



Chapter 11

Taxing the 'Unreachable' as Panacea for Post-Pandemic Recovery

Anggari Dwi Saputra

A. Base Erosion and Profit Shifting (BEPS)

The COVID-19 outbreak raging across the globe has disrupted the global economy. Such catastrophic impacts also struck Indonesia with no apparent sign of immediate decline. Indonesia poured out 34% of its expenditure, or around USD 47 billion, into coping with that pandemic situation. Such funds are utilized to ensure that health care service is fulfilled and to establish a program to stimulate the economy named *Pemulihan Ekonomi Nasional* (PEN) (Ministry of Finance of Indonesia, 2020). Such a large amount of funds requires substantial financing and is highly possible to harm the state budget. Based on *Anggaran Belanja dan Pemerintah Indonesia* (APBN) 2020, total budget deficit to Gross Domestic Product (GDP) has risen from 2.34% as of November 30, 2019, to 5.6% as of November 30, 2020,

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Saputra, A. D. (2022). Taxing the 'unreachable' as panacea for post-pandemic recovery.
In A. P. Sunjaya, Y. B. Wang, R. Sagita, & D. Sugiharti (Eds.), *Indonesia post-pandemic outlook: Rethinking health and economics post-COVID-19* (235–258). BRIN Publishing. 10.55981/
brin.537.c528 ISBN: 978-623-7425-91-5 E-ISBN: 978-623-7425-92-2

compelling Indonesia to enact a presidential decree Number 72/2020 to accommodate the extraordinary increase in budget deficit due to COVID-19. Moreover, the debt to GDP ratio climbed from 30.03% in 2019 to 39.84% in 2021.

Additional tax revenue can be seen as one essential solution in dealing with this financing crisis amid this pandemic. The tax avoidance issue has harmed Indonesia for a long time and has become a perennial problem. According to the Tax Justice Network (2020) report, Indonesia has lost around USD 4.8 billion from misaligned profits. Multinational Enterprises (MNEs) try to shift their profit to other jurisdictions with lower tax rates. Moreover, Organization for Economic Co-operation and Development (OECD) (2021b) stated that based on the aggregated Country-by-Country Report (CbCR) data, MNEs tend to report their profit in locations—such as Bahamas, Barbados, Bermuda, British Virgin Islands, etc.—where they do not have any economic activities. It means such locations are only utilized to shift their profit due to the benefits of such countries or jurisdictions.

Thankfully, the Organization for Economic Co-operation and Development (OECD) and the Group of Twenty (G20)—Indonesia is one of the members—have prioritized this issue since 2013 and established the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS) to tackle such issue (OECD, 2021a). Throughout 2017–2020, this inclusive framework discussed a breakthrough to address the tax avoidance issue, notably in the challenges of digitalization of the economy. Eventually, as of July 9, 2021, most of the members of the inclusive framework have agreed to consolidate and try to establish a reform in international taxation rules to deal with this tax avoidance issue carried out by MNEs.

Such reform is established based on two-pillar, pillar one will set the floor on equitable distribution of profits and taxing right among jurisdictions, and pillar two will overcome tax competition among jurisdictions and preserve the tax base in every jurisdiction by introducing a global minimum corporate tax (OECD, 2021a). Those pillars

include numerous mechanics that must be considered and agreed upon among jurisdictions. However, pillar two is expected to be the first agreed and implemented, then pillar one hereinafter.

Those pillars will not affect all scope of taxpayers. Only large MNEs with an enormous profit that passes certain thresholds are expected to be a subject of those new rules. OECD (2020c), in its report, pointed out that introducing those two pillars could increase the investment cost of the MNEs, and might encourage MNEs to relocate their investment away from low-tax jurisdictions. That impact may benefit countries since the competition to draw the investment is no longer based on the rates, leading to a race to the bottom. Moreover, the OECD (2020c) mentioned that additional revenue generated from those pillars would bring advantageous indirect effects. The return of tax revenue from a long-lost source can be used to increase government purchases, especially in this pandemic situation, where countries need ample funds to recover. OECD (2020c) also mentioned the adverse impact in case jurisdictions failed to reach any consensus. If countries do not reach any consensus on that pillar, a different mechanism of tax, namely digital service tax (DSTs), is likely to be implemented by each jurisdiction to tackle the tax issue arising from digitalization. This will lead to a decline in the effectiveness of global investment in the economy. Other than that, such different mechanisms will increase disputes among countries generating additional administration costs.

Regardless of the empirical research reports concerning the two pillars by OECD, it is essential to observe what impacts Indonesia may get if consensus on these two pillars is reached. Each pillar has specific provisions that will be mutually agreed upon; discussing Indonesia's most favorable provisions is also essential before reaching the final consensus. This chapter discusses three parts. The first and second part examines the mechanism of each pillar, as each pillar consider various rule and regulation that are being discussed by the inclusive framework so far. The third part observes what Indonesia may get from implementing those two pillars. Most of the analysis is explained based on the OECD report on these two pillars.

1. Pillar One Proposal

Pillar one proposal is intended to give new taxing rights for market jurisdiction from a share of MNEs' residual profit. This proposal addresses the taxing business income, which only depends on the physical presence. In this current circumstance, countries can only tax MNEs' business profit if MNEs establish their business in that country, indicated by setting up permanent establishments or subsidiaries. If MNEs do not have any physical presence, no taxing right can be entitled to the country. However, with globalization and digitalization, now MNEs could carry out their business abroad without establishing a physical presence. One example is Netflix or Spotify, which can sell their product worldwide without settling any office in Indonesia. Prior to the enactment of Regulation of the Minister of Finance of the Republic Indonesia Number 48/PMK.03/2018¹, Indonesia has no right to impose a tax on Netflix due to its lack of physical presence. However, such regulation only provides value-added tax rights, not a tax on business profit.

Pillar one proposal consists of three key elements: amount A, amount B, and amount C. Amount A is the one that will give new taxing rights to the market jurisdictions. Amount B is in accordance with the arm's length principle, which will set a fixed return for certain marketing and distribution activities. Amount C will provide dispute prevention and resolution related to amount A. As mentioned above, each pillar takes a lot of detail into account. This section may not go into detail about each provision in-depth, thus only providing an overview of the proposal.

Amount A will not cover all MNEs and only include certain MNEs within the scope that will apply these provisions. According to a statement on a two-pillar solution by OECD (2021a), MNEs with global turnover above 20 billion euros and profitability above 10%,

1 Regulation of The Minister of Finance of The Republic Indonesia concerning Procedures for Appointing Collectors, Collection, Remittance, and Filing of Value-Added Tax on The Utilization of Intangible Taxable Goods and/or Taxable Services from the Outside of the Customs and Excises Territory within the Customs and Excises Territory through Electronic Commerce

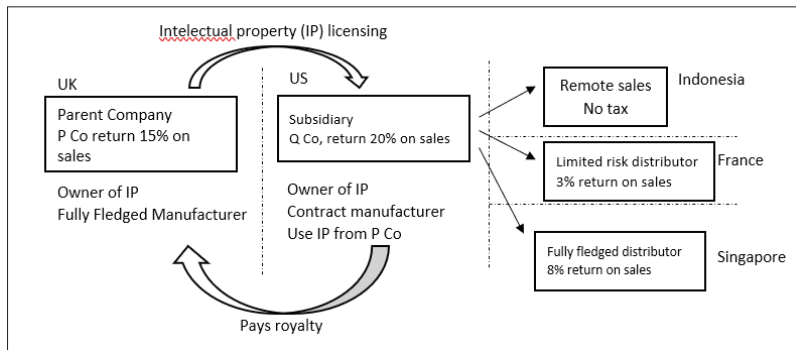
whose categories of activities are Automated Digital Service (ADS) and Consumer Facing Businesses (CFB), will be included in the scope of this amount A. “The definition of ADS comprises a positive list of ADS activities; a negative list of non-ADS activities; and a general definition” (OECD, 2020a, p.19). Meanwhile, CFB businesses are defined as “those that generate revenue from the sale of goods and services of a type commonly sold to consumers, including those selling indirectly through intermediaries and by way of franchising and licensing” (OECD, 2020a, p.21). There are many examples of positive list ADS categories: online advertising services; sale or other alienation of user data; online search engines; social media platforms; online intermediation platforms; digital content services; online gaming; standardized online teaching services; and cloud computing services (OECD, 2020a). CFB businesses can include many goods and services such as clothes, toiletries, cosmetics, automobiles, luxury goods, etc. Several carve-outs are excluded from the scope, including extractive industries, infrastructure businesses, producers, sellers of raw materials and commodities and intermediate products, shipping and air transport, and financial services.

Nexus rules are introduced in this proposal related to the allocation of amount A to the jurisdictions. Nexus rules for ADS and CFB can be different. OECD (2020a) pointed out that the nexus for ADB is merely based on the revenues in the jurisdiction, which exceed a certain level. While for CFB, nexus is based on revenue and the “plus factor,” which indicate the significance and sustainability of the engagement in the market. However, in the statement on a two-pillar solution by OECD (2021a), a new particular purpose nexus rule allows market jurisdiction to get allocation amount A if the revenue from that jurisdiction exceeds 1 million euros, while for smaller jurisdictions with GDP lower than 40 billion euros, the threshold is set at 250,000 euros.

The simple formula below can be considered to calculate how much additional tax revenue will be obtained from this proposal.

Where, denotes additional tax revenue for jurisdiction i . ρ_i denotes quantum or reallocation percentage. π denotes global residual profit, meaning residual profit exceeds threshold mentioned above (10%). ρ_i denotes the share of jurisdiction i . π_i denotes jurisdiction i share of residual profit. τ_i denotes the rate of double tax relief jurisdiction i .

It is essential to provide a simple case, as shown in Figure 11.1, to explain how the mechanism of pillar one proposal works. Such a case is inspired by the case presented by the International Fiscal Association (Case Studies of Pillar One of the OECD Report on Taxation of Digital Economy, 2020a).



Source: Author's illustration adapted from the International Fiscal Association (2020a) presentation

Figure 11.1 Example Case of Pillar One Proposal

P Co is the group's parent company located in the United Kingdom (UK), which operates as a fully-fledged manufacturer, and makes and sells their goods for the UK market. P Co owns intangible property (IP) and license it to its subsidiary Q Co located in the United States, which operates as a contract manufacturer, creates, and sells its goods for the UK and overseas market in Indonesia, France, and Singapore. Q Co sells its goods to Indonesia remotely, not via permanent establishment or its subsidiary. Since there is no physical presence, Indonesia has no right to impose a tax on Q Co sales. For France and Singapore markets, Q Co sells its product through

its subsidiaries, which operate as limited risk distributors and fully fledged distributors.

In the year 2022, the consolidated financial statements of P Co group company are described as follows:

Table 11.1 Consolidated Financial Statement

Consolidated group operating revenue	EUR 3 billion
Consolidated expenses:	
Cost of sales	EUR 1.5 billion
Research and development expenses	EUR 50 million
Selling and distribution expenses	EUR 150 million
Administrative expenses	EUR 50 million
Interest expenses	EUR 50 million
Total expenses	EUR 1.8 billion
Consolidated profit/Earning before tax	EUR 1.2 billion
Consolidate EBT Margin	40%

Source: Author's illustration adapted from the International Fiscal Association (2020a) presentation

Global operating revenue consists of sales to third-party consumers, with 10% of its global revenue from Indonesia, 20% from France, 30% from Singapore, 30% from the US, and 10% from the UK market. As mentioned above, the profit that will be used as allocation (is any profit that exceeds 10%. Since the consolidated EBT margin is 40%, the global residual profit is 30% (40%–10%). However, such a number will not be allocated fully; amount A uses quantum as a percentage of residual profit allocated to market jurisdictions. OECD (2021a) stated that the amount of quantum or reallocation percentage is 25%. Therefore, the residual profit that will be allocated is 7.5% (25% x 30%) or EUR 900 million (7.5% x EUR 1.2 billion).

As 10% of the global sales are derived from Indonesia, Indonesia will allocate A 10% x EUR 900 million or EUR 90 million. This number is multiplied by the tax rate to get the additional tax. For France, it will be allocated 20% x EUR 900 million or EUR 180 million. For Singapore, it will be allocated 30% x EUR 900 million or EUR 270 million. However, in Singapore, the subsidiary acts as a fully-fledged

distributor, and the income is also calculated as the basis of profit allocation. Therefore, there will be double counting. A marketing and distribution safe harbor will be introduced to prevent such issues, which will exempt Singapore from obtaining profit allocation. For the US, it will be allocated $30\% \times \text{EUR } 900 \text{ million}$ or EUR 270 million. However, the entity in the US is booking residual profits outside the UK market. This entity will relieve double taxation for amount A liability in Indonesia and France. Therefore, no amount A liability is available in the US. For the UK, it will be allocated $10\% \times \text{EUR } 900 \text{ million}$ or EUR 90 million. However, this company is booking residual profit for the USA market. This entity can be identified as the paying entity for discharging amount A in the UK; therefore, there is no amount A liability in the UK.

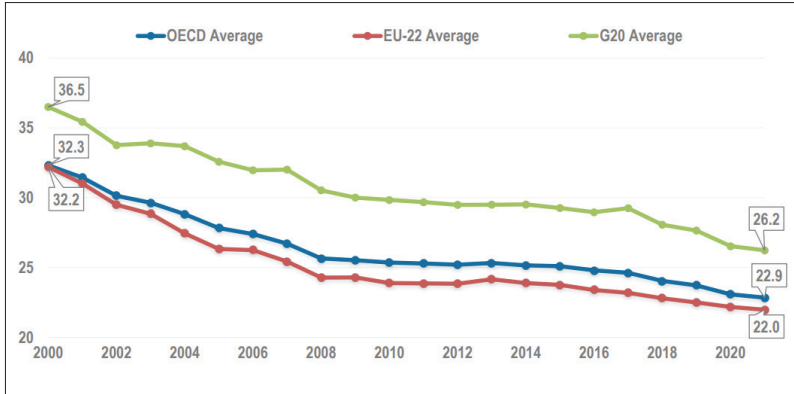
2. Pillar Two Proposal

Pillar two proposal is intended to combat profit shifting and tax competition, leading to a race to the bottom. MNEs use profit shifting to reduce their tax payment by misaligning their profit with a jurisdiction whose tax rate is very low. By introducing a global minimum tax rate, it is expected that MNEs do not have any incentive to set their transaction, so they can shift their profit to reduce their tax payment. Additionally, setting a global minimum tax rate will combat tax competition, encouraging countries to use non-tax investment incentives to draw investment, leading to fair and thriving competition. This race to the bottom phenomenon is not mere nonsense. According to Figure 11.2, we can observe from the year 2000 until 2020 average corporate tax rate has declined significantly. Of course, there are many backgrounds behind such phenomenon, but it cannot be denied that tax competition among countries to attract investment in one of the determining factors.

Pillar two proposal consists of two key elements: Global anti-Base Erosion Rules (GloBE) and Subject to Tax Rule (STTR). GloBE rules consist of Income Inclusion Rule (IIR) and Undertaxed Payment Rule (UTPR). Therefore, this proposal will fundamentally establish three

rules—IIR, UTPR, and STTR—to ensure that the effective tax rate (ETR) of the MNEs group already meets the global minimum tax rate. IIR will impose a top-up tax on the parent entity on its constituent entity's tax that does not meet the global minimum tax rate (OECD, 2020b). UTPR has the same intention as IIR, but instead of requiring the parent entity to pay top-up tax, UTPR obliges taxpayer that is member of the group to adjust with respect to any tax that does not meet the global minimum tax rate. However, UTPR will only apply if the IIR is not adopted. Therefore, IIR has priority over UTPR (OECD, 2020b). IIR is also backed up by the Switch-over Rule (SOR), which allows the state of the parent entity to tax the income of its permanent establishment (PE) up to the minimum tax rate agreed in the provision. Unlike IIR and UTPR, STTR applies to certain payments between two connected persons² which do not meet the minimum rate for STTR. Countries will have the rights to tax the difference in rates that do not meet the minimum rate for such payment.

2 According to article 5(8) OECD Model Tax Conventions, “Two persons are treated as “connected” if one has control of the other or both are under the control of the same person or persons. While the test is based on a de facto control relationship, these control requirements are automatically met where one person possesses directly or indirectly more than 50% of the beneficial interests in the other or if a third person possesses directly or indirectly more than 50% of the beneficial interests in both.”



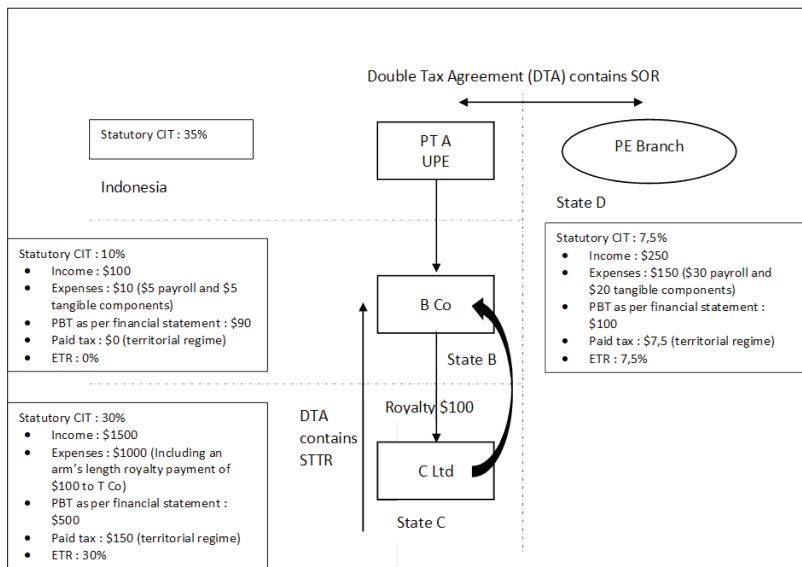
Source: OECD (2021)

Figure 11.2 Average Corporate Income Tax Rate

Similar to pillar one, pillar two will not cover all MNEs in its scope. MNEs with more than EUR 750 million in annual gross revenue in the preceding fiscal year are covered in this proposal's scope (OECD, 2020b). Such thresholds are defined in the Base Erosion and Profit Shifting (BEPS) 13 concerning Transfer Pricing Documentation and Country-by-Country Reporting. There are also categories of taxpayers that are not subject to this proposal, namely government entities, international organizations, non-profit organizations, pension funds, or investment funds that are Ultimate Parent Entities (UPE) of an MNE Group or any holding vehicles used by such entities (OECD, 2021a).

According to the statement on a two-pillar by OECD (2021), the global minimum tax rate used for applying IIR and UTPR is 15%. Meanwhile, the minimum rate for STTR will be 9%. Both of the minimum rates will be calculated based on the ETR, which will be calculated on a jurisdiction basis. There is also a c provision used to exclude an amount of income for calculating top-up tax. The rate of carve-outs provision is 5% of the carrying value of tangible assets and payroll (OECD, 2020b).

Pillar two also consists of many detailed mechanisms, which are very complicated and include many specific definitions. Therefore, providing a simple case as below may explain how the proposal will work. Such a case is inspired by the case presented by the International Fiscal Association (Case Studies of Pillar Two of the OECD Report on Taxation of Digital Economy, 2020b).



Source: Author's illustration adapted from the International Fiscal Association (2020b) presentation

Figure 11.3 Example Case of the Pillar Two Proposal

PT A located in Indonesia, is Ultimate Parent Entity (UPE) of the MNEs group. B Co is one of PT A subsidiaries located in state B. C Ltd is also PT A subsidiary located in state C. PT A also has a branch in state D and form PE there. In year X, C Ltd has a profit before tax (PBT) \$500 with the details above and paid tax \$150 so that the ETR is 30%. C Ltd paid a royalty, which we assume the transaction is already arm's length, to B Co. B Co gain income solely from a transaction with C Ltd, and from that transaction, B Co obtained PBT of \$90.

However, as state B follows a territorial regime, in which only income arising in state B is taxable, B Co did not pay any tax. Prior to the implementation of the STTR rule, the Double Tax Agreement (DTA) between states B and C adheres to the OECD model, where state C does not have rights to tax royalty transactions. In state D, PE of PT A generated an income of \$150, PBT \$100, and paid tax of \$7.5, so the ETR is 7.5%.

Now assume that the implementation of IIR, SOR, and UTPR has been in place. First rule that needs to be applied is STTR since STTR will affect the implementation of IIR. The case above shows that ETR for B Co is 0%. In this regard, STTR will apply. STTR requires a minimum tax rate for certain payments, in which royalty is in the scope of 9%. In this case, B Co paid tax 0 (ETR 0%), below the minimum rate. Therefore, under STTR, State C has the right to tax such royalty payments of 9% (9% - 0%). Therefore, the tax to be paid under STTR is $9\% \times 100 = \$9$.

Next is the transaction of the PE branch in state D, since IIR and SOR have already been implemented, and the ETR of the PE branch is below the minimum rate of IIR (15%). In this case, under IIR and SOR rule, Indonesia has the right to tax the PE branch income that has not met the global minimum rate. Under IIR Rule, PT A should pay top-up tax for the PE branch in 7.5% (15% - 7.5%). However, the base for top-up tax needs to be adjusted under the carve-out rule. The calculation of top-up tax with respect to the PE branch is as follows:

- ETR of PE Branch = 7.5%
- Top up tax under IIR = $15\% - 7.5\% = 7.5\%$
- GloBE tax base = PBT - carve out rule. Carve out rate is 5% of the carrying value of tangible assets and payroll. Therefore, the base is $100 - 5\% \times (50) = 97.5$.
- Tax to be paid by R Co under IIR = $7.5\% \times 97.5 = 7.3125$

Concerning B Co, the initial ETR of B Co is 0%. However, under STTR, a top-up tax needs to be considered in the calculation of IIR. Tax paid under STTR is 9, therefore adjusted ETR is $9/90 = 10\%$.

Since the ETR adjusted is below the global minimum rate of 15%, IIR applies. The calculation of IIR is as follows:

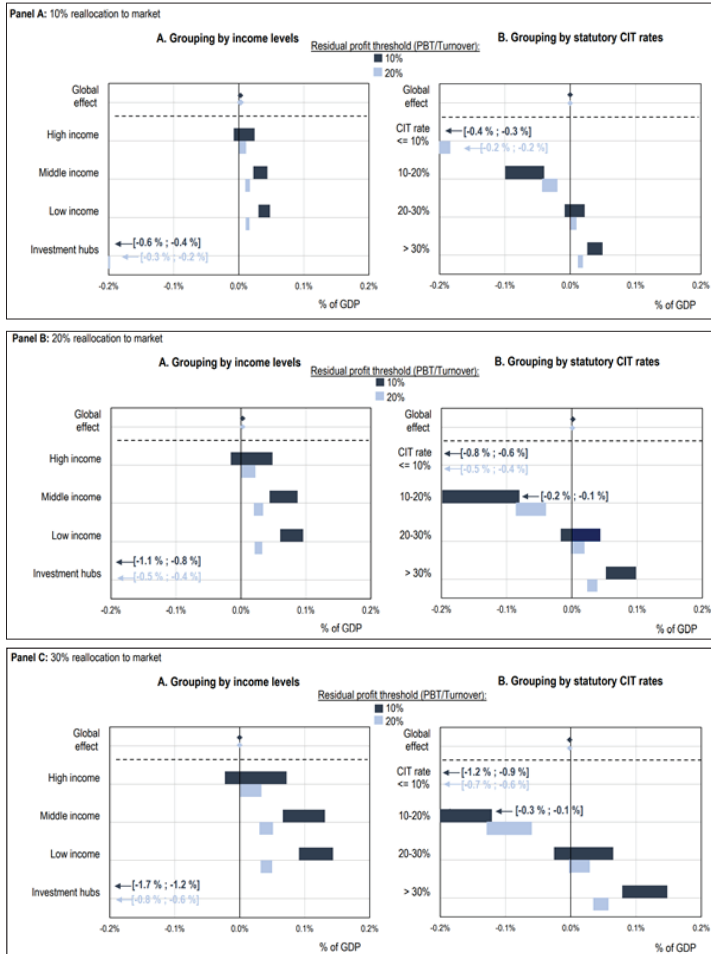
- 1) Adjusted ETR = 10%
- 2) Top up tax under IIR = 15% - 10% = 5%
- 3) Globe tax base = PBT - carve out rule. Carve out rate is 5% of the carrying value of tangible assets and payroll. Therefore, the base is $90 - 5\% \times (10) = 89.5$
- 4) Tax to be paid under IIR = $5\% \times 89.5 = 4.475$

Therefore, the total tax paid by PT A in Indonesia under IIR is $7.3125 + 4.475 = \$11.7875$. If Indonesia does not implement the IIR rule, in such a case, UTPR will apply. Assume only state S that implements the UTPR rule. Hence under UTPR rule, C Ltd should pay top-up tax concerning its transaction with B Co, or in this case, it is \$4.475. There is no top-up tax regarding the PE branch' ETR, which is below the minimum rate since C Ltd does not directly relate to the PE branch.

B. The Impact of Pillar One and Two Proposals

Several studies have observed the impact of pillars one and two proposals (OECD, 2020; Cobham et al., 2019; Hanappi & Cabral, 2020). Those studies concluded that this would generate additional revenue, although Cobham et al. (2019) stated that such gains main benefit OECD countries and only provide a small portion of the benefits for other countries. OECD (2020) pointed out that the tax revenue' effect of pillar one and two varies across countries within the range 0%–2% of corporate income tax (CIT) revenue for the effect of pillar one and 0%–5% of CIT revenue for pillar two. Cobham et al. (2019) mentioned that the lower income countries only obtain a fraction of a percentage point of CIT revenues, while OECD countries will get 2% on average. Hanappi and Cabral (2020), which observed the expected change in the firm' effective average tax rates (EATRs) and effective marginal tax rate (EMTRs), stated that pillar one would bring a small change in the ETR, while the change in ETR is expected to be significant due to implementation of pillar two.

OECD (2020c) observed the impact of those two proposals under several scenarios based on the features of each proposal. The estimated effect of pillar one according to OECD (2020c) is presented in Figure 11.4.



Source: OECD (2020)

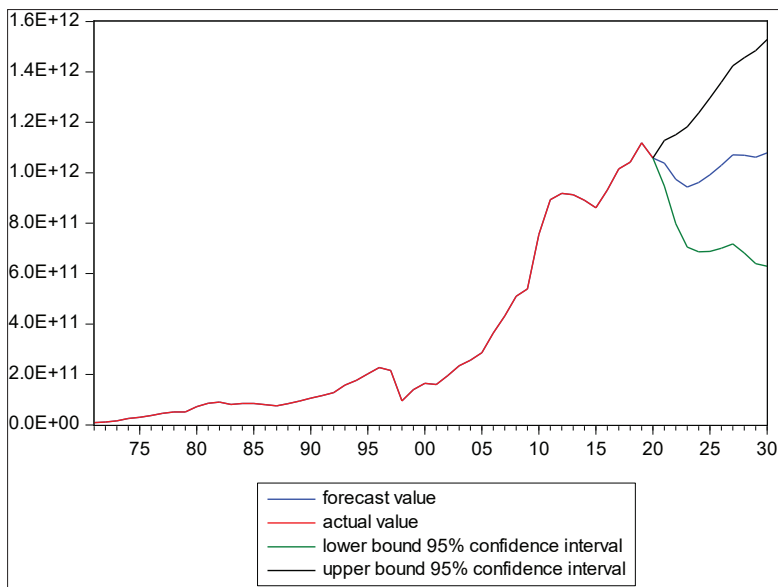
Figure 11.4 Effect of Pillar One Proposal on Tax Base

Based on Figure 11.4, we can observe that the effect varies across countries and depends on the reallocation percentage and profit threshold. In general, the effect is larger for low-income countries, smaller in high-income countries, and for investment hubs countries (tax haven), the effect is negative. If we refer to the 30% reallocation percentage arrangement, middle-income countries, of which Indonesia is included, will obtain an additional tax base of approximately 0.15% of GDP at the highest. We can use this number to forecast the estimated additional tax base Indonesia will get from this proposal. By employing the autoregressive integrated moving average (ARIMA) model, we can forecast Indonesia's future GDP, which can be used to calculate the additional tax base.

$$y_t = \mu + \sum_i^{13} y_{t-i} + \sum_i^1 \varepsilon_{t-i}$$

y_t is Indonesia's GDP and ε_t is a representation of error term. GDP data for the year 1971–2020 is then employed to conduct the analysis. The data were extracted from World Bank data³. The ARIMA model is utilized because the GDP trend is not stationer and stochastic with a random walk. Based on the unit root test and considering the correlogram, ARIMA 13.1.1 is used. The results of the estimation are presented in Figure 11.5.

3 Retrieved from <https://databank.worldbank.org/reports.aspx?source=world-development-indicators#>



Source: Author' calculation

Figure 11.5 GDP forecasting.

Table 11.2 Additional revenue estimates from pillar one

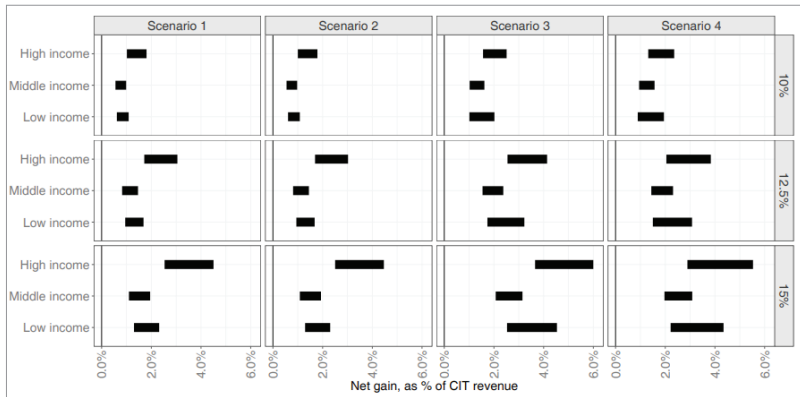
Year	GDP Forecast ARIMA model (in million USD \$)	Additional Tax Base (%)	Additional Tax Base (in million USD \$)	Tax Rate	Additional Tax Revenue (in million USD \$)	Exchange Rate	Additional Tax Revenue (in million Rupiah)	Covid-19 Fund	%
2022	974.120,21	0,15%	1.461,18	22%	321,46	14.366,00	4.618.089,61	87.550.000,00	5,27%
2023	943.662,72	0,15%	1.415,49	22%	311,41	14.366,00	4.473.697,34	87.550.000,00	5,11%
2024	961.444,83	0,15%	1.442,17	22%	317,28	14.366,00	4.557.998,41	87.550.000,00	5,21%
2025	992.142,13	0,15%	1.488,21	22%	327,41	14.366,00	4.703.527,56	87.550.000,00	5,37%
2026	1.029.826,64	0,15%	1.544,74	22%	339,84	14.366,00	4.882.181,53	87.550.000,00	5,58%
2027	1.071.034,36	0,15%	1.606,55	22%	353,44	14.366,00	5.077.538,26	87.550.000,00	5,80%
2028	1.069.122,38	0,15%	1.603,68	22%	352,81	14.366,00	5.068.473,99	87.550.000,00	5,79%
2029	1.061.779,75	0,15%	1.592,67	22%	350,39	14.366,00	5.033.664,20	87.550.000,00	5,75%
2030	1.078.813,77	0,15%	1.618,22	22%	356,01	14.366,00	5.114.418,72	87.550.000,00	5,84%

Source: Author' calculation

As shown in Table 11.2, referring to the OECD' estimated effect of pillar one, Indonesia is estimated to generate additional revenue of around USD 321.46 million if the proposal is implemented in 2022.

Such additional revenue may cover about 5% of health care costs related to COVID-19.

While for pillar two, OECD (2020c) estimated 0.5%–5% net gain, as % of CIT revenue depending on the scenario and the global minimum tax rate. Unlike the estimated effect of pillar one, revenue gains driven by pillar two is larger in high-income and low-income countries and smaller for middle-income countries. Detail of the effect can be seen in Figure 11.6.



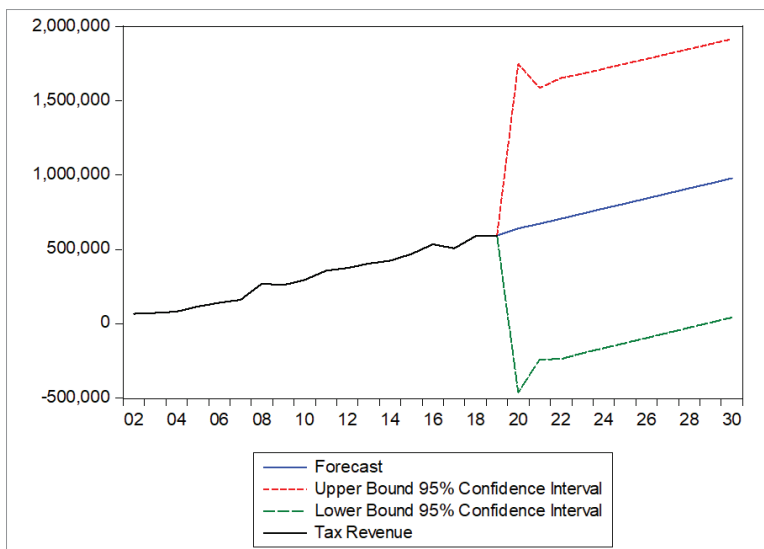
Source: OECD (2020)

Figure 11.6 Pillar two revenue gains

As shown in Figure 11.6, middle-income countries are expected to obtain an additional revenue gain of 3% of CIT revenue. Similar to the analysis above, we can predict Indonesia’s estimated additional revenue from this proposal by forecasting Indonesia’s CIT Revenue. Data from OECD revenue statistics⁴ are employed to forecast the future CIT revenue. As the CIT revenue trend is deterministic, such a trend does not have a unit root. Simple ordinary least square (OLS) with the inclusion of a time variable is then employed⁵. The results of the estimation are presented in Figure 11.7.

4 Retrieved from <https://stats.oecd.org/index.aspx?DataSetCode=REV>

5 I also tried to use ARIMA model, but the result still persists.



Source: Author' calculation

Figure 11.7 CIT revenue forecasting.

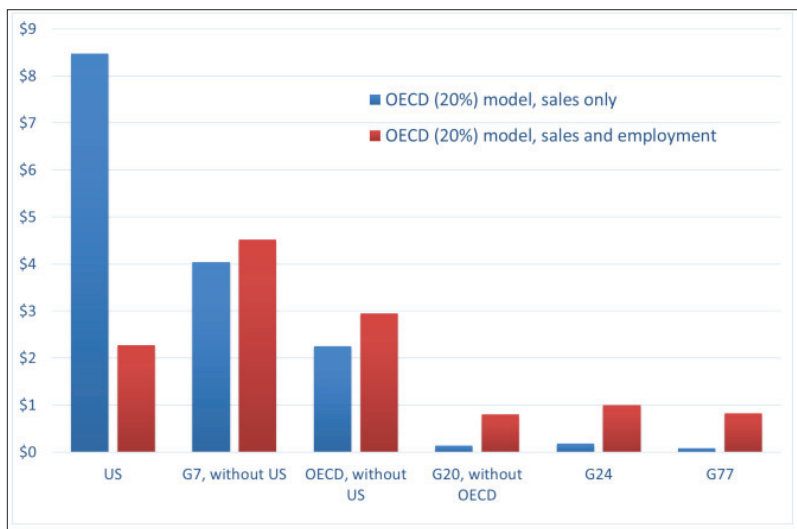
Table 11.3 Additional Revenue Estimates from Pillar Two

Year	OLS with time trend (in billion rupiah)	ARIMA (in billion rupiah)	Additional Revenue Gains (%)	Additional Revenue OLS (in billion rupiah)	Additional Revenue ARIMA (in billion rupiah)	Covid-19 Fund (in billion rupiah)	% additional revenue/covid-19 fund (OLS estimation)	% additional revenue/covid-19 fund (ARIMA estimation)
2020	638.645,40	641.892,83	3%	19159,36	19.256,78	87.550,00	22%	22%
2021	672.433,10	673.329,56	3%	20172,99	20.199,89	87.550,00	23%	23%
2022	706.220,70	707.665,00	3%	21186,62	21.229,95	87.550,00	24%	24%
2023	740.008,40	741.522,03	3%	22200,25	22.245,66	87.550,00	25%	25%
2024	773.796,10	775.458,01	3%	23213,88	23.263,74	87.550,00	27%	27%
2025	807.583,80	809.380,96	3%	24227,51	24.281,43	87.550,00	28%	28%
2026	841.371,50	843.306,07	3%	25241,15	25.299,18	87.550,00	29%	29%
2027	875.159,20	877.230,82	3%	26254,78	26.316,92	87.550,00	30%	30%
2028	908.946,90	911.155,62	3%	27268,41	27.334,67	87.550,00	31%	31%
2029	942.734,60	945.080,42	3%	28282,04	28.352,41	87.550,00	32%	32%
2030	976.522,30	979.005,22	3%	29295,67	29.370,16	87.550,00	33%	34%

Source: Author' calculation

As shown in Table 11.3, the revenue impact generated by pillar two is much higher than pillar one. This estimated additional revenue gain may cover around 22%–34% of the total health-related cost of dealing with COVID-19.

Slightly different from the OECD (2020c) study results, Cobham et al. (2019), which employed a representative sample of CbCR by US large MNEs, mentioned that pillar one proposal only gives \$0.08–\$0.18 increase in per capita revenue for The Group of Twenty (G20) countries. Such a small number compared to \$8 increase for US, \$4 increase for Group of Seven (G7), and \$2 increase for OECD countries. Cobham et al. (2019) further pointed out that the benefits of pillar one mostly go to OECD countries, while other countries only get a little or no benefits. Even in aggregate, lower-middle income countries will experience a revenue loss upon implementing this proposal.



Source: Cobham et al. (2019)

Figure 11.8 Projected per capita revenue increases

Cobham et al. (2019) also emphasized that employment as a factor in determining the jurisdiction share of residual profit plays an important role. The inclusion of employment as a complement to the sales is essential to reflect the actual nexus of MNEs production activity. However, pillar one also consists of other several attributes beside those mentioned by Cobham et al. (2019) that is very substantial in

generating additional revenue. Therefore, to analyze which key factor in shaping the additional revenue, I tried to estimate model below using simple OLS.

$$\ln \text{Average Additional Tax Revenue}_i = \beta_0 + \beta_1 \ln \text{Profit Residual Threshold}_i + \beta_2 \ln \text{Revenue Threshold}_i + \beta_3 \ln \text{Nexus Threshold}_i + \beta_4 \ln \text{Reallocation Percentage}_i$$

Log-log model is utilized to get the elasticities of each attribute. Using data from OECD (2020), the results below are obtained.

Table 11.4 Tax revenue determination on the pillar-one

Variables	og Average Additional Tax Revenue
Log of Profit Residual Threshold	-0.982*** (0.014)
Log of Revenue Threshold	-0.022*** (0.005)
Log of Nexus Threshold	0.000 (0.007)
Log of Reallocation Percentage	1.000*** (0.010)
Constant	6.482*** (0.048)
Observations	192
R-squared	0.988

From Table 11.4, we can conclude that all factors except the nexus threshold are significantly determining additional tax revenue for pillar one. Profit residual and revenue threshold have negative elasticities to the additional tax revenue. If residual profit threshold increases by 1%, then the additional tax revenue will decrease almost 1%, The elasticities is smaller for revenue threshold. However, perfect elasticity is witnessed in the reallocation percentage, meaning if the reallocation percentage increases by 1%, additional tax revenue will increase by 1%.

Apart from the additional tax revenue effect above, other negative impacts that may arise from the proposal also need to be considered. The one that maybe intriguing is who will bear the burden economically. Large MNEs of course can shift this additional tax burden to the consumer or even their employee. MNEs can increase the price of their products to cover the additional tax and remain to shift their profit to jurisdictions with lower tax rates. Especially if the demand of their products is inelastic. The consumer will not alter their consumption even though the price increases. The tax burden distribution is determined by the elasticity of demand and supply as follows.

$$\frac{\epsilon_s}{\epsilon_s - \epsilon_d} + \frac{-\epsilon_d}{\epsilon_s - \epsilon_d} = 1$$

The $\frac{\epsilon_s}{\epsilon_s - \epsilon_d}$ is the share of tax borne by consumers and $\frac{-\epsilon_d}{\epsilon_s - \epsilon_d}$ is the share of the tax borne by producers. For example, according to 2020 London Business School online survey (as cited in the Consultancy. uk., 2020), the price elasticity of Netflix is inelastic, i.e. -0.13. If the price elasticity of supply, for instance, is 0.5, then consumers will bear 80% of the additional tax through a price increase. Since the demand is inelastic, a price increase will not affect demand too much, so Netflix in this case can share most of their tax burden to consumers.

The other impacts of pillar one and two proposals might be estimated using simplified version of the dynamic stochastic general equilibrium (DSGE). From the simplified DSGE model (Mankiw, 2018), dynamic aggregate demand curve equation can be derived as follows.

$$Y_t = \bar{Y}_t - \frac{\alpha\theta_\pi}{1 + \alpha\theta_Y} (\pi_t - \pi_t^*) + \frac{1}{1 + \alpha\theta_Y} \varepsilon_t$$

Where Y_t is total output of goods and services. \bar{Y}_t is the natural level of output. Parameter α indicates how sensitive demand is to change in real interest rates. θ_π denotes inflation variability and θ_Y

denotes output volatility. π_t is inflation in period t where π_t^* is target inflation. ε_t is demand shock. The dynamic aggregate supply curve is as follows.

$$\pi_t = \pi_{t-1} + \varphi (Y_t - \bar{Y}_t) + v_t$$

Where φ tells about the response of inflation to the deviation of output from its natural level and v_t is random supply shock. The introduction of pillar one and pillar two can be considered as fiscal policy, where the government gets additional revenue to improve government purchases. However, this additional revenue is not obtained from increasing taxes, but rather from maximizing tax potential lost from tax avoidance. Hence it is not considered a contractionary fiscal policy. This expansionary fiscal policy can raise demand for goods and services, raises ε_t , and shifts dynamic aggregate demand (DAD) curve to the right. The rightward shifts of DAD curve will increase output (Y_t) and inflation π_t in the short run. Dynamic aggregate supply (DAS) curve shifts up each period since the rise in inflation increases the expected inflation in the following period. Central bank responds the increase in output and inflation by increasing the nominal and real interest rates, which partly offsetting the expansionary effects of the demand shock. To sum up, based on the simplified DSGE model, this pillar one and pillar two policy shock will increase output or GDP and inflation in the short run. Since the inflation and output rises, the central bank increases nominal and real interest rates, which will decrease investment and partly offset the effects of such policy. Then, economy will move gradually to the natural level of output with higher inflation.

C. Conclusion

Amidst the turmoil of the COVID-19 pandemic engulfing countries, ensuring sufficient funds for handling COVID-19 is necessary. Indonesia has prepared a budget of USD 47 billion to respond to this situation. The need for large funds narrows Indonesia's budget so that the total budget deficit to GDP increases beyond the maximum

threshold. Indonesia is also compelled to increase its debt so the ratio climb to 39.84% in 2021. Such atrocious conditions signify that Indonesia must find additional revenue to restore the post-pandemic situation.

The implementation of pillar one and pillar two proposals is expected to provide additional tax revenue to the jurisdictions. Based on the OECD (2020c) studies, the estimated additional revenue effect of pillar one (with the 30% reallocation) is 0.15% of GDP. Analyzed together with the forecasting from ARIMA model, this number can generate IDR 4–5 trillion, which can be used to finance around 5% of the health-related cost for the COVID-19 response. While the effect is larger for pillar two, this additional tax revenue may cover around 22%–24% of COVID-19 related cost if the proposal is in place.

References

- Cobham, A., Faccio, T., & FitzGerald, V. (2019, October 4). Global inequalities in taxing rights: An early evaluation of the OECD tax reform proposals. *Global Inequalities in Taxing Rights: An Early Evaluation of the OECD Tax Reform Proposals*. <https://doi.org/10.31235/osf.io/j3p48>
- Hanappi, T., & Cabral, A. C. G. (2020). *The impact of the Pillar One and Pillar Two proposals on MNE's investment costs*. OECD Taxation Working Papers. <https://doi.org/10.1787/b0876dcf-en>
- Mankiw, G. N. (2018). *Macroeconomics* (10th ed.). Worth Publishers.
- OECD. (2020a). *Tax challenges arising from digitalization – report on pillar one blueprint: Inclusive framework on BEPS*. OECD/G20 Base Erosion and Profit Shifting Project, OECD Publishing, Paris. <https://doi.org/10.1787/beba0634-en>
- OECD (2020b). *Tax Challenges Arising from Digitalization – Report on Pillar Two Blueprint: Inclusive Framework on BEPS*. OECD/G20 Base Erosion and Profit Shifting Project, OECD Publishing, Paris. <https://doi.org/10.1787/abb4c3d1-en>
- OECD (2020c). *Tax challenges arising from digitalization – economic impact assessment: Inclusive framework on BEPS*, OECD/G20 Base Erosion and Profit Shifting Project, OECD Publishing, Paris. <https://doi.org/10.1787/0e3cc2d4-en>

- OECD. (2021a). *Statement on a two-pillar solution to address the tax challenges arising from the digitalization of the economy*. Retrieved January 15, 2022 from <https://www.oecd.org/tax/beps/statement-on-a-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalization-of-the-economy-july-2021.htm>
- OECD. (2021b). *New corporate tax statistics provide fresh insights into the activities of multinational enterprises*. Retrieved January 15, 2022 from <http://www.oecd.org/tax/new-corporate-tax-statistics-provide-fresh-insights-into-the-activities-of-multinational-enterprises.htm>
- International Fiscal Association - India Branch. (2020a, December 12). *Case studies of pillar one of the OECD report on taxation of digital economy* [Video]. YouTube. <https://www.youtube.com/watch?v=kyaSMpLtsHQ&t=6157s>
- International Fiscal Association - India Branch. (2020b, December 12). *Case studies of pillar two of the OECD report on taxation of digital economy* [Video]. YouTube. <https://www.youtube.com/watch?v=7AJ9TDKm9BI&t=1732s>
- Consultancy.uk. (2020, July 1). *COVID-19 presents Netflix with chance to hike prices*. Simon Kucher & Partners. <https://www.consultancy.uk/news/24986/COVID-19-presents-netflix-with-chance-to-hike-prices>
- Tax Justice Network (TJN). 2020. *The state of tax justice 2020*. Retrieved January 10, 2022 from <https://taxjustice.net/reports/the-state-of-tax-justice-2020/>