84.94 billion of allocable net profits available. The allocable net profits are calculated by taking a fourth of the returns in excess of 10% and multiplying that with the level of sales [(Net profit/sales - 0.10) *0.25*sales]. In the alternative scenario, where the country specific ETR are used the qualifying companies remain 67; instead, allocable profits are US$ 132.2 billion.

As our analysis on Pillar Two suggests, the effective tax rates vary widely and the estimate based on net profits reasonably approximate OECD's estimate of $100 billion[78]. Given that the contours of Amount B have not yet been made public no estimates for Amount B have been made.

While these estimates suggest a narrow tax base for the Amount A proposal, it is also important to reflect on the countries that will reallocate the profits as well as the countries that will receive a share of the allocable profits. It is estimated that companies headquartered in the United States are among the highest sources of Amount A allocations followed by China, Switzerland, France and Japan.

While China qualifies among the top countries that will distribute Amount A, it is important to clarify that this presumes that Chinese companies have significant global operations. While it is likely that some companies have international presence, others may not. This in turn will have an impact on the profits that are re-allocated to different market jurisdictions. We selected a few companies among the Forbes 2000 list and found that either the global operations are nearly absent, (for example in the case of Alibaba) or there are companies such as Anhui Conch Cement and Shanghai Pudong Development which report 6.88% and 2.03% of sales from global operations overseas. For example, in the baseline scenario where net profits are taken as profits that will be reallocated and Chinese companies are excluded, the amount allocable declines to $80 billion and the number of companies decline to 64. The paper reports the results for profits allocable where Chinese companies are included and to that extent are an upper bound on allocable Amount A profits.

---

[76] Point raised in connection with pharmaceutical procurement in Pillar One Blueprint. OECD, *Tax Challenges Arising from Digitalisation – Report on Pillar One Blueprint: Inclusive Framework on BEPS*.

[77] Note that the qualifying companies is 68 when the net profit margin is taken, but when the adjustments are made to net profits to arrive at gross profit no information is available on AETR of Taiwan and so the data is not selected.

[78] OECD, "Tax Challenges Arising from Digitalisation – Economic Impact Assessment: Inclusive Framework on BEPS".

Based on the Amount A allocated to a market jurisdiction, we calculate the tentative tax revenues by applying the prevailing statutory tax rate in that country (Amount A allocated to a country* Statutory Tax Rate in the Country).

From the first estimates of Amount A payable and receivable it is seen that China and US are also amongst the largest recipients of Amount A from other countries. Moreover, the allocation of these profits varies widely depending on the factor used for allocation. However, taking purely the Amount A attributable to the jurisdiction presents an inaccurate picture. It is important to calculate the full effect, as will be discussed later.

Another way to assess whether the allocation based on these factors represents an accurate picture is to take the share of regions and countries in global sales of US companies. This information is available in 10K filings with SEC. For illustrative purposes we take three companies in the Forbes 2000 list - Netflix, Salesforce and Broadcom. For the selected companies, information is available for specific regions and not for jurisdictions. Therefore, the regional shares are compared to demonstrate the differences in allocation that may arise using the sales factor.

As can be seen from the Table 2 below, the profit allocation as per the SEC filings are not strictly comparable to that based on macro indicators. Therefore, it is likely that the Amount A allocations for some MNE groups will be below those estimated for the Asia Pacific region here on the basis of macro indicators. While such information may be available to tax authorities for some companies, creating a jurisdiction wise share using open source information is difficult.

Table 2 Comparison of the allocation of profits based on 2021 information

Company	Allocated to US as per SEC	Allocated to US as per macro factors			Allocated to Asia as per SEC	Allocated to Asia as per macro factor		
		Final consumption expenditure	internet users	broadband connections		Final consumption expenditure	internet users	broadband connections
Netflix	44%	27.30%	6.70%	10%	11%	30%	49%	54%
Salesforce.com	69%	27.30%	6.70%	10%	10%	30%	49%	54%
Broadcom	22%	27.30%	6.70%	10%	65%	30%	49%	54%

Source: SEC[79] and World Development Indicators[80]

It is possible that applying a criterion that is purely sales-based may in fact rely on reported numbers and where there is a lack of nexus it would overstate the profits under Pillar One to the home country. On the other hand, consumption or user-based indicators may take care of the divergence between reported sales and market presence.

While estimating the revenue gains, it is not only the Amount A received from MNE groups that are residents of other countries but the home country may also be a large market and some of the Amount A of its own resident MNE groups may be reallocated based on the proxy indicator used for market presence. These could be the profits that the OECD

[79] U.S. Securities and Exchange Commission, Company Search Page. Available from https://www.sec.gov/edgar/searchedgar/companysearch.

[80] World Bank, World Development Indicators, DataBank. Available from https://databank.worldbank.org/reports.aspx?source=world-development-indicators.

estimates re-allocated from investment hubs[81]. Therefore, not only will countries such as the US gain Amount A revenue from other jurisdictions but may also receive an allocation from their resident MNE groups[82]. The formula used for calculation of tax gains from Amount A is as follows:

Total tax collected on Amount A by Country *i*= ∑ [(Total amount A generated by MNE of country *j* * statutory corporate tax rate of country *i*) – (Amount A generated by MNE of *i* payable to *j** statutory corporate tax rate in *j*) + (Amount A generated by MNE of *i* and allocable to *i** statutory corporate tax rate of country *i*)]

Table 3 presents the net gain using the formula: [(Amount A received from own companies and foreign MNEs* Corporate tax rate) - (Amount A paid*corporate tax rate of partner countries)]. Note that the computation of which constituent entities will be paying entities and how double tax will be eliminated was not possible for this study.

Note that the base for DST varies across countries and while assessing Amount A, the numbers may be compared with internal impact assessment or revenue estimated carried out from national data on digital sales to arrive at a crude measure of revenue gains[83] (shown in Table 5). Note that we also report the results for select developed countries so as to demonstrate how they fare in comparison to the South Centre's member countries.

---

[81] OECD, "Tax Challenges Arising from Digitalisation – Economic Impact Assessment: Inclusive Framework on BEPS", p. 61.

[82] The paper does not take into account the proposed Marketing and Distribution Safe Harbour (MDSH) which is supposed to prevent double counting by capping the Amount A allocation to jurisdictions which are already earning residual profit. The details of the working of MDSH are still to be released to the public. However, it will not impact the parent jurisdiction as the quantum of profits that go unallocated will remain in the parent jurisdiction.

[83] The comparison of this number for India has been carried out by one of the authors in https://www.taxnotes.com/tax-notes-international/base-erosion-and-profit-shifting-beps/making-pillars-1-and-2-effective/2021/11/08/7ckdp.

Table 3 Net Gains from Pillar One based on net profit in 2021 (Million US$)

Countries	Tax on Amount A received using final consumption expenditure as revenue sourcing rule	Tax on Amount A paid to other countries	Tax on Amount A allocated to home country	Statutory tax rate	Net gains under amount A (in million US$)	Tax revenue from income and gains	Net gains from Amount A as % of tax revenue from incomes and gains
Algeria	34			26%	34	0	
Angola	19			25%	18	7305	0.3
Argentina	163		0	35%	163	9709	1.7
Benin	4			30%	4	0	
Bolivia	11			25%	11	0	
Brazil	682		768	34%	1450	134313	1.1
Burundi	1			30%	1	0	
Cabo Verde	0			22%	0	0	
Cambodia	5			20%	5	1002	0.5
China	2135	2956	383	25%	2518	462012	0.5
Cote d'Ivoire	15			25%	14	1885	0.8
Cuba	40			35%	39	0	
Dominican Republic	24			27%	24	3403	0.7
Ecuador	25			25%	25	0	
Egypt, Arab Rep.	77			23%	77	0	
Gabon	3			30%	3	814	0.3
Ghana	18			25%	17	4095	0.4
Honduras	7			25%	7	0	
Indonesia	207		0	22%	207	52678	0.4
Iran, Islamic Rep.	50			25%	50	0	
Iraq	27			15%	27	2662	1.0
Jamaica	4			25%	4	1340	0.3
Jordan	11			20%	11	1359	0.8
Malaysia	79		0	24%	79	29531	0.3
Mali	6			30%	6	572	1.0
Mauritius	2			15%	2	687	0.3
Morocco	36		0	31%	36	10173	0.3
Mozambique	5			32%	5	1492	0.3
Namibia	5			32%	4	1651	0.3
Nicaragua	4			30%	4	927	0.4
Nigeria	136		0	30%	135	0	
Pakistan	96			29%	96	0	

Panama	14			25%	13	2949	0.5
Philippines	122		0	30%	122	19661	0.6
Seychelles	1			33%	0	206	0.1
Sierra Leone	2			30%	1	0	
South Africa	114		0	28%	114	55822	0.2
Sri Lanka	20			24%	20	1911	1.0
Uganda	11			30%	10	1245	0.8
Tanzania	15			30%	15	2237	0.7
Venezuela, RB	0		0	34%	0	0	
Vietnam	49		0	20%	49	0	
Zimbabwe	6			25%	5	0	
United States	2005	7455	3637	26%	5642	1854324	0.3
United Kingdom	565	218	7	19%	572	336235	0.2
Ireland	26	66	181	13%	206	0	
Russia	59	353	0	20%	59	0	
Netherlands	195		0	25%	195	0	
Italy	552		0	28%	552	0	
Denmark	68		0	22%	68	58073	0.1
Switzerland	107	409	7	20%	114	31647	0.4
Sweden	98		0	21%	98	28963	0.3
Spain	334		78	25%	412	0	
Hungary	13		0	9%	13	10264	0.1
Germany	1057		10	30%	1067		
France	719	11449	29	28%	-10701.7		

Note: 1. The countries that are South Centre members and whose latest data was missing for computation were excluded from the calculations.
2. The information on the tax on incomes and gains was available for more countries for the year 2019; where the information is available the information is used to put into perspective the tentative gains.

Table 4 Net Gains from Pillar One based on gross profit in 2021 (Million US$)

Countries	Tax on Amount A received using final consumption expenditure as revenue sourcing rule	Tax on Amount A paid to other countries	Tax on Amount A allocated to home country	Statutory tax rate	Net gains under amount A (in million US$)	Tax revenue from income and gains	Net gains from Amount A as % of tax revenue from incomes and gains
Algeria	55.2			26%	55.2	0	
Angola	30.2			25%	30.2	7305	0.4
Argentina	265.9		0.0	35%	265.9	9709	2.7
Barbados	0.5			6%	0.5	0	
Benin	7.0			30%	7.0	0	
Bolivia	18.2			25%	18.2	0	
Brazil	1111.4		0.0	34%	1111.4	134313	0.8
Burundi	1.7			30%	1.7	0	
Cabo Verde	0.7			22%	0.7	0	
Cambodia	8.3			20%	8.3	1002	0.8
China	3539.9	3979.0	563.2	25%	124.1	462012	0.0
Cote d'Ivoire	23.7			25%	23.7	1885	1.3
Cuba	64.5			35%	64.5	0	
Dominican Republic	38.9			27%	38.9	3403	1.1
Ecuador	41.1			25%	41.1	0	
Egypt, Arab Rep.	126.0			23%	126.0	0	
Gabon	5.1			30%	5.1	814	0.6
Ghana	28.8			25%	28.8	4095	0.7
Honduras	12.2			25%	12.2	0	
Indonesia	337.1		0.0	22%	337.1	52678	0.6
Iran, Islamic Rep.	81.1			25%	81.1	0	
Iraq	44.8			15%	44.8	2662	1.7
Jamaica	7.3			25%	7.3	1340	0.5
Jordan	18.4			20%	18.4	1359	1.4
Liberia	0.0			24%	0.0	0	
Mali	9.5			30%	9.5	572	1.7
Mauritius	3.9			15%	3.9	687	0.6
Morocco	58.4		0.0	31%	58.4	10173	0.6

Mozambique	8.9			32%	8.9	1492	0.6
Namibia	7.8			32%	7.8	1651	0.5
Nicaragua	6.7			30%	6.7	927	0.7
Nigeria	221.1		0.0	30%	221.1	0	
Pakistan	157.0			29%	157.0	0	
Panama	22.1			25%	22.1	2949	0.7
Philippines	198.7		0.0	30%	198.7	19661	1.0
Seychelles	0.9			33%	0.9	206	0.4
Sierra Leone	2.7			30%	2.7	0	
South Africa	185.9		0.0	28%	185.9	55822	0.3
Sri Lanka	32.8			24%	32.8	1911	1.7
Uganda	17.4			30%	17.4	1245	1.4
Tanzania	25.0			30%	25.0	2237	1.1
Venezuela, RB	0.0		0.0	30%	0.0	0	
Vietnam	80.2		0.0	20%	80.2	0	
Zimbabwe	9.1			25%	9.1	0	
United States	3494.3	14816.1	5699.6	26%	-5622.1	1854324	-0.3
United Kingdom	918.8	216.6	13.2	19%	715.4	336235	0.2
Ireland	42.0	140.4	0.0	13%	-98.4	0	
Russia	58.8	309.3	0.0	20%	-250.5	0	
Netherlands	317.9		0.0	25%	317.9	0	
Italy	900.3		0.0	28%	900.3	0	
Denmark	110.8		0.0	22%	110.8	58073	0.2
Switzerland	175.6	0.0	10.3	20%	185.9	31647	0.6
Sweden	159.5		0.0	21%	159.5	28963	0.6
Spain	544.3		0.0	25%	544.3	0	
Hungary	20.9		0.0	9%	20.9	10264	0.2
France	1158.9	0.0		30%	1158.9		
Germany	1722.4	598.3		30%	1124.1		

Tables 3 and 4 show that China, US, France and Switzerland are among the largest payers of Amount A. On the other hand, while most countries tend to show net receipt under Amount A, gains are less than or close to a per cent for most economies. It is also important to note that in the paper we have reported only the policy rate for digital services tax. It is likely that the estimated gains under Amount A may pale in comparison to the presently levied DSTs. While the information available is not enough for computing the country-wise DSTs, the tax administration must consider that the base of the DST may be wider and cover more digital corporations than that covered under Amount A. Therefore, the revenue from DST must be computed or projected in order to understand the relative or additional gains from Pillar One.

Table 5: Summary of DSTs applied in select jurisdictions

Country	**Digital Services Tax Rate**	**Services to which it is applicable**
Argentina	2%	Argentina has applied a turnover tax for many years but two of Argentina's main provinces - City of Buenos Aires and Province of Buenos Aires have now extended the tax to foreign providers of digital services used in Argentina. Digital services are understood to be those developed through the internet network or any adaptation or application of the protocols, platforms or technology used by the internet or another network through which equivalent services are provided which, by their nature, are basically automated, require minimal human intervention and require the use of devices for download, display or use.[84]
Brazil	There are multiple proposals to apply DST of the rates 1-5%, 3%	• 1-5% on gross revenue from digital advertising, online seller platforms and transfer of data from Brazil. The tax will be applicable to companies with (1) BRL 3 billion of global gross revenue; or (2) BRL 100 million gross revenue in Brazil. • 3% on download or streaming of digital content, online games, apps and software (as

[84] See https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/taxation-digital-economy/ey-digital-services-tax-jurisdiction-activity-summary-as-of-1-december-2020.pdf.

		well as upgrades) Electronical apps that allow economic transactions or transactions of any digital contents between users Betting commercialized through electronic channels This tax is applicable to entities with gross revenue in excess of BRL 100 million • 3% tax on gross revenue from advertising, sponsorship or merchandising, content targeting, collection, distribution or treatment of users' data, incentive or influence for the use of services, payment platform, exploitation or dissemination of images, text, video or sound related to a natural or legal person.[85]
Indonesia	10%	VAT on intangible digital goods and services that are provided by overseas provider. As of January 2021, 53 companies paid the tax including large tech companies.[86]
Malaysia	6%	Digital services provided to consumers in Malaysia. The service tax will be applicable where its value exceeds RM 500,000. In 2020 there were 248 registered payers and the

[85] See https://home.kpmg/us/en/home/insights/2021/04/tnf-brazil-review-of-digital-services-tax-proposals.html.
[86] See https://www.bdo.global/en-gb/microsites/tax-newsletters/indirect-tax-news/issue-1-2021/indonesia-update-on-value-added-tax-on-sales-of-digital-products-to-indonesian-customers.

		Customs authority collected \$101 million[87].
Nigeria	6%	Applied to annual turnover of non-resident companies providing services such as apps, high frequency trading, electronic data storage and online advertising.[88]
Pakistan	5%	Withholding on payments for a broad range of digital services provided by non-residents[89].
Sierra Leone	1.5%	On gross turnover of all digital and electronic transactions.
Zimbabwe	5%	Gross income from satellite broadcasting services in respect of the provision or delivery of television or radio programs, and on e-commerce operators providing or delivering goods or services to persons resident in Zimbabwe. The tax is applicable to companies with revenue more than USD 500,000 in any year.[90]
United Kingdom	2%	Tax will be applicable on revenues of search engines, social media services and online marketplaces which derive value from UK users. Companies with group revenue over GBP 500 million will qualify and where more than GBP 25 million is derived from

[87] See https://www.internationaltaxreview.com/article/2a6aaa1s2uhuklckhu70g/the-evolving-world-of-malaysias-digital-services-tax.

[88] See https://news.bloombergtax.com/daily-tax-report/nigeria-introduces-tax-on-foreign-digital-services-companies.

[89] See https://openknowledge.worldbank.org/bitstream/handle/10986/36840/P169976002e89a07209ae40d48d6ebb7154.pdf?sequence=1&isAllowed=y.

[90] See https://www.taxathand.com/article/15137/Egypt/2020/Digital-services-tax-in-AfricaThe-journey-so-far.

		UK. First GBP 25 million will be exempt[91].
Russia		Foreign tech companies are required to set up office in Russia, or else face punitive measures[92].
Italy	3%	On gross turnover of companies offering digital advertising, interaction of users and transmission of data. Intercompany services are excluded as are the sale of goods and services. It applies to companies that have an annual global revenue more than Euro 750 million and revenue from digital service more than Euro 5.5 million[93].
Spain	3%	Applicable on revenues from online advertising, data transmission and intermediation services. It applies to companies with net revenues during the prior calendar year exceeding EUR 750 million, and (ii) the total amount of revenues derived from the development of the activities subject to DST taxation in Spain during the prior calendar year exceeds from EUR 3 million. As per Spain's Independent Authority for Fiscal Responsibility revenue from the tax is Euro 546-968 million a year.[94]

[91] See https://www.gov.uk/government/publications/introduction-of-the-digital-services-tax/digital-services-tax.
[92] See https://www.silicon.co.uk/e-management/social-laws/russia-bill-to-force-us-tech-firms-to-open-local-offices-403226.
[93] See https://www.ey.com/en_gl/tax-alerts/ey-italys-digital-services-tax-enters-into-force-as-of-1%C2%A0january-2020.
[94] See https://taxfoundation.org/spain-digital-services-tax/.

Hungary	7.5%	Applicable on digital advertising revenue, on company with annual global revenue of HUF 100 million.
France	3%	Social networks; Search engines; Intermediaries (e.g. online selling platforms); Digital services; File sharing; Online retailers; Online content. It applies to companies with revenue of greater than or equal to EUR 750 million and French revenue of equal to or more than EUR 25 million. It applies to French resident companies and/or non-resident companies with/without PE in France.
Austria	5%	Applicable on digital advertising service. Applies to companies with a global turnover of €750 million or more. As well as turnover in Austria (from online advertising services) of at least €25 million.

3.2 Dispute Resolution Mechanism under Pillar One

Tax certainty is a key component of Pillar One and the October 2020 Report on Pillar One Blueprint provides for an innovative dispute prevention and dispute resolution mechanism. The new taxing right Amount A will be determined by the application of a formula to a defined tax base, corresponding to a portion of the residual profit of large MNEs' in-scope activities. The Pillar One Blueprint embeds a mechanism to ensure that the application of the new taxing right to a particular MNE group is agreed among all interested jurisdictions. This is practical given the fact that if each individual jurisdiction starts auditing Amount A it will result in an increase in disputes that may remain unsettled. Therefore, it is important to have a multilateral dispute prevention and resolution mechanism.

The Blueprint proposes a panel mechanism to be put in place for tax administrations, working with the relevant MNEs, to agree on the various elements of Amount A like scope, revenue sourcing, results of the implementation of the formula, and any other feature of Amount A, including the paying entities and elimination of double taxation. In the October 2021 IF Statement it was agreed that since Amount A will also have interactions with the existing tax rules, for in-scope MNEs a mandatory and binding dispute resolution mechanism has been proposed, and also for issues relating to Amount A (e.g. transfer pricing and business profits). For developing economies who are eligible for deferral of BEPS Action 14 peer review[95], elective binding dispute resolution will only be available for Amount A. The eligibility of a jurisdiction for the elective mechanism will be reviewed periodically and once a jurisdiction is found ineligible it will remain so in subsequent periods for the elective mechanism.

Further, Amount B which is based on a fixed return for baseline marketing and distribution functions will also help in tax certainty as there are a significant number of disputes on pricing of marketing and distribution arrangements. The Forum for Tax Administrators (FTA) in its Plenary Communiqué of Santiago, Chile in March 2019 called to "…. explore the potential use and sharing of benchmarks for standard situations in the area of transfer pricing". The Amount B work is a continuation of this work.

3.3 Estimating the impact of Pillar Two

The importance of Pillar Two has been stressed by OECD countries like France, Germany and United States that incidentally have Controlled Foreign Company regimes (CFC). Pillar Two sets a floor on the level of tax by prescribing a global minimum rate of 15% that is to be achieved on a jurisdictional level. The effort of the proposal was to end a four-decade long race to the bottom in corporate tax[96].

In order to do so the Pillar Two rules provide a framework for taxing back profits that are currently located in low tax jurisdictions. The Pillar Two proposal will apply to large corporations defined as companies with annual global consolidated sales revenue in excess of € 750 million. This test will be based on two of four fiscal years immediately preceding the tested fiscal years.

Once the MNE group is identified, all of its constituent entities (CE), including permanent establishments (PE), will be verified. These exclude government entities, international organizations, pension funds, real estate investment vehicles, or investment funds that are ultimate parent entities (UPE) of an MNE group or any holding vehicles used by any of the entities previously mentioned. Entities that hold assets or invest funds and only perform ancillary activities or that primarily derive income that is excluded from GloBE tax base are also excluded from Pillar Two. Thereafter, the residence of these entities is determined based on their place of management and PE, creation, or similar criteria.

Revenue and taxes are to be determined for all constituent entities, organizations, or funds belonging to an MNE when consolidating income. The net income so computed is subsequently adjusted to exclude dividends; equity gains/losses; policy disallowed expenses such as bribes; asymmetric foreign currency gains or losses; and stock-based compensation.

Similarly, the covered taxes are estimated for each jurisdiction and assigned to them. Covered taxes are also adjusted for temporary differences and losses from previous years.

---

[95] The conditions for being eligible are available in paragraph 7 of BEPS Action 14 Assessment Methodology of the OECD 2016 Action 14 Peer Review documents available at https://www.oecd.org/tax/beps/beps-action-14-on-more-effective-dispute-resolution-peer-review-documents.pdf.

[96] BBC News, "Yellen: 'Global race to the bottom' in corporate tax", 23 March 2021. Available from https://www.bbc.com/news/business-56500673.

These are subject to safeguards, which include recognition of the deferred tax assets and liabilities to the extent the minimum rate is achieved.

Further, a recapture rule is established to ensure amounts claimed as covered taxes are paid within a set period of time. CFC related taxes are allocated to other constituent entities when necessary. An effective tax rate (ETR) is computed for each jurisdiction using the estimated income and covered tax. If the ETR is lower than the minimum, then a top-up tax will apply to excess profits, which is GloBE income *less* substance based carve outs. These carve outs are exclusions based on payroll and tangible assets. In the initial years the carve out will be at 10% of eligible payroll cost and 8% of tangible assets which will eventually be reduced. An amount equivalent of 5% of the eligible payroll cost of qualified employees in the jurisdiction and 5% of the carrying value of the eligible tangible assets located there will be permitted. Devereux *et al*. (2021) suggest that the nature of the adjustment of carve outs can significantly alter the minimum tax liability[97]. The carve out applies through the exclusion from net GloBE income. Such manner of calculation can limit tax competition to an extent.

Once the top-up tax is estimated, any domestic minimum tax which is paid is also removed from this liability. That is, from the estimated minimum tax liability deduction for qualified domestic minimum tax is permitted. Further, *de minimus* exclusions have been built in for jurisdictions when an MNE has an average GloBE revenue of less than € 10 million, and the average GloBE income is a loss or less than € 1 million computed on a three-year average basis. The top-up tax will be applied under the income inclusion rule (IIR). The IIR permits the UPE to pay for low tax Constituent Entities which are effectuated at the shareholder level. While the domestic minimum tax acts as a means for source countries to shore up the revenue that would be taxed by the IIR, there are further clarifications necessary on how the exclusion for QDMTT works. Wardell-Burrus (2022) points out that the CFC taxes applicable to a constituent entity apply prior to the deduction for QDMTT[98]. Further, the tax base for GloBE, CFC regime and the QDMTT may not overlap creating greater scope of taxation for residence country, especially where the CFC does not account for the domestic minimum tax[99]. To add to this, there is need for clarity on how the GILTI will interact with IIR.

It is important to note that there are interactions between Pillar One and Two, where the tax on the former applies before the latter. Therefore, the tax base is adjusted for Pillar One[100] and the profits available to tax back will be adjusted for the former. In a case when low taxed income beneficially owned by the UPE remains outside the scope of IIR, the undertaxed payment rule (UTPR) will act as a backstop. As per UTPR, deductions are disallowed or equivalent adjustments are made to profits that are not taxed at the minimum rate.

It is observed in Table 6 that 60% of the covered entities are from 5 countries - US, China, Japan, Germany and France.

---

[97] Michael P. Devereux *et al*., "What is the Substance-based Carve-out under Pillar 2? How Will it Affect Tax Competition?", EconPol Policy Brief No. 39, vol. 5 (November 2021), Oxford University Centre for Business Taxation.

[98] Tax Notes, "How Does the Qualified Domestic Minimum Top-Up Tax Fit Into Pillar 2?", 18 April 2022. Available from https://www.taxnotes.com/tax-notes-today-federal/base-erosion-and-profit-shifting-beps/how-does-qualified-domestic-minimum-top-tax-fit-pillar-2/2022/04/18/7dczg.

[99] Ibid.

[100] OECD, *Tax Challenges Arising from Digitalisation – Report on Pillar Two Blueprint: Inclusive Framework on BEPS*, p. 53..

Table 6 Number of companies with revenue more than EUR 750 million and positive profits in Forbes 2000

HQ Country	Number of companies	Share of total companies
USA	278	24.5
China	184	16.2
Japan	144	12.7
Germany	36	3.2
France	37	3.3
Brazil	15	1.3
Russia	16	1.4
Australia	14	1.2
United Kingdom	44	3.9
Ireland	13	1.1
India	28	2.5
Total	1134	71.3

Source: Estimated from 2021 Forbes 2000

For the purpose of estimating the qualifying entities and their gains, the approach used by Sullivan (2021)[101] is adopted, i.e. qualifying MNEs are identified for the US, based on the revenue threshold. The difference between the cash effective tax rates is presumed as the baseline level of tax that may arise from the application of the minimum tax. That is, the effective tax rate at the consolidated level represents the overall tax paid across jurisdictions and the difference is the tax that will be clawed back using IIR.

In order to calculate the revenue gains from application of the Pillar Two, top US companies are selected from Forbes 2000 list. Once these are selected, their cash effective tax rates, i.e. the cash paid for income tax, are compiled for each company from publicly available information on Yahoo finance[102]. Cash effective tax rate is defined as income tax paid divided by sales. However, there are financial firms for which the information on income tax paid is not available. For such companies, the income tax provision to sales ratio is used for estimating the ETR. Note that while there are carve-outs for payroll and assets, at the jurisdictional level, however this information is not available for the selected companies.

It is observed that among the Forbes 2000 list, 1955 companies report revenues of more than € 750 million (or $830 billion[103]). Of these, 44% of the covered MNEs are located in US (29.7%) and China (14.7%). As is mentioned, Pillar Two is expected to benefit a small number of countries of residence for some of the largest companies. In fact, the IMF (2019) finds that benefits to developing countries are likely to result when the “inbound” rule, i.e. denial of deductions through the UTPR, is given precedence over the “outbound” rule which is the IIR.

From the rules, it is clear that under IIR the right to tax will accrue to the parent entity’s jurisdiction only when there are no domestic minimum taxes or they are applied at a lower

[101] Tax Notes, “Estimated Effects of Proposed 15 Percent Minimum Tax on Individual Companies”, 1 November 2021. Available from https://www.taxnotes.com/tax-notes-today-federal/corporate-taxation/estimated-effects-proposed-15-percent-minimum-tax-individual-companies/2021/11/01/7ck3r.

[102] Yahoo Finance (available at https://finance.yahoo.com/).

[103] Note that the exchange rate used for calculating is 1.104USD$=1EUR, as per April 2, 2022.

rate. It is also possible to imagine a situation in which the top-up tax collected from CEs results in an effective tax rate for the MNE that is significantly higher than the effective and all such gains will accrue to the country of residence. Therefore, the tentative revenue gains are estimated for the US. Sullivan (2021) estimates that the estimated minimum tax liability for top 100 companies is $ 20.63 billion. The OECD's own impact analysis estimates that between $42 and $70 billion revenues will be gained from Pillar Two[104]. The October 2021 statement pegged the collections at $150 billion annually[105]. Barake et *al*. (2021)[106] estimate that in cases where the application of minimum tax co-ordinated across jurisdictions, the revenue gain in the European Union from a minimum tax of 15% is $48.3 billion, US would receive $40.7 billion and China $4.5 billion. Countries such as South Africa, Brazil, Indonesia and Chile would earn less than $1 billion.

The paper estimates the revenue gains from Pillar 2 for US, since it is already shown that a large fraction of the MNE groups covered under Pillar two belong in US and the information available for group MNEs to compute gains from Pillar 2 is available for US based MNEs. As per our estimates, in 2021, 87 companies in the US would qualify under Pillar Two and the estimated tax deficit is $14.2 billion. The revenue gains to the US from Pillar Two in fact surpass the revenue loss on account of Amount A presented in Tables 3 and 4. The more important issue with the application of Pillar Two is to which countries will the proposal apply. Since Country-by-Country Reports (CbCR) apply to companies that have annual consolidated revenue of € 750 million, it is expected that the information of jurisdiction wise operations is available. Therefore, tax administrators can view this information to understand how they will be impacted by the application of IIR. Clausing *et al.* (2021)[107] estimate that a large fraction of the tax deficit will be collected from Cayman Islands, Bermuda, Singapore, Puerto Rico, Switzerland, Ireland and Netherlands. Using the information reported by the US, we look at the distribution of entities as per effective tax rates. Among the entities that report effective tax rates less than 10%, we identify the jurisdictions with the highest share in profits of these entities. It is seen that stateless entities account for a large share followed by Bermuda, Cayman Islands and Singapore (Figure 3). It is reasonable to expect that tax revenues will be collected from these jurisdictions through the IIR.

---

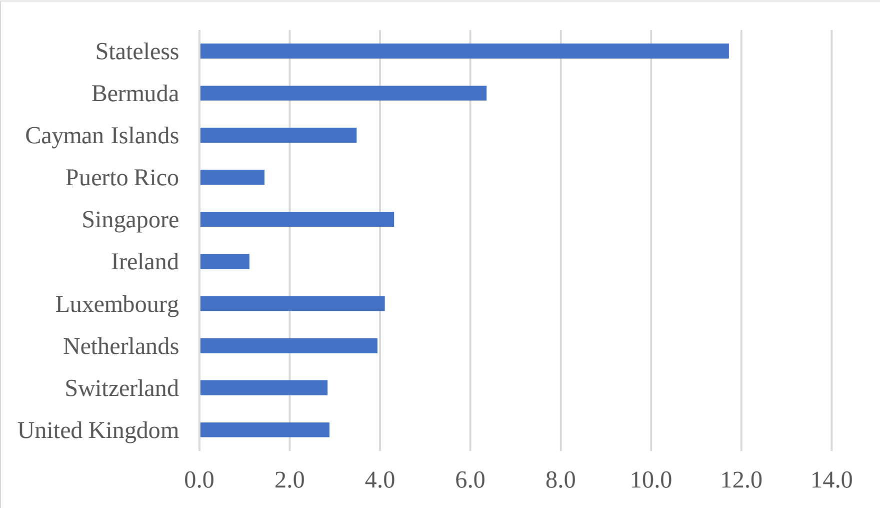
[104]OECD, "Tax Challenges Arising from Digitalisation – Economic Impact Assessment: Inclusive Framework on BEPS", p. 15..

[105] OECD, "International community strikes a ground-breaking tax deal for the digital age", 8 October 2021. Available from https://www.oecd.org/tax/international-community-strikes-a-ground-breaking-tax-deal-for-the-digital-age.htm.

[106] Mona Barake *et al.*, *Collecting the Tax Deficit of Multinational Companies: Simulations for the European Union* (EU Tax Observatory, June 2021).

[107] Kimberly A. Clausing *et al.*, "Ending corporate tax avoidance and tax competition: a plan to collect the tax deficit of multinationals", Law-Econ Research Paper No. 20-12, UCLA School of Law (2021).

Figure 3 Share in profits of entities with effective tax rate less than 10%



Source: US IRS CbCR statistics

An important component of the Pillar Two proposal is the Subject to Tax Rule (STTR). It is considered critical from the perspective of developing country members of the Inclusive Framework (IF)[108]. The IIR addresses the issues related to relocation of profits to low tax jurisdictions by MNEs from developed countries. However, these MNEs make intra company transactions which in turn are an avenue for BEPS.

The Group of Twenty-four (G-24) in their comments submitted to OECD Inclusive Framework Secretariat on September 19, 2021[109] called for broader application of the STTR to incomes such as payments for services and capital gains. Its primary purpose is to ensure that treaty benefits do not accrue to intra-group payments subject to no or low tax. However, the STTR is currently a work in progress and applies to a narrow base of interests, royalties, and a defined set of other payments, subject to bilateral negotiations. In order to assess benefits from a widely adopted STTR, we use ICTD's tax treaty database and check for number of treaties with withholding rates on royalty, interest and fees for technical services below 9%. Although the STTR will apply where the withholding rate and the tax on the specified income is less than 9%, we present only the number of treaties with withholding rates less than 9% as potential scope for applying STTR. These treaties are further classified on the basis of signatories. It is seen from Table 7 that the tentative instances of bilateral treaties where STTR may become applicable are largely in the case of those between developing and developed countries[110].

[108] OECD, Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy, OECD/G20 Base Erosion and Profit Shifting Project, 8 October 2021.
[109] Available at https://www.g24.org/wp-content/uploads/2021/09/Comments-of-the-G24-on-the-IF-July-Statement.pdf.
[110] Taking OECD countries as developed and the rest as developing.

Table 7 Number of treaties with withholding rate less than 9 per cent

Level of development of signatories to treaties	Interest	Royalty	FTS	Total treaties
Developed-developed	42	55	3	767
Developing-developed	240	302	47	833
Developing-developing	113	130	25	2123

Source: Constructed from ICTD tax treaties database[111]

As mentioned earlier, the estimates do not take into account the option to implement a qualified domestic minimum top-up tax (QDMTT). Such a tax will reduce the amount of top-up tax that may otherwise be applicable under the GloBE rules and be payable in MNE parent jurisdiction. This crediting of a qualified domestic minimum top-up tax against a top-up tax liability under the GloBE rules preserves the primary taxing rights for the jurisdiction where the income arises[112]. This may to an extent reduce the gains to the MNE parent jurisdiction which applies the IIR and bring tax gains to source countries which otherwise have rates below the minimum rate of 15%. Therefore, the estimated gains for the US may be muted by the application of a QDMTT.

We find that among the South Centre members, 32 countries have a minimum tax and these are summarised in Table 8. It is observed that many of these taxes apply to turnover.

Table 8 Domestic Minimum Taxes in South Centre Member States

South Centre countries	Minimum domestic tax
Jamaica	Minimum tax of $60,000 repealed in 2019
Bolivia (Plurinational State of)	3% on incomes
Micronesia (Federated States of)	3% in excess of $10,000 revenue
Liberia	2% tax on proceeds
Philippines	2% on turnover
Guyana	2% of turnover
Panama	2% of equity, min USD 100 and max USD 60,000 (operation notice tax)
India	15% on book profit, 9% in IFSC
Iraq	15% deemed tax on revenue
Algeria	10,000 DZD for nil return companies, 10% for reinvested profit
Democratic People's Republic of Korea	10% if turnover is less than 10 billion KW/12% if turnover is 10-100 billion KW and 17% for more than 100 billion KW, 7% for SME and 8% for mid-size companies
Pakistan	1.25% of turnover

[111] Available at https://www.ictd.ac/dataset/tax-treaties-explorer/.
[112] OECD, "Global Anti-Base Erosion Model Rules (Pillar Two): FAQs". Available from https://www.oecd.org/tax/beps/pillar-two-model-GloBE-rules-faqs.pdf.

Burundi	1% on turnover if profits are less than turnover divided by 30
Dominican Republic	1% on assets
Gabon	1% of global turnover
Cambodia	1% minimum tax
Nicaragua	1 to 3% on gross income
Honduras	0.75% of the income if gross income greater than HNL 1 billion
Côte d'Ivoire	0.5% of turnover with minimum of 3 million XOF of tax and maximum of 35 million
Morocco	0.5% of turnover and specific revenues
United Republic of Tanzania	0.5% of turnover
Nigeria	0.5% of gross turnover less franked investment income[113]

Source: compiled from PwC tax summaries

Another important factor for consideration is that there will be behavioural shifts post the introduction of the minimum tax. The evidence in literature suggests that these effects are not similar across countries. For example, Mooij and Ederveen (2005)[114] explain the variation in empirical estimates in the literature on the elasticity of foreign direct investment with respect to company tax levels. They find most studies report a negative relationship between taxation and foreign direct investment (FDI) but do so with a wide range of estimates of the tax elasticity of FDI.

Further, the sensitivity of FDI to taxation varies and depends on host country conditions and policies (including the level of corporate tax rates), types of industries/business activities covered, the time period examined, and other factors. Lee and Gordon (2005)[115] use cross-country data during 1970–1997 for over 70 countries (OECD and non-OECD). They too find a negative impact of corporate taxes on growth; labour income taxes are not significant for economic performance. This result is confirmed by Arnold (2008)[116]. Xing (2010)[117] finds that levying higher taxes on income, both individual and corporation, as well as on consumption is associated with lower long-term per capita GDP in 17 EU countries. Bond and Xing (2015)[118] find that in case of 14 developed countries during in both short and long-run that a 1% increase in a firm's taxation has a negative impact on capital-output ratios of between -0.3% and -0.7%. The negative impact of tax increase on investment is observed for other countries such as Netherlands (Jacob et al., 2017[119]), Chile (Vergara, 2010[120]) and India

[113] Franked investment income is defined as dividend received by one company from another after the Withholding Tax has been deducted.
[114] Ruud A De Mooij and Sjef Ederveen, "Explaining the Variation in Empirical Estimates of Tax Elasticities of Foreign Direct Investment", Tinbergen Institute Discussion Paper No. 108/3 (December 2005).
[115] Young Lee and Roger H. Gordon, "Tax structure and economic growth", *Journal of Public Economics*, vol. 89 (2005), pp. 1027-1043.
[116] Jens Matthias Arnold, "Do Tax Structures Affect Aggregate Economic Growth?", OECD Economics Department Working Papers, No. 643 (Paris, OECD Publishing, 2008).
[117] Jing Xing, "Does tax structure affect economic growth? Empirical evidence from OECD countries", Oxford University for Business Taxation Working Paper No. 11/20 (2010).
[118] Stephen Bond and Jing Xing, "Corporate taxation and capital accumulation: Evidence from sectoral panel data for 14 OECD countries", *Journal of Public Economics*, vol. 130 (October 2015), pp. 15-31.
[119] Martin Jacob *et al.*, "Consumption Taxes and Corporate Investment", *The Review of Financial Studies*, pp. 1-39, (2017).
[120] Rodrigo Vergara, "Taxation and private investment: evidence for Chile", *Applied Economics*, vol. 42, No. 6 (2010), pp. 717-725.

(Neog and Gaur, 2020[121]). Then there are studies that do not find a causality between investment and taxes (Das, 2019[122]). The World Investment Report 2022[123] estimates 20% growth in revenue from Pillar Two in case of full reversal of profit shifting and no carve outs. Yet, in terms of distribution of the gains, the report finds that developing countries will receive less revenue than developed countries. The report finds that "the larger gain in government revenues of developed economies would not be due to the allocation of the top-up tax to the parent entity but rather to the relatively higher increase in taxes paid by MNE on FDI in developed economies compared with developing economies" [124] . Therefore, the gains are premised on the diversion of investments from offshore jurisdictions to developing countries and more so on the ability of these countries to compete on all other regulatory factors. While the discussion on tax and regulatory competition remains outside the scope of this paper, it may be said that the ability of countries to attract foreign capital may be impeded[125].

In order to assess whether a minimum tax can alter investment in the economy, i.e. by foreign and domestic MNEs we check if there is a long run or short run relationship between the two. Table 8 presents an estimated relationship between gross fixed capital formation (GFCF), a measurement of investment in the economy, and statutory taxes prevailing in the economy. This is to estimate if the changes in statutory corporate tax rate impact the investment in the economy. Note that total investment in the economy is taken and not just the FDI since the change in tax rates can impact overall level of activity, including past investments rather than current inflows.

It is observed that the corporate tax rate and fixed capital investment in economies such as US, UK, Mauritius, Germany and Singapore are related. That is, a change in corporate tax rate impacts investments. Therefore, any switch in tax policy triggered by the minimum that raises the overall tax rates can have impact on investment in these economies. As for the other economies, the statutory corporate tax rates have no material impact on investments. Similarly, the impact on FDI is also varied across countries, such that corporate tax rate changes can impact foreign investment in countries such as Malaysia, Singapore, and South Africa[126] (Table 9).

---

[121] Yadawananda Neog and Achal Kumar Gaur, "Tax structure and economic growth in India: insights from ARDL model", *Indian Growth and Development Review*, vol. 13, No. 3 (20 March 2020), pp. 589-605.
[122] Debashree Das, "Causality between Tax Revenue and Economic Growth in India (1992-2017)", *International Journal of Business Insights & Transformation*, vol. 12, No. 1 (March 2019), pp. 42-47.
[123] United Nations Conference on Trade and Development (UNCTAD), "The Impact of Global Minimum Tax on FDI", in *World Investment Report 2022*, chap. 3, p. 126.
[124] Ibid., p. 126.
[125] For more on this see Suranjali Tandon, "Article: The Need for Global Minimum Tax: Assessing Pillar Two Reform", *Intertax*, vol. 50, Issue 5 (2022), pp. 396-413. Available from https://kluwerlawonline.com/journalarticle/Intertax/50.4/TAXI2022037?_ga=2.234450014.1947271556.1658770991-804135925.1656922632.
[126] Suranjali Tandon, "Article: The Need for Global Minimum Tax: Assessing Pillar Two Reform", *Intertax*, vol. 50, Issue 5 (2022), pp. 396-413. Available from https://kluwerlawonline.com/journalarticle/Intertax/50.4/TAXI2022037?_ga=2.234450014.1947271556.1658770991-804135925.1656922632.

Table 9 Impact of statutory corporate tax rate on investment (1990-2020)

Country	**Causality from Statutory corporate tax rate to GFCF**
US	0.0007***
UK	0.0930*
Malaysia	0.7109
South Africa	0.668
Singapore	0.0898*
France	0.4141
Germany	0.0046***
Brazil	0.8038
Korea	0.2738
Panama	0.7675
Philippines	0.8818
Indonesia	0.5477
Argentina	0.7706
Mauritius	0.0721*
Ghana	0.7955
Sri Lanka	0.3271
Pakistan	0.1949

Barbados	0.939
China	0.6295
Cote d'Ivoire	0.5418
Dominican Republic	0.8851
Egypt	0.3451
Gabon	0.6364
Morocco	0.4199
Mozambique	0.5801
Namibia	0.2754
Nigeria	0.5515
Sudan	0.7978
Uganda	0.8177
Venezuela	0.4869
Vietnam	0.7107
Zimbabwe	0.6271

Note: *** $p<0.01$, ** $p<0.05$, * $p<0.1$; Note where the two are related, the stars represent their level of significance.

4. Conclusion

Pillar One and Two proposals are consensus-based proposals that seek to provide solutions to the various attempts for taxing corporate incomes of large MNEs. The work is a step in the direction of revision of the hundred-year international tax rules by introducing the market element in profit allocation and it departs from the physical presence nexus rule to a revenue-based nexus rule. This marks a departure from previous approaches. It is expected that these changes, though presently applicable for a limited number of companies, will expand in the future through a reduction in thresholds. Further, experts also anticipate a behavioural impact of Pillar Two on MNEs and tax administrations which will lead to higher global tax collections while mitigating the chaos from the lack of a global solution.

The progress in the work on the Pillars demonstrates the evolving nature of the reform. Work that was to address the tax challenges from digitalisation later shaped into an effort not just to revise nexus rules but also to end the four-decade long race to the bottom. The descriptive analysis of these proposals demonstrates that there are many issues that remain to be finalised and the proposal may be complex for tax administrations to implement. Furthermore, there still remains a significant degree of complexity, along with concerns from the suggested measures related to MDSH, sector exclusions, elimination of double taxation, loss transfer in segments and proposed inclusion of withholding tax[127].

The OECD[128] provides a summary of cost of collection of tax revenues as well as capacity of administration. It is seen that for most countries the cost is approximately 1% of the revenues. However, a more concerning feature is that percentage staff allocated to audit, investigation and other verification in many countries is more than a fifth. Therefore, while implementing the proposal the available resources must be considered and there is a need to build capacity of the tax administrations, especially in the developing countries.

Further, this paper alludes to two important features. One, the gains from Pillar One are limited and jurisdictions which have imposed DSTs and similar measures may initially see a dip in revenue due to transitional arrangements on DSTs. Secondly, as shown the MNEs qualifying for Pillar 2 are residents of US, China and EU. Few MNE groups belong to the developing countries. For example, many of the South Centre member countries do not have a covered MNE group. Therefore, the estimates for Pillar Two have been restricted to US. As for China, it is shown that firms have small presence in foreign markets and therefore the gains from application of Pillar Two may be limited for this developing country. Lastly, the QDMTT allows source countries to tax profits first. There are already 32 South Centre countries that have a minimum tax that is designed as per the jurisdiction's economic needs. It is expected then that there is limited or no gain to developing countries from Pillar Two. In fact, in an attempt to tailor the domestic minimum taxes to be compatible with the GloBE, there may be counteracting investment effects for specific jurisdictions. The only gain will be through the Subject to Tax Rule [129] and the secondary impacts of GloBE rules[130].

---

[127] Comments of the G-24 on the Progress Report on Amount A of Pillar One, submitted for the Public Consultations on August 15, 2022. Available from https://www.g24.org/wp-content/uploads/2022/08/Comments-of-the-G-24-on-the-Progress-Report-on-Amount-A-of-Pillar-One.pdf.

[128] "Data tables" in OECD, *Tax Administration 2019: Comparative Information on OECD and other Advanced and Emerging Economies* (Paris, OECD Publishing, 2019).

[129] The final impact will depend on the scope that is agreed for STTR.

[130] Alexander Fedan, "Case Study Analysis of the OECD Pillar One and Pillar Two Allocations to Developing Countries", *Bulletin for International Taxation* (2021).

In fact, the behavioural shift in investment, in response to the Pillar Two proposal, may reduce the tax base available where investments respond to tax changes. Therefore, this paper makes a case for assessing further the OECD proposal in the context of developing countries. The developing countries, which have country level data, need to carry out their own jurisdiction level analysis to evaluate the precise impacts of the Two Pillar solution. This paper identifies scope for further empirical analysis from corporate tax returns and financial reporting that can bolster a similar impact analysis so as to shape the reform as a truly global solution.

RECENT SOUTH CENTRE RESEARCH PAPERS

No.	Date	Title	Authors
91	February 2019	Key Issues for BAPA+40: South-South Cooperation and the BAPA+40 Subthemes	Vicente Paolo B. Yu III
92	March 2019	Notification and Transparency Issues in the WTO and ' November 2018 Communication	Aileen Kwa and Peter Lunenborg
93	March 2019	Regulating the Digital Economy: Dilemmas, Trade Offs and Potential Options	Padmashree Gehl Sampath
94	April 2019	Tax Haven Listing in Multiple Hues: Blind, Winking or Conniving?	Jahanzeb Akhtar and Verónica Grondona
95	July 2019	Mainstreaming or Dilution? Intellectual Property and Development in WIPO	Nirmalya Syam
96	Agosto 2019	Antivirales de acción directa para la Hepatitis C: evolución de los criterios de patentabilidad y su impacto en la salud pública en Colombia	Francisco A. Rossi B. y Claudia M. Vargas P.
97	August 2019	Intellectual Property under the Scrutiny of Investor-State Tribunals Legitimacy and New Challenges	Clara Ducimetière
98	September 2019	Developing Country Coalitions in Multilateral Negotiations: Addressing Key Issues and Priorities of the Global South Agenda	Adriano José Timossi
99	September 2019	Ensuring an Operational Equity-based Global Stocktake under the Paris Agreement	Hesham AL-ZAHRANI, CHAI Qimin, FU Sha, Yaw OSAFO, Adriano SANTHIAGO DE OLIVEIRA, Anushree TRIPATHI, Harald WINKLER, Vicente Paolo YU III
100	December 2019	Medicines and Intellectual Property: 10 Years of the WHO Global Strategy	Germán Velásquez
101	December 2019	Second Medical Use Patents – Legal Treatment and Public Health Issues	Clara Ducimetière
102	February 2020	The Fourth Industrial Revolution in the Developing Nations: Challenges and Road Map	Sohail Asghar, Gulmina Rextina, Tanveer Ahmed & Manzoor Illahi Tamimy (COMSATS)
103	February 2020	Eighteen Years After Doha: An Analysis of the Use of Public Health TRIPS Flexibilities in Africa	Yousuf A Vawda & Bonginkosi Shozi

104	March 2020	Antimicrobial Resistance: Examining the Environment as Part of the One Health Approach	Mirza Alas
105	March 2020	Intersección entre competencia y patentes: hacia un ejercicio pro-competitivo de los derechos de patente en el sector farmacéutico	María Juliana Rodríguez Gómez
106	March 2020	The Comprehensive and Progressive Agreement for the Trans-Pacific Partnership: Data Exclusivity and Access to Biologics	Zeleke Temesgen Boru
107	April 2020	Guide for the Granting of Compulsory Licenses and Government Use of Pharmaceutical Patents	Carlos M. Correa
108	April 2020	Public Health and Plain Packaging of Tobacco: An Intellectual Property Perspective	Thamara Romero
109	May 2020	Non-Violation and Situation Complaints under the TRIPS Agreement: Implications for Developing Countries	Nirmalya Syam
110	May 2020	Estudio preliminar del capítulo sobre propiedad intelectual del acuerdo MERCOSUR – UE	Alejandra Aoun, Alejo Barrenechea, Roxana Blasetti, Martín Cortese, Gabriel Gette, Nicolás Hermida, Jorge Kors, Vanesa Lowenstein, Guillermo Vidaurreta
111	May 2020	National Measures on Taxing the Digital Economy	Veronica Grondona, Abdul Muheet Chowdhary, Daniel Uribe
112	June 2020	La judicialización del derecho a la salud	Silvina Andrea Bracamonte and José Luis Cassinerio
113	June 2020	La evolución de la jurisprudencia en materia de salud en Argentina	Silvina Andrea Bracamonte and José Luis Cassinerio
114	June 2020	Equitable Access to COVID-19 Related Health Technologies: A Global Priority	Zeleke Temesgen Boru
115	July 2020	Special Section 301:US Interference with the Design and Implementation of National Patent Laws	Dr. Carlos M. Correa
116	August 2020	The TRIPS Agreement Article 73 Security Exceptions and the COVID-19 Pandemic	Frederick Abbott
117	September 2020	Data in Legal Limbo: Ownership, sovereignty, or a digital public goods regime?	Dr. Carlos M. Correa

118	September 2020	Re-thinking Global and Local Manufacturing of Medical Products After COVID-19	Dr. German Velásquez
119	October 2020	TRIPS Flexibilities on Patent Enforcement: Lessons from Some Developed Countries Relating to Pharmaceutical Patent Protection	Joshua D. Sarnoff
120	October 2020	Patent Analysis for Medicines and Biotherapeutics in Trials to Treat COVID-19	Srividya Ravi
121	November 2020	The World Health Organization Reforms in the Time of COVID-19	German Velásquez
122	November 2020	Analysis of the Overcapacity and Overfishing Pillar of the WTO Fisheries Subsidies Negotiations	Peter Lunenborg
123	November 2020	The United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas: One Step Forward in the Promotion of Human Rights for the Most Vulnerable	Maria Natalia Pacheco Rodriguez and Luis Fernando Rosales Lozada
124	November 2020	Practical Implications of 'Vaccine Nationalism': A Short-Sighted and Risky Approach in Response to COVID-19	Muhammad Zaheer Abbas, PhD
125	December 2020	Designing Pro-Health Competition Policies in Developing Countries	Vitor Henrique Pinto Ido
126	December 2020	How Civil Society Action can Contribute to Combating Antimicrobial Resistance	Mirza Alas Portillo
127	December 2020	Revisiting the Question of Extending the Limits of Protection of Pharmaceutical Patents and Data Outside the EU – The Need to Rebalance	Daniel Opoku Acquah
128	February 2021	Intellectual Property in the EU–MERCOSUR FTA: A Brief Review of the Negotiating Outcomes of a Long-Awaited Agreement	Roxana Blasetti In collaboration with Juan I. Correa
129	March 2021	The TRIPS waiver proposal: an urgent measure to expand access to the COVID-19 vaccines	Henrique Zeferino de Menezes
130	April 2021	Misappropriation of Genetic Resources and Associated Traditional Knowledge: Challenges Posed by Intellectual Property and Genetic Sequence Information	Nirmalya Syam and Thamara Romero
131	June 2021	TRIPS Flexibilities and TRIPS-plus Provisions in the RCEP Chapter on Intellectual Property: How Much Policy Space is Retained?	Vitor Henrique Pinto Ido
132	June 2021	Interpreting the Flexibilities Under the TRIPS Agreement	Carlos M. Correa

133	August 2021	Malaria and Dengue: Understanding two infectious diseases affecting developing countries and their link to climate change	By Mirza Alas
134	September 2021	Restructuring the Global Vaccine Industry	Felix Lobo
135	September 2021	Implementation of a TRIPS Waiver for Health Technologies and Products for COVID-19: Preventing Claims Under Free Trade and Investment Agreements	Carlos M. Correa, Nirmalya Syam and Daniel Uribe
136	September 2021	Canada's Political Choices Restrain Vaccine Equity: The Bolivia-Biolyse Case	Muhammad Zaheer Abbas
137	October 2021	The Ocean Economy: trends, impacts and opportunities for a post COVID-19 Blue Recovery in developing countries	David Vivas Eugui, Diana Barrowclough and Claudia Contreras
138	October 2021	Beyond Corporate Social Responsibility: Strengthening Human Rights Due Diligence through the Legally Binding Instrument on Business and Human Rights	Daniel Uribe Terán
139	October 2021	Governing Seed for Food Production: The International Treaty on Plant Genetic Resources for Food and Agriculture	Nina Isabelle Moeller
140	November 2021	Del SIDA al COVID-19: La OMS ante las crisis sanitarias globales	Germán Velásquez
141	November 2021	Utilising Public Health Flexibilities in the Era of COVID-19: An Analysis of Intellectual Property Regulation in the OAPI and MENA Regions	Yousuf A Vawda and Bonginkosi Shozi
142	4 January 2022	Competition Law and Access to Medicines: Lessons from Brazilian Regulation and Practice	Matheus Z. Falcão, Mariana Gondo and Ana Carolina Navarrete
143	11 January 2022	Direito Brasileiro da Concorrência e Acesso à Saúde no Brasil: Preços Exploratórios no Setor de Medicamentos	Bruno Braz de Castro
144	27 January 2022	A TRIPS-COVID Waiver and Overlapping Commitments to Protect Intellectual Property Rights Under International IP and Investment Agreements	Henning Grosse Ruse-Khan and Federica Paddeu
145	9 February 2022	The Right to Health in Pharmaceutical Patent Disputes	Emmanuel Kolawole Oke
146	16 February 2022	A Review of WTO Disputes on TRIPS: Implications for Use of Flexibilities for Public Health	Nirmalya Syam
147	28 February 2022	Can Negotiations at the World Health Organization Lead to a Just Framework for the Prevention, Preparedness and Response to Pandemics as Global Public Goods?	Viviana Muñoz Tellez

148	7 March 2022	Marine Genetic Resources Beyond National Jurisdictions: Negotiating Options on Intellectual Property	Siva Thambisetty
149	8 March 2022	The International Discourse on the Right to Development and the Need to Reinvigorate its Implementation	Yuefen Li, Daniel Uribe and Danish
150	21 March 2022	The Liability of Internet Service Providers for Copyright Infringement in Sri Lanka in Relation to Infringing Items Carried on their Networks: A Comparative Analysis with the US and English Law	Ruwan Fernando
151	19 April 2022	Escaping the Fragility/Conflict Poverty Trap: How the interaction between service delivery, capacity development and institutional transformation drives the process of transition out of fragility	Mamadou Dia
152	21 April 2022	An Examination of Selected Public Health Exceptions in Asian Patent Laws	Kiyoshi Adachi
153	26 April 2022	Patent Analysis for Medicines and Biotherapeutics in Trials to Treat COVID-19	Srividya Ravi
154	9 May 2022	COVID-19 Vaccines as Global Public Goods: between life and profit	Katiuska King Mantilla and César Carranza Barona
155	27 May 2022	Manufacturing for Export: A TRIPS-Consistent Pro-Competitive Exception	Carlos M. Correa and Juan I. Correa
156	1 June 2022	A Tough Call? Comparing Tax Revenues to Be Raised by Developing Countries from the Amount A and the UN Model Treaty Article 12B Regimes	Vladimir Starkov and Alexis Jin
157	3 June 2022	WTO Moratorium on Customs Duties on Electronic Transmissions: How much tariff revenue have developing countries lost?	Rashmi Banga
158	15 June 2022	Twenty Years After Doha: An Analysis of the Use of the TRIPS Agreement’s Public Health Flexibilities in India	Muhammad Zaheer Abbas, PhD
159	15 July 2022	Reaping the Fruits of Research on Microorganisms: Prospects and Challenges for R&D and Industry in Sri Lanka	Ruwan Fernando
160	21 July 2022	Movement Forward on ABS for the Convention on Biological Diversity: Bounded Openness Over Natural Information	Joseph Henry Vogel, Manuel Ruiz Muller, Klaus Angerer, and Christopher May
161	26 July 2022	Two Pillar Solution for Taxing the Digitalized Economy: Policy Implications and Guidance for the Global South	Irene Ovonji-Odida, Veronica Grondona, Abdul Muheet Chowdhary

162	11 August 2022	The Proposed Standing Multilateral Mechanism and Its Potential Relationship with the Existing Universe of Investor – State Dispute Settlement	Danish and Daniel Uribe
163	19 August 2022	The Human Right to Science: From Fragmentation to Comprehensive Implementation?	Peter Bille Larsen and Marjorie Pamintuan
164	23 September 2022	Impact of a Minimum Tax Rate under the Pillar Two Solution on Small Island Developing States	Kuldeep Sharma

International Environment House 2
Chemin de Balexert 7-9
POB 228, 1211 Geneva 19
Switzerland

Telephone: (41) 022 791 8050
E-mail: south@southcentre.int

Website:
http://www.southcentre.int

ISSN 1819-6926